

2021 SENATE APPROPRIATIONS

SB 2019

**Department 270 - Department of Career and Technical Education
Senate Bill No. 2019**

Executive Budget Comparison to Prior Biennium Appropriations

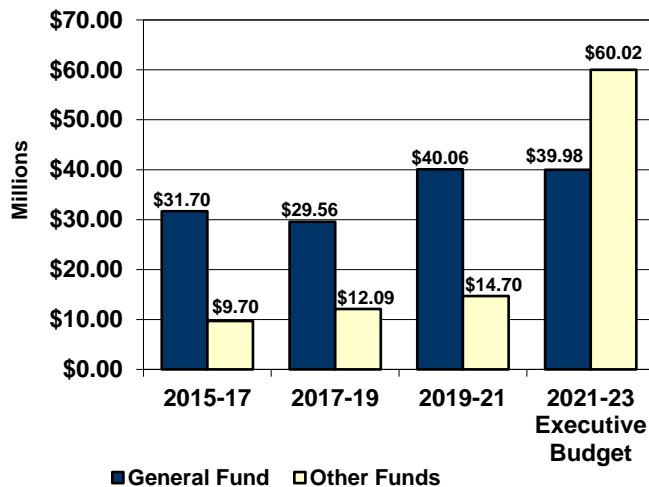
	FTE Positions	General Fund	Other Funds	Total
2021-23 Executive Budget	50.30	\$39,978,448	\$60,019,817	\$99,998,265
2019-21 Legislative Appropriations ¹	52.30	40,064,988	14,703,121	54,768,109
Increase (Decrease)	(2.00)	(\$86,540)	\$45,316,696	\$45,230,156

¹The 2019-21 biennium agency appropriation amounts have not been adjusted for additional federal funds authority of \$593,675, of which \$470,980 is related to Coronavirus (COVID-19) costs, resulting from Emergency Commission action during the 2019-21 biennium.

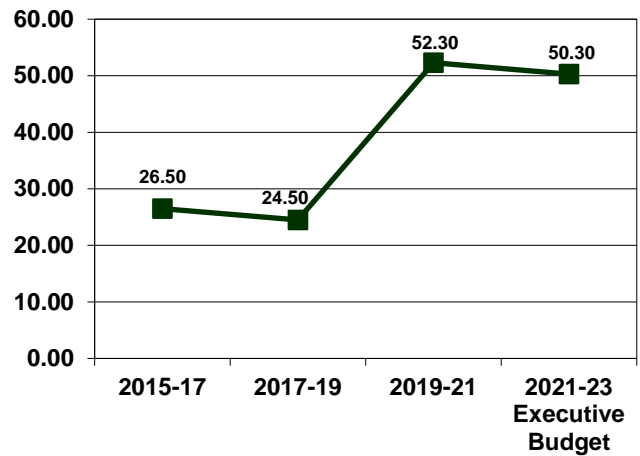
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2021-23 Executive Budget	\$39,978,448	\$0	\$39,978,448
2019-21 Legislative Appropriations	40,064,988	0	40,064,988
Increase (Decrease)	(\$86,540)	\$0	(\$86,540)

Agency Funding



FTE Positions



Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2021-23 Executive Budget	\$39,978,448	\$60,019,817	\$99,998,265
2021-23 Base Level	40,064,988	14,703,121	54,768,109
Increase (Decrease)	(\$86,540)	\$45,316,696	\$45,230,156

Attached as an appendix is a detailed comparison of the executive budget to the agency's base level appropriations.

Executive Budget Highlights

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which \$256,821 is for salary increases, \$2,442 is for health insurance increases, and \$32,132 is for retirement contribution increases	\$291,395	\$0	\$291,395
2. Removes funding for 1 FTE assistant program supervisor position (\$174,335) and 1 FTE administrative assistant II position (\$118,279)	(\$292,614)	\$0	(\$292,614)
3. Adds funding for the state agency Capitol grounds rent proposal	\$169,313	\$0	\$169,313
4. Adds federal funding for an apprenticeship grant program. The funding will be transferred to Lake Region State College for the administration of the program. In August 2020, the Emergency	\$0	\$300,000	\$300,000

Commission and Budget Section approved a request to accept and spend \$122,695 of federal funds for this program for the remainder of the 2019-21 biennium.

5. Adds funding for the cost to continue career and technical education course cost reimbursement rates at schools (27 percent) and area career and technical centers (40 percent). Secondary grants from the general fund totals \$25,687,780.	\$1,000,000	\$0	\$1,000,000
6. Removes funding for postsecondary grants	(\$256,982)	\$0	(\$256,982)
7. Reduces funding for the adult farm management program, to provide a total of \$1,756,138 from the general fund	(\$138,111)	\$0	(\$138,111)
8. Reduces funding for workforce training, to provide a total of \$1,900,000 from the general fund	(\$100,000)	\$0	(\$100,000)
9. Reduces funding for temporary Center for Distance Education salaries. Center for Distance Education funding totals \$8,842,998, of which \$5,792,998 is from the general fund and \$3,050,000 is from the independent studies operating fund.	(\$630,119)	\$0	(\$630,119)
10. Adds one-time funding from bond proceeds for a career academy grant program	\$0	\$45,000,000	\$45,000,000

**Other Sections Recommended to be Added in the Executive Budget
(As Detailed in the Attached Appendix)**

Career academy competitive matching grant program - Section 3 would identify \$45 million of one-time funding from bonding proceeds to the Department of Career and Technical Education for the purpose of providing competitive workforce development grants to build career academies, with a maximum of \$15 million being allowed per project, for the 2021-23 biennium. A committee consisting of the leaders or designees of the Department of Career and Technical Education, Department of Commerce, Job Service North Dakota, and Department of Public Instruction would develop a competitive process in consultation with the Workforce Development Council, Economic Development Foundation, and the Career and Technical Education Board, to distribute the funds with a required 1-to-1 match from private sector or political subdivision funds.

Line item transfers - Section 4 would authorize the Office of Management and Budget to transfer funds between line items in Section 1 as requested by the Department of Career and Technical Education during the 2021-23 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

The operational audit for the Department of Career and Technical Education conducted by the State Auditor's office for the period ending June 30, 2019, identified no significant audit findings.

Major Related Legislation

House Bill No. 1083 - Provides an exemption to the requirement that high school students obtain a grade of at least a "C" for credit units earned during a semester, quarter, or term that includes, March, April, or May 2020 for consideration of career and technical education scholarships.

Department of Career and Technical Education - Budget No. 270
Senate Bill No. 2019
Base Level Funding Changes

	Executive Budget Recommendation			
	FTE Positions	General Fund	Other Funds	Total
2021-23 Biennium Base Level	52.30	\$40,064,988	\$14,703,121	\$54,768,109
2021-23 Ongoing Funding Changes				
Base payroll changes		(\$1)	\$23,018	\$23,017
Salary increase		256,821		256,821
Health insurance increase		2,442		2,442
Retirement contribution increase		32,132		32,132
Removes 1 FTE assistant program supervisor position	(1.00)	(174,335)		(174,335)
Removes 1 FTE administrative assistant II position	(1.00)	(118,279)		(118,279)
Reduces funding for temporary salaries		(17,688)	(8,712)	(26,400)
Reduces funding for operating expenses		(62,207)		(62,207)
Adds funding for state agency Capitol grounds rent proposal		169,313		169,313
Adds funding for Microsoft Office 365 license expenses		474	2,390	2,864
Transfers STEM funding from operating to secondary grants				0
Adds federal funding for an apprenticeship grant program			300,000	300,000
Adds funding for costs to continue school reimbursement rates		1,000,000		1,000,000
Reduces funding for Marketplace for Kids		(50,000)		(50,000)
Remove funding for postsecondary grants		(256,982)		(256,982)
Reduces funding for adult farm management		(138,111)		(138,111)
Reduces funding for workforce training		(100,000)		(100,000)
Reduces funding for Center for Distance Education rent			(152,500)	(152,500)
Adds funding for Center for Distance Education IT expenses			152,500	152,500
Removes temporary Center for Distance Education salaries		(630,119)		(630,119)
Total ongoing funding changes	(2.00)	(\$86,540)	\$316,696	\$230,156
One-time funding items				
Adds funding to bond for a career academy grant program			\$45,000,000	\$45,000,000
Total one-time funding changes	0.00	\$0	\$45,000,000	\$45,000,000
Total Changes to Base Level Funding	(2.00)	(\$86,540)	\$45,316,696	\$45,230,156
2021-23 Total Funding	50.30	\$39,978,448	\$60,019,817	\$99,998,265
<i>Total ongoing changes as a percentage of base level</i>	(3.8%)	(0.2%)	2.2%	0.4%
<i>Total changes as a percentage of base level</i>	(3.8%)	(0.2%)	308.2%	82.6%

Other Sections in Department of Career and Technical Education - Budget No. 270

	Executive Budget Recommendation
Career academy competitive matching grant program	Section 3 would identify \$45 million of one-time funding from bonding proceeds to the Department of Career and Technical Education for the purpose of providing competitive workforce development grants to build career academies, with a maximum of \$15 million being allowed per project, for the 2021-23 biennium. A committee consisting of the leaders or designees of the Department of Career and Technical Education, Department of Commerce, Job Service North Dakota, and Department of Public Instruction would develop a competitive process in consultation with the Workforce Development Council, Economic Development Foundation, and the Career and Technical Education Board, to distribute the funds with a required 1-to-1 match from private sector or political subdivision funds.

Other Sections in Department of Career and Technical Education - Budget No. 270

Executive Budget Recommendation

Line item transfers

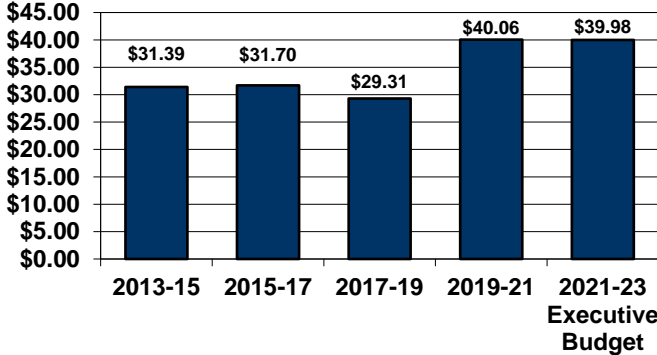
Section 4 would authorize the Office of Management and Budget to transfer funds between line items in Section 1 as requested by the Department of Career and Technical Education during the 2021-23 biennium.

Department 270 - Department of Career and Technical Education

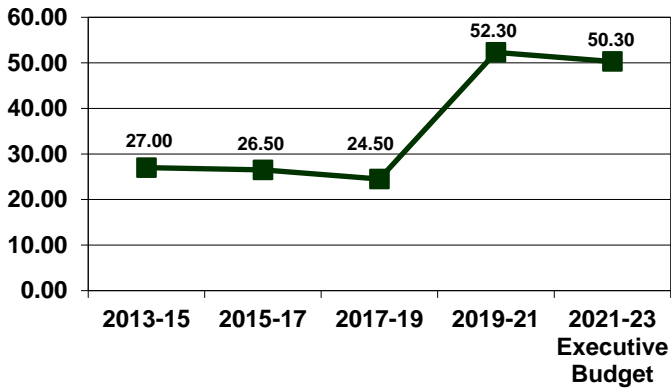
Historical Appropriations Information

Ongoing General Fund Appropriations Since 2013-15

Ongoing General Fund Appropriations (in Millions)



FTE Positions



Ongoing General Fund Appropriations					
	2013-15	2015-17	2017-19	2019-21	2021-23 Executive Budget
Ongoing general fund appropriations	\$31,392,916	\$31,698,298	\$29,306,283	\$40,064,988	\$39,978,448
Increase (decrease) from previous biennium	N/A	\$305,382	(\$2,392,015)	\$10,758,705	(\$86,540)
Percentage increase (decrease) from previous biennium	N/A	1.0%	(7.5%)	36.7%	(0.2%)
Cumulative percentage increase (decrease) from 2013-15 biennium	N/A	1.0%	(6.6%)	27.6%	27.3%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2015-17 Biennium

- 1. Added funding to continue Cass County Area Technology Center \$500,000
- 2. Added funding to increase reimbursement rates and for secondary and postsecondary career and technical education programs \$700,000
- 3. Added funding for new and expanding programs to increase course offerings \$700,000
- 4. Reduced funding for grants, including STEM program grants (\$160,000), STEM network (\$140,000), and other grant adjustments (\$10,436) (\$310,436)
- 5. Added funding for a STEM advancement initiative \$93,450

2017-19 Biennium

- 1. Removed 1 FTE assistant program supervisor position and related funding of \$157,200 and 1 FTE program coordinator position (funding of \$171,382 from the general fund for this position was removed as part of the August 2016 budget reductions) (\$157,200)
- 2. Restored salaries and wages funding from the general fund removed as part of the August 2016 budget reductions \$168,618
- 3. Adjusted funding for postsecondary grants, including a \$290,500 transfer from the postsecondary grants line item to the grants line item for STEM grants related to K-12 education (\$364,906)
- 4. Adjusted funding for adult farm management grants (\$80,616)
- 5. Adjusted funding for workforce training grants to provide total funding of \$2 million from the general fund (\$803,500)
- 6. Adjusted funding for state-funded grants, including a \$290,500 transfer from the postsecondary grants line item to the grants line item for STEM grants related to K-12 education (\$883,934)
- 7. Removed ongoing funding for the Marketplace for Kids program. (Funding of \$300,000 was added as a one-time appropriation, of which \$250,000 was from the general fund and \$50,000 was from the foundation aid stabilization fund.) (\$250,000)

2019-21 Biennium

1. Removed 1 FTE assistant program supervisor position	(\$159,737)
2. Added 28.80 FTE and related operating expenses for the Center for Distance Education transferred from the Information Technology Department, including \$102,759 from the general fund for new Center for Distance Education enrollments. The total amount added was \$9,068,816, of which \$3,050,000 was from the independent study operating fund.	\$6,018,816
3. Added funding for grants to school districts and area centers to provide total ongoing funding from the general fund of \$23,246,580	\$2,427,000
4. Reduced funding for part-time adult postsecondary grants (\$40,000) and STEM infusion grants (\$180,000)	(\$220,000)
5. Reduced funding for postsecondary grants to provide a total of \$256,982	(\$25,818)
6. Reduced funding for adult farm management grants to provide a total of \$1,894,249	(\$250,000)
7. Added funding for the Marketplace for Kids program	\$300,000
8. Added funding for new and expanding secondary programs	\$1,150,000
9. Added funding for cost to continue to maintain current reimbursement rates for the department's center expenditures, including instructor salaries and supplies	\$1,000,000

2021-23 Biennium (Executive Budget Recommendation)

1. Removes funding for 1 FTE assistant program supervisor position (\$174,335) and 1 FTE administrative assistant II position (\$118,279)	(\$292,614)
2. Adds funding for the state agency Capitol grounds rent proposal	\$169,313
3. Adds funding for the cost to continue career and technical education course cost reimbursement rates at schools (27 percent) and area career and technical centers (40 percent). Secondary grants from the general fund totals \$25,687,780.	\$1,000,000
4. Removes funding for postsecondary grants	(\$256,982)
5. Reduces funding for the adult farm management program, to provide a total of \$1,756,138 from the general fund	(\$138,111)
6. Reduces funding for workforce training, to provide a total of \$1,900,000 from the general fund	(\$100,000)
7. Reduces funding for temporary Center for Distance Education salaries. Center for Distance Education funding totals \$8,842,998, of which \$5,792,998 is from the general fund.	(\$630,119)

**GOVERNOR'S RECOMMENDATION FOR THE
DEPARTMENT OF CAREER AND TECHNICAL
EDUCATION AS SUBMITTED BY THE
OFFICE OF MANAGEMENT AND BUDGET**

SECTION 1. APPROPRIATION. The funds provided in this section, or so much of the funds as may be necessary, are appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, and from special funds derived from federal funds and other income, to the state board for career and technical education for the purpose of defraying the expenses of the state board for career and technical education, for the biennium beginning July 1, 2021 and ending June 30, 2023, as follows:

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Salaries and Wages	\$ 4,812,765	(\$126,531)	\$ 4,686,234
Operating Expenses	2,357,796	9,970	2,367,766
Grants	9,207,349	45,300,000	54,507,349
Grants-Secondary	24,587,780	1,100,000	25,687,780
Grants-Postsecondary	256,982	(256,982)	0
Adult Farm Management	1,894,249	(138,111)	1,756,138
Workforce Training	2,000,000	(100,000)	1,900,000
Marketplace for Kids	300,000	(50,000)	250,000
Center for Distance Ed	<u>9,351,188</u>	<u>(508,190)</u>	<u>8,842,998</u>
Total All Funds	\$54,768,109	\$45,230,156	\$99,998,265
Less Estimated Income	<u>14,703,121</u>	<u>45,316,696</u>	<u>60,019,817</u>
Total General Fund	\$40,064,988	(\$86,540)	\$39,978,448
Full-Time Equivalent Positions	52.30	(2.00)	50.30

SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO SIXTY-EIGHTH LEGISLATIVE ASSEMBLY. The following amounts reflect the 2021-23 one-time funding items included in the appropriation in section 1 of this Act:

<u>One-Time Funding Description</u>	<u>2019-21</u>	<u>2021-23</u>
Career Academies	\$ 0	\$45,000,000
Total All Funds	\$ 0	\$45,000,000
Total Special Funds	<u>0</u>	<u>45,000,000</u>
Total General Fund	\$ 0	\$ 0

The 2021-23 one-time funding amounts are not a part of the entity's base budget for the 2023-25 biennium. The department of career and technical education shall report to the appropriations committees of the sixty-eighth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2021 and ending June 30, 2023.

SECTION 3. CAREER ACADEMY COMPETITIVE MATCHING GRANT PROGRAM. The appropriation contained in section 1 of this Act includes the sum of \$45,000,000 for the purpose of providing competitive grants, with a maximum of \$15,000,000 per project, to build career academies throughout the state, for the biennium beginning July 1, 2021 and ending June 30, 2023. A committee comprised of the leaders or their designees of career and technical education, the department of commerce, job service North Dakota and the department of public instruction will develop a competitive process in consultation with the workforce development council, and the career and technical education board, to distribute the funds with a required one to one match from the private sector or political subdivision.

SECTION 4. TRANSFERS. Notwithstanding section 54-16-04, the director of the office of management and budget shall make transfers of funds between line items in section 1 of this act for the department of career and technical education as may be requested by the state director as determined necessary for activities that are proper and consistent with the provisions of this act.

2021 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee Roughrider Room, State Capitol

SB 2019
1/7/2021
Senate Appropriations

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Senator Holmberg opened the hearing on SB 2019 at 1:30. Senators Holmberg, Krebsbach, Wanzek, Bekkedahl, Poolman, Erbele, Dever, Oehlke, Rust, Davison, Hogue, Sorvaag, Mathern, and Heckaman were present.

Discussion Topics:

- Agency Overview

Wayde Sick, State Director, North Dakota Career and Technical Education – Oral and written testimony # 169, #170, #172, #173, #171.

Dr. Matthew Lonn, State Director, North Dakota Center Distance Education – Oral and written testimony #267.

Sara Vollmer, Train ND – Oral and written testimony in favor #32 and #271.

Kyle Olson, Farm Management Education, Bismarck State College – ND Farm Management brochure – Neutral Testimony #241

Robert Heitkamp, Marketplace for Kids – Oral and submitted testimony in favor #22.

Rocky W. Bateman, Farm Management Education, New Salem, ND – Oral and submitted testimony in favor #194.

Matt Purdue, ND Farmers Union – Submitted testimony #223.

Additional written testimony submitted:

Lyle Krueger, Asst. Director, Central Region Area Career & Technical Center (CRACTC) – Submitted testimony in favor #112.

Dave Farnsworth, Manager, Great River Energy and Reese Boehm, Train ND SW Advisory Board Member – Submitted testimony in favor #30.

Alexus Baxley, Executive Director, ND School Boards Association – Submitted testimony in favor # 36.

Todd M. Neurohr, Vice President, Security First Bank, Mandan, ND – Submitted testimony in favor #130

Jennifer Greuel, Economic Development Association of North Dakota – Submitted testimony in favor #156

Martin Kyle, Executive Director, Technology Council of North Dakota – Submitted testimony in favor #163

Denise Jonas, West Fargo Public Schools, Fargo, ND – Testimony in favor #203, 204, 205, 206.

John Richman, President, ND State College of Science – Testimony in favor #240.

Kenny Bahm, Asst. Vice President, Farm Credit Services, Mandan, ND – Testimony in favor # 238.

Kim Murphy, Great Northwest Area Career & Technical Center, Williston, ND – Testimony in favor # 249.

Michael Heilman, Executive Director, North Dakota Small Organized Schools – Testimony in favor #234.

Mitch Carlson, Superintendent, LaMoure Public School, LaMoure, ND – Testimony in favor #219.

In Opposition -

Dr. Steven Johnson, Superintendent, Lisbon Public School #19, Lisbon, ND – Testimony in opposition #246

Rose Laning, Committee Clerk



North Dakota Department of Career and Technical Education

2021-23 Legislative Budget Priorities

169

For the 67th Legislative Session, the North Dakota Department of Career and Technical Education (ND CTE) has identified the following as budget priorities. The following change packages are increases to the agency's budget. In addition to these increases, the agency, through efficiencies and other reductions, made a 10% reduction, as directed by the Governor's Office.

CHANGE PACKAGES

Cost to Continue – \$1.5 million

Currently, high school career and technical education programs are reimbursed at our comprehensive high schools at 27% and 40% at our area Career and Technology Centers (CTCs). In order to account for increases in costs and maintain reimbursement rates, ND CTE is requesting \$1.5M for cost to continue.

New and Expanding – \$1.5 million

Every year, new career and technical education programs are introduced and make substantial expansions. In order to support these programs, but not at the expense to reimbursement of existing programs, ND CTE is requesting \$1.5 million.

New and Expanding CTE Centers – \$40 million

Currently, there are ten regional area Career and Technology Centers (CTCs) in North Dakota. Instruction at the CTCs varies. It can be provided face-to-face, online, or through interactive television (ITV). Five of the CTCs are considered brick and mortar centers. The other five are considered virtual, meaning they lack a central physical space. A total of eight of the ten CTCs provide distance instruction, whether through ITV and/or online. The virtual centers are almost exclusively distance, but still provide a level of face-to-face hands-on instruction for every program.

The ND CTE approves the operation of the CTCs, approves their programming and supports them through funding and technical assistance. The CTCs also raise revenue through center membership and course enrollment fees. The ten area CTCs currently have a school district membership totaling 100 school districts.

Career and technical education is available to every high school student in the state; what the CTCs can provide is career specific coursework. This can be done because a CTC is able to scale coursework by providing courses to multiple school districts at the same time.

Another benefit is that CTCs employ an administrator whose primary focus is career and technical education. This focus allows the administrator time to build quality programs, foster employer partnerships, and advocate for career and technical education. It is not that local district superintendents and principals do not do a good job at this, they simply don't often have the time for that level of commitment.

The request is to provide funding to expand access to CTCs through center expansion and start up grants. This would be a \$40 million competitive matching grant program. To ensure partnership and industry alignment, applications will be reviewed by a team comprised of representatives from the ND CTE, Department of Public Instruction, Job Service ND, the Department of Commerce, and the ND Workforce Development Council. This idea stems from the success that has been seen from the current CTCs. Applicants will be required to ensure there is industry and community support, higher education partnership including dual credit and postsecondary offerings, and commitment from school districts to agree to partner with the center.

New and Expanding CTE Center Operating – \$2 million

The intent of this change package is to support the operating of any new area CTCs that happen to come online during the 2021-23 biennium.

Revised Funding Model – \$3 million

The ND CTE has been exploring various models of funding career and technical education programs. The intent of this funding is to support all programs equally. Currently, Family and Consumer Science Education and Business Education programs receive lower reimbursement rates and are not totally funded. Also, the state does not currently support Middle School CTE programs. This funding could provide opportunities to expand access.

Center for Distance Education – Funding Student Choice and Opportunity – \$1,051,449

Center for Distance Education (CDE) exists to guarantee that every K-12 North Dakota student, regardless of where they live, has the opportunity to learn what they want, when they want. CDE is requesting \$6.7 million in general funds to ensure that over 11,000 online courses can be taken by all of ND's K-12 students and over 3,400 of ND's students can continue to have access to blended learning opportunities through project-based learning labs. The executive budget reduced CDE's general fund appropriation to \$5.8 million from its 19-21 biennium level of \$6.3 million. This reduction has the potential to reduce CDE's capacity by 1,500 online course enrollments at a time when need of CDE's services continues to grow.

North Dakota Department of Career and Technical Education

2021-23 Biennium Budget
Senate Appropriations
January 7, 2021



North Dakota Century Code- NDCTE

NDCC 15-20.1 – Career and Technical Education

- Administer State and Federal Funds to support CTE programs
- Facilitate Career Development Program
- Provide a ND Elementary Student Entrepreneurship Program

NDCC 15-20.2 – Area Career and Technology Centers

- Provides authority to operate and governance structure

NDCC 15-20.4 – Postsecondary Educational Institutions

- Provides authority to CTE to approve postsecondary career schools



North Dakota Century Code - NDCDE

15-19-01: The state, through the Center for Distance Education, shall provide:

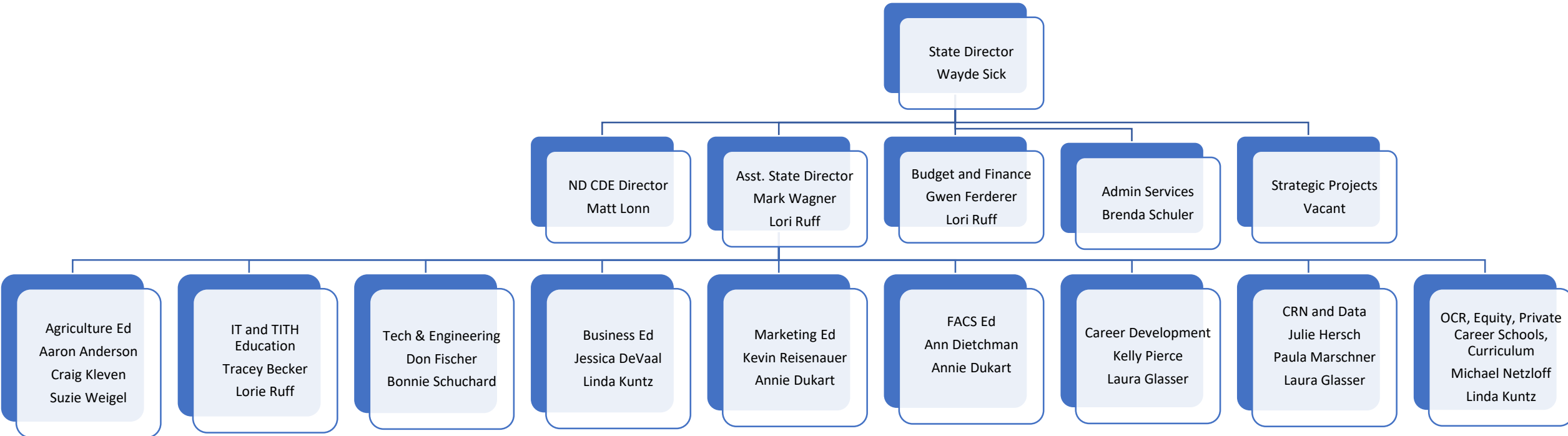
- Kindergarten through grade twelve courses,
- Comprehensive educational support,
- High school diplomas.

Mission of ND Career and Technical Education

The mission of the State Board for Career and Technical Education is to work with others to provide all North Dakota citizens with the technical skills, knowledge, and attitudes necessary for successful performance in a globally competitive workplace.



ND CTE Org Chart



NDCTE Audit Findings

Department of Career and Technical Education Audit

Completed March 2, 2020

- Audit included reviewing financial transactions, expenditures, blanket bond coverage and appropriation requirements for the 2017-19 Biennium.
- No areas of concern were identified.



2019-21 NDCTE Accomplishments

Perkins V

- Development of Perkins V State Plan
 - Extensive Stakeholder Feedback
- Development of the Comprehensive Local Needs Assessment
 - Use of funds determined on:
 - Student performance and enrollment
 - Alignment with in-demand, high wage, high skill jobs
- Selection of Work-based Learning as HS Performance Indicator
- Innovation Grant Program funded by Federal Perkins



2019-21 NDCTE Accomplishments

Agency Accomplishments

- Automating Process
- Evaluating Staff Positions
 - Development of a Strategic Projects Manager position
- COVID-19 Response
 - Virtual CTSO Events
 - Virtual Professional Development Conference
 - Virtual School Visits
 - Collection of Distance Learning Resources
 - Re-evaluating office needs in the Capital



2019-21 NDCTE Accomplishments

Growth of Programs

	2017		x	2018		x	2019		x	2020		x	2021	
	Number of Programs	Increase/ (Decrease)		Number of Programs	Increase/ (Decrease)		Number of Programs	Increase/ (Decrease)		Number of Programs	Increase/ (Decrease)		Number of Programs	Increase/ (Decrease)
Agriculture	85	7		86	1		93	7		91	(2)		90	(1)
Business Education	87	(1)		89	2		87	(2)		89	2		92	3
Career Development	70	3		75	5		79	4		93	14		95	2
Family & Consumer Sciences	96	1		95	(1)		98	3		96	(2)		98	2
Family & Consumer Occupational	17	0		16	(1)		14	(2)		12	(2)		14	2
Health Sciences	25	0		25	0		26	1		25	(1)		26	1
Information Technology	13	0		13	0		13	0		12	(1)		14	2
Local Administration/Operating	15	0		15	0		14	(1)		14	0		15	1
Marketing Education	24	1		23	(1)		25	2		26	1		25	(1)
Technology & Engineering	51	(5)		48	(3)		47	(1)		47	0		47	0
Trade & Industry	68	(4)		70	2		77	7		75	(2)		77	2
	551	2		555	4		573	18		580	7		593	13
New Programs		12			5			17			27			11



2019-21 NDCTE Accomplishments

Secondary (9-12)

- 23,007 Enrolled
- 8,129 Concentrators
 - 72% of all 9-12 Grade Students Enroll in a CTE course
 - 25% of all 9-12 Grade Students are CTE Concentrators

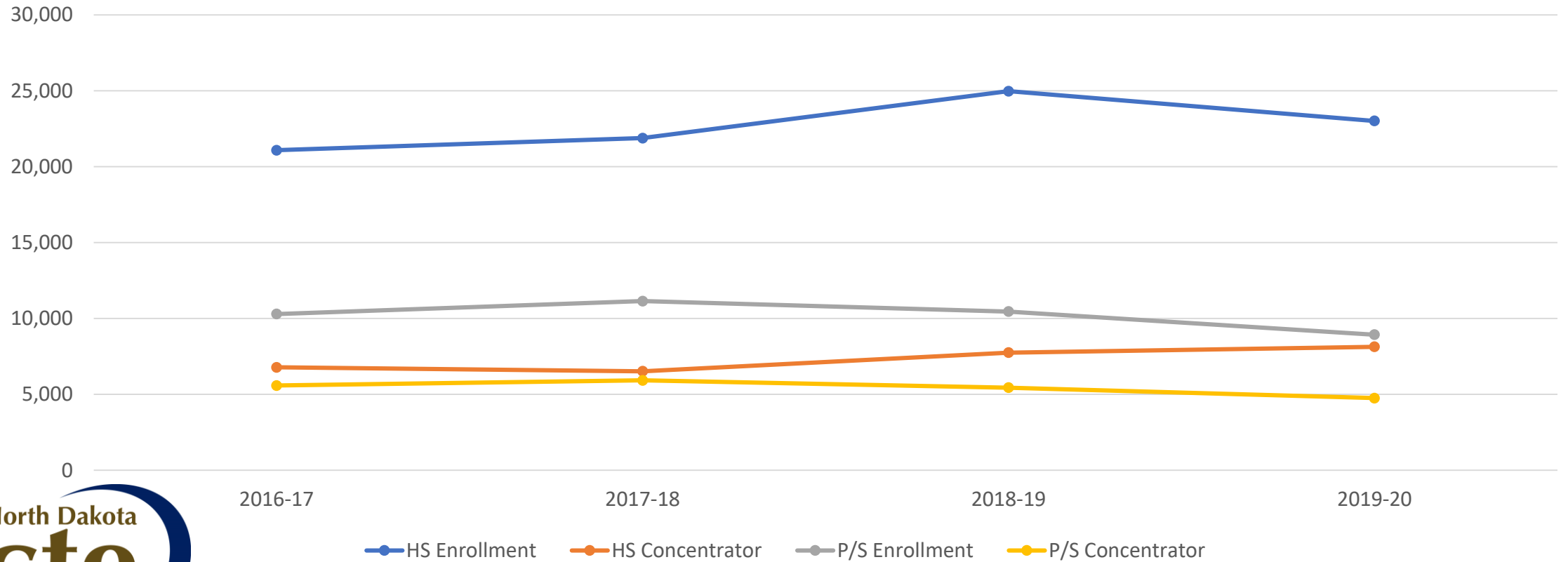
Postsecondary

- 8929 Enrolled
- 4752 Concentrators



2019-21 NDCTE Accomplishments

CTE Enrollment and Concentrator Trends



2019-21 NDCTE Accomplishments

95.87%

In 2019, 95.87% of CTE Concentrators in North Dakota graduated on time compared to 88% of all high school students.

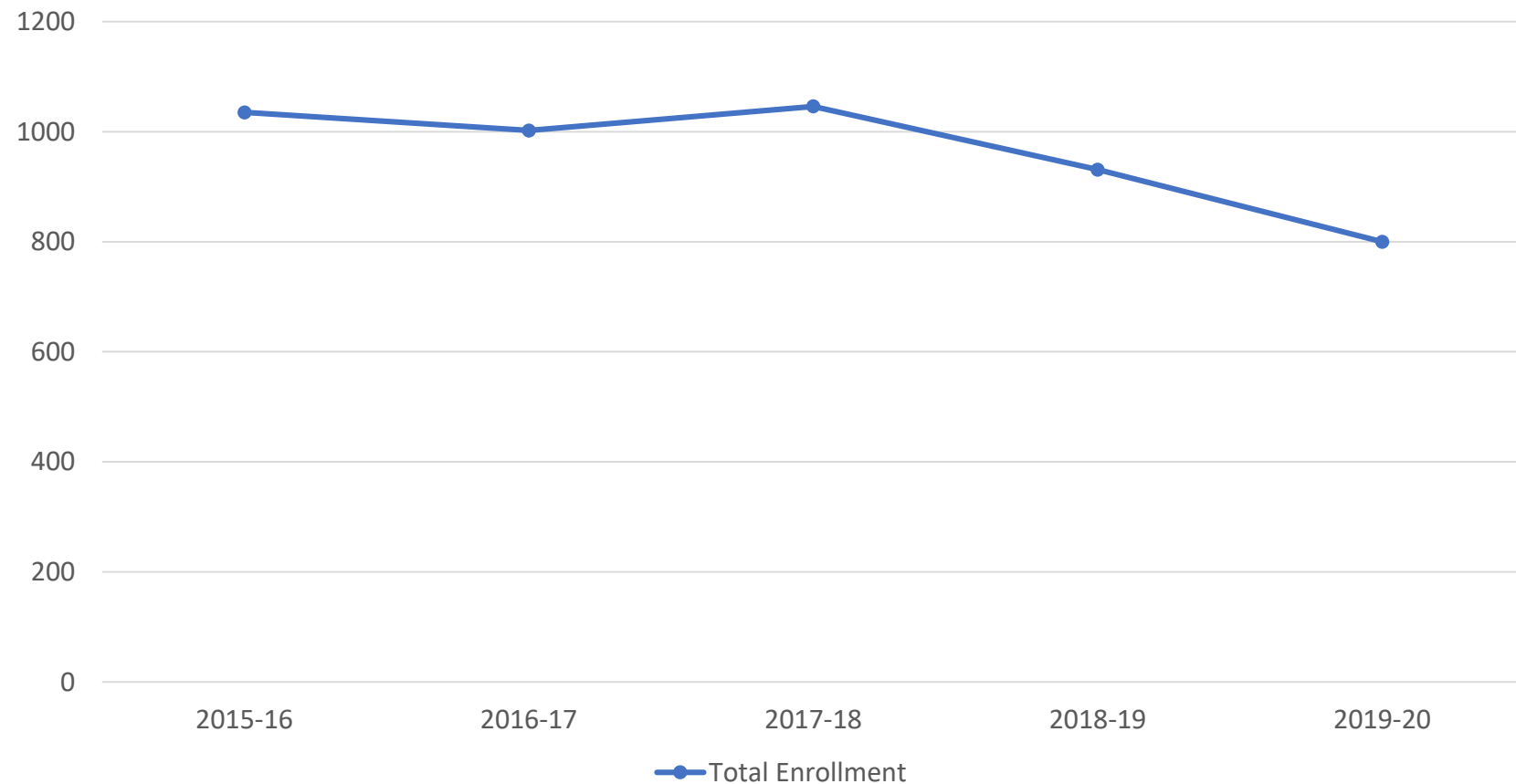
	2016-17 Statewide	2016-17 CTE Concentrators	2017-18 Statewide	2017-18 CTE Concentrators	2018-19 Statewide	2018-19 CTE Concentrators
Four Year Graduation Rate	87%	95.6%	88%	94.9%	88%	95.87%
Demographics						
Asian American	78%	92%	89%	89.29%	86%	97.06%
Black	75%	94.59%	76%	96.83%	81%	92.75%
Hispanic	76%	87.32%	75%	90.91%	74%	88.89%
Native American	67%	90.55%	72%	91.1%	72%	91.26%
Native Hawaiian or Pacific Islander	95%	83.33%	90%	100%	84%	100%
White	91%	96.23%	91%	95.47%	92%	96.61%



2019-21 NDCTE Accomplishments

North Dakota Farm Management Education

ND Farm Management Education Enrollment



2021-23 CTE Goals and Opportunities

- Development and expansion of programs at our High Schools and Existing Centers
- Increase enrollee and concentrator numbers
- Assist in the development of three additional area career and technology centers
 - Development of at least three new programs at each center, serving multiple districts
- Study and potentially restructure CTE funding model
- Coordinate distance education
- Secondary/Post-Secondary alignment
 - Expand Dual Credit CTE Options
- Expand Work-based Learning Opportunities
- Increase ND Farm Management Education Enrollment



Base Budget Comparisons

Budget Line Items	2019-21	2021-23	Variance
Salaries	\$4,812,765	\$4,539,287	(\$273,478)
Operating Expenses	\$2,357,796	\$2,295,589	(\$62,207)
Grants - Secondary	\$24,587,780	\$24,587,780	\$0
Grants - Federal	\$9,207,349	\$9,207,349	\$0
Postsecondary Grants	\$256,982	\$0	(\$256,982)
ND Farm Management Education	\$1,894,249	\$1,756,138	(\$138,111)
Workforce Training	\$2,000,000	\$1,900,000	(\$100,000)
Marketplace for Kids	\$300,000	\$250,000	(\$50,000)
Center for Distance Education	\$9,351,188	\$8,698,551	(\$652,637)
Total Funds	\$54,768,109	\$53,234,694	(\$1,533,415)
General Funds	\$40,064,988	\$38,517,267	(\$1,547,721)
Federal Funds	\$11,498,147	\$11,512,453	\$14,306
Special Funds	\$3,204,974	\$3,204,974	\$0
Total Funding	\$54,768,109	\$53,234,694	(\$1,533,415)
FTE Count	52.3	50.3	(2)



Agency Budget vs. Executive Budget – 2021-23

Budget Line Items	Agency Request	Executive Budget
Salaries	\$4,539,287	\$4,686,234
Operating Expenses	\$2,195,589	\$2,367,766
Grants - Secondary	\$72,687,780	\$25,687,780
Grants	\$9,507,349	\$54,507,349
ND Farm Management Education	\$1,756,138	\$1,756,138
Workforce Training	\$1,900,000	\$1,900,000
Marketplace for Kids	\$250,000	\$250,000
Center for Distance Education	\$9,750,000	\$8,842,998
Total Funds	\$102,586,143	\$99,998,265
General Funds	\$47,568,716	\$39,978,448
Federal Funds	\$11,812,453	\$11,814,843
Special Funds	\$43,204,974	\$48,204,974
Total Funding	\$102,586,143	\$99,998,265
FTE Count	50.30	50.30



Change Package Requests – 2021-23

Budget Line Items	Agency Requested	Executive Budget
Cost to Continue – Secondary Grants – Add to Base	\$1,500,000	\$1,000,000
New and Expanding – Secondary Grants – Add to Base	\$1,500,000	\$0
Funding for CDE to accommodate enrollment growth – Add to Base	\$1,051,449	\$0
Funding to Establish new CTE Centers – One Time	\$40,000,000	\$45,000,000
Reimbursement for new CTE Centers – Add to Base	\$2,000,000	\$0
New Funding Formula – Add to Base	\$3,000,000	\$0
Transfer Funds from Operating to Grants – STEM Network	\$100,000	\$100,000



COVID-19 Funding

- Center for Distance Education - \$270,980 – Fund adjunct teachers due to surge in enrollments
- Career and Technical Education - \$200,000 – Funding for Area Career and Technology Centers to purchase PPE, cleaning supplies and equipment (IT and eliminate multiple student use)



Visionary Framework

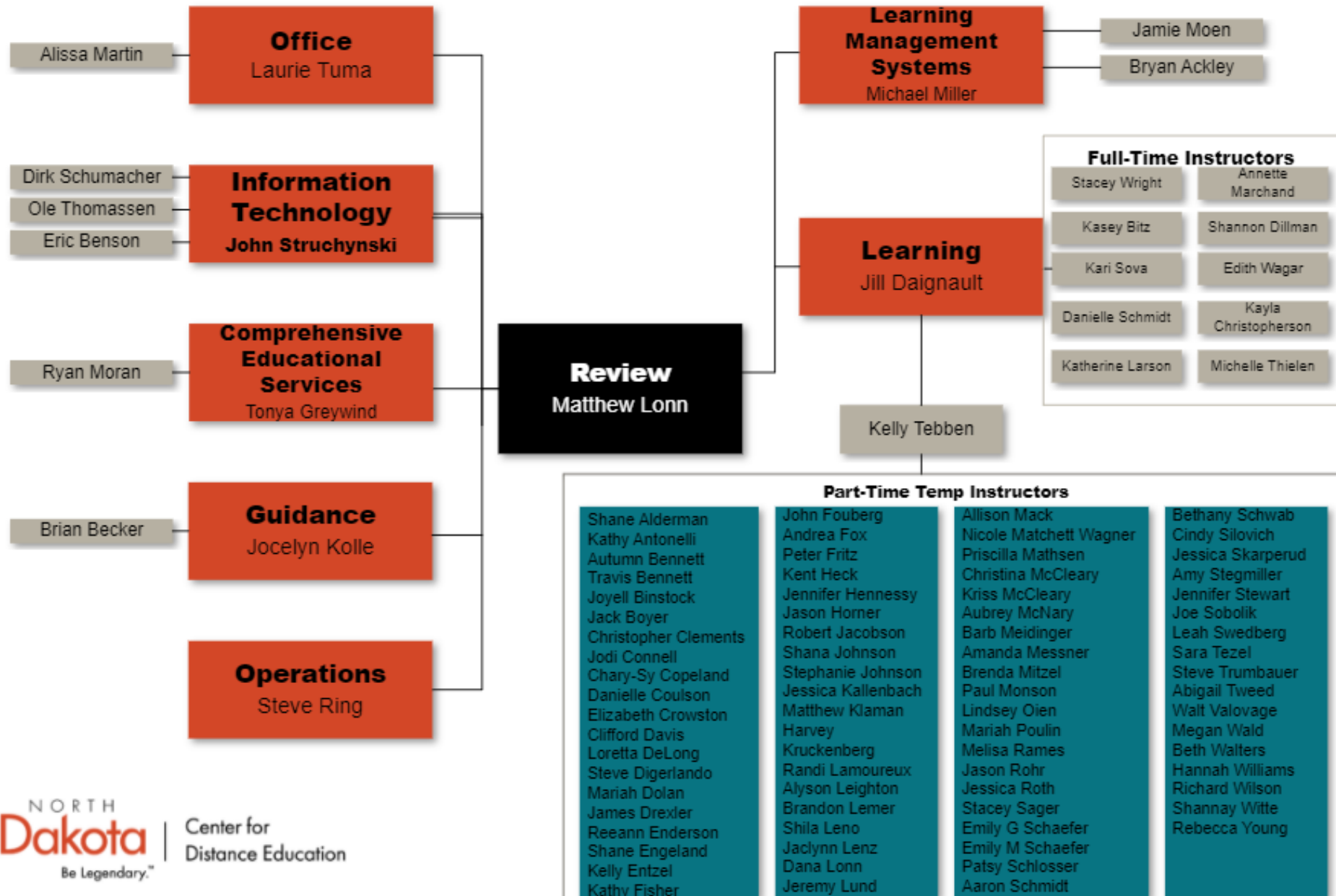
Purpose: To provide educational opportunities for North Dakota's learners.

Mission: To ensure that ALL ND students regardless of location have access to educational opportunities that meet or exceed customer expectations for:

- the quality of curriculum,
- ongoing contact time with highly qualified instructors,
- monitoring course delivery efficiency, effectiveness, and
- student learning.

Envisioned Future: CDE will become a recognized leader in education because CDE helps, serves, nurtures, guides, and encourages every North Dakota learner, providing them with the opportunity to take charge of their own learning.

North Dakota Center for Distance Education Organizational Chart



ND CDE Audit Findings Summary

North Dakota Information Technology Department Audit Findings

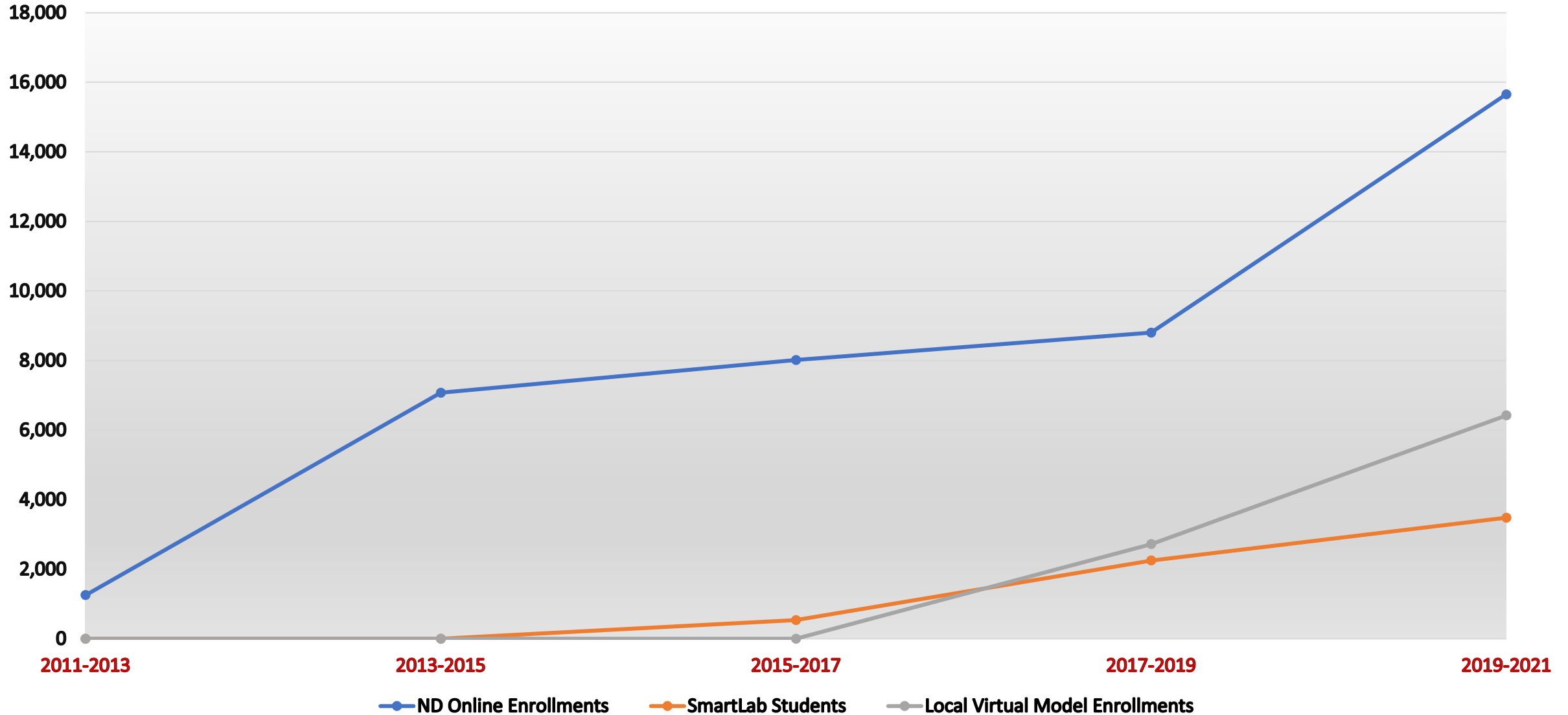
Completed June 30th, 2018

1. Why the audit was conducted:
 - a) The purpose of this audit was to determine that financial transactions including expenditures were made in accordance with law and appropriation requirements.
2. What was found:
 - a) The North Dakota Information Technology Department complied with law and appropriation requirements except for inadequate annual inventory procedures surrounding assets.
3. Center for Distance Education:
 - a) CDE was found to be in full compliance and no additional action was needed on the agencies part. Full documentation is attached.

CDE Key Programs

1. Online Courses: nearly 400 different online ½ credit courses for grades K-12 taught by ND highly qualified instructors and all curriculum approved by NDDPI.
 - a) 15,651 Enrollments
 - b) 84% Successful completion rate.
2. SmartLab Program: 19 different hands-on, project-based learning labs across the state to over 3,300 students.
3. Local Virtual Model: schools and organizations using CDE's learning management system to provide their own online instruction to students.
 - a) 6,418 Enrollments

Performance Per Biennium



2021 – 2023 CDE Opportunities

1. Provide greater choice and opportunity for more kids (3% annually).

- a) Over 110,000 ND students.
- b) Courses that prepare students for industry recognized certifications.

2. Improve student learning.

- a) Increase successful completion rates to over 90% by improving online instruction.
- b) New courses that offer adaptive technology and competency-based learning.
- c) Newly installed and support learning labs (5 annually).

3. Internal efficiency improvements

- a) Rapid enrollment feature, accounting practices, customer purchase experience.
- b) IT support responsiveness.

Biennium Request Comparison

2021-2023 Request

- 28.5 FTE's
- Total Budget:
\$9,750,000
 - General Funds:
\$6,700,000 (+6%)
 - Spending
Authority:
\$3,050,000
 - 11,087 Online
Enrollments

2019 – 2021 Budget

- 28.5 FTE's
- Total Budget:
\$9,351,188
 - General Funds:
\$6,301,188
 - Spending
Authority:
\$3,050,000
 - 10,387 Online
Enrollments

2021-2023 Executive

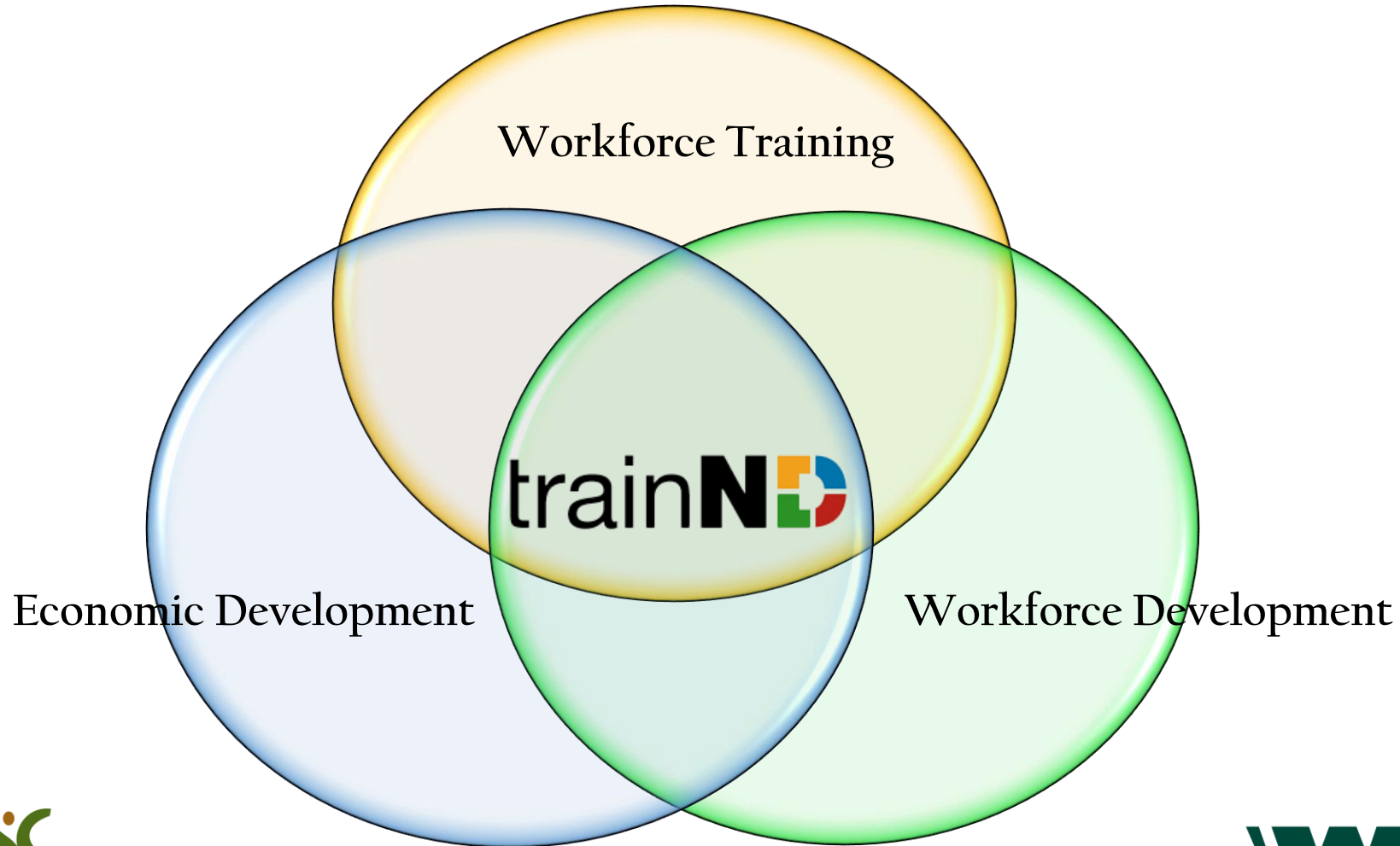
- 28.5 FTE's
- Total Budget:
\$8,842,998
 - General Funds:
\$5,792,998 (-8%)
 - Spending
Authority:
\$3,050,000
 - 9,543 Online
Enrollments

CDE Pricing Strategy for Services

- Prices are set at an amount that allows CDE to cover operational expenses needed for a new enrollment and a small portion of adjunct salaries.
- Prices must allow CDE to compete with lower quality out of state providers.
- Current ND student pricing
 - \$179 per enrollment
 - \$149 NDSOS membership schools
 - \$189 Ag enrollments
 - \$209 AP Courses
 - \$141.26 Dual Credit per credit
 - \$10 - \$89 LVM courses
 - \$5,000 for SmartLab support and install

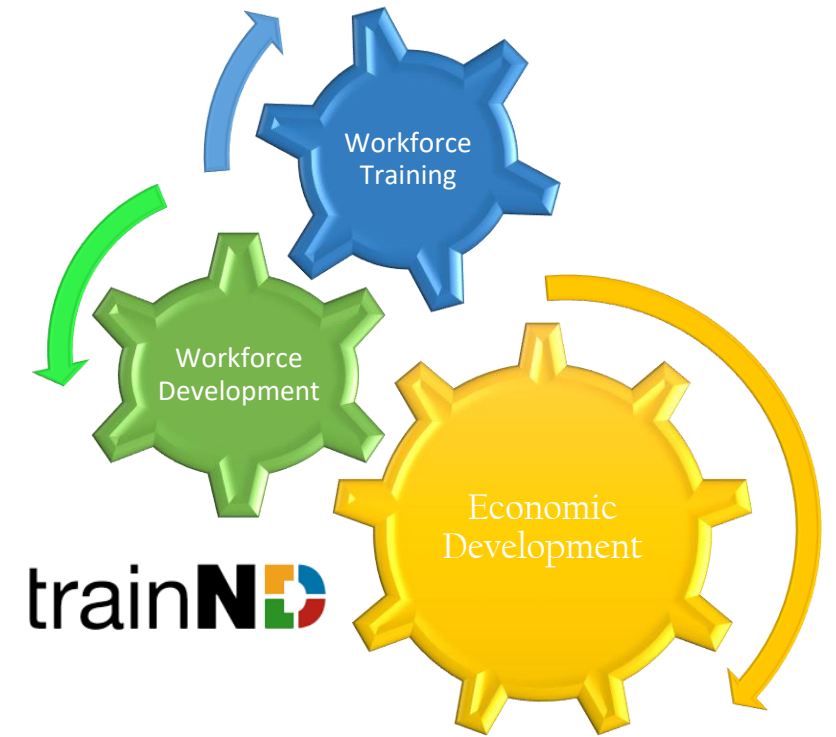
An Investment into North Dakota

Building a Sustainable Workforce



A Return on Investment

- Workforce Development
 - Brings Trained People Into the Workforce
- Workforce Training
 - Brings greater skills to incumbent workers
- Economic Development
 - Brings growth to communities and state



Need is Greater than Ever

- Short term programming for workforce development
- Qualified workers help drive economic development
- Incumbent workers to gain new skills for enhanced work
- Economic recovery amid a pandemic
- Continued funding to assist with program expansion
- Economic diversity within North Dakota
- Investment in our workforce and business growth
- 74% of businesses in North Dakota have less than 10 people



Workforce Program Impacts

- Certified Nursing Assistant (CNA Programs)
 - Statewide programming
 - Stackable Certificate & Pathway to Education
 - Job Service WIOA Funding Eligible
 - 326 students
 - 36 classes
 - 636 CNA State Board Exams (Registered Students & Challenge Exams)
 - Pre CNA
 - Fast Track Temporary CNA
 - Quality Service Provider (In Home Care)



Workforce Program Impacts

- Commercial Drivers License (CDL Programs)
 - Statewide programming
 - Stackable Certificate & Pathway to Education
 - Job Service WIOA Funding Eligible/Veterans Funding
 - ND Commerce Grant to Expand CDL programming
 - 134 students
 - 22 classes

Williston, Dickinson, Minot, Fargo, Bismarck, Devils Lake





NDUS Annual Enrollment Summary FY20

- Non-Credit TrainND Headcount 19,008
- Total Community College Headcount 35,038
- Percentage of Headcount from TrainND 54%
- Total NDUS Headcount (11 Institutions) 74,014
- Percentage Headcount from TrainND 26%

TrainND Annual Report FY20

- Number of Businesses Receiving Training in FY20 1,412
- Number of Businesses with less than 50 employees 1,026
- Number of Unduplicated Employees receiving Training 19,008



Changing Modes of Delivery

- Accelerated changes to the way people learn
- Flexible with new costs in transition
- Increased options for companies and workers
 - Distance Learning
 - Synchronous/Asynchronous
 - Virtual
 - Hybrid
 - Recorded Presentations
 - Traditional Face-to-Face/In person
 - Mobile labs





Virtual
Delivery
Options

Programming Growth Areas



Stackable Certificates
Pathways to Education

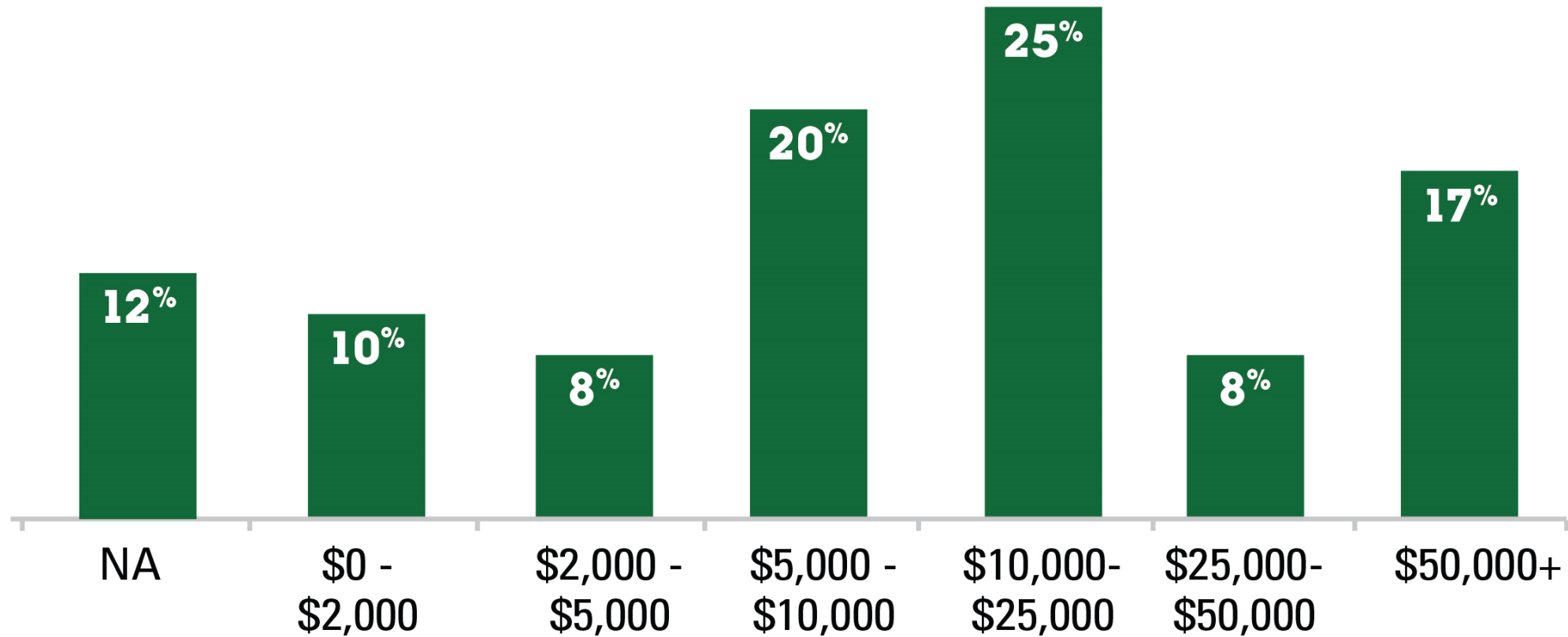
TrainND Request

Request to continue funding at \$2 million based on recommendation from Workforce Development Council

- Reinvention to education
- Expansion of programming
- Flexible modes of delivery
- Delivery at the speed of business

The logo for TrainND features the word "train" in a lowercase, sans-serif font, followed by a large, bold "N". To the right of the "N" is a stylized "D" composed of four colored segments: orange, blue, green, and red.

ND Farm Management Education



What is the annual economic gain of participating in the Farm Management program for your farm/ranch?



The Entrepreneurs of Tomorrow Are in Our Schools and Homes Today!

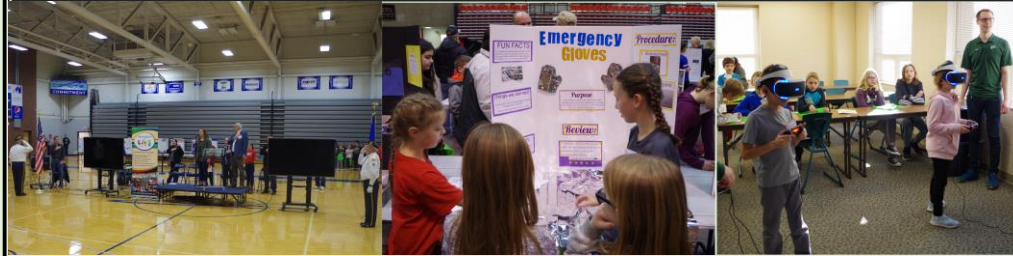


Mission:

To encourage youth to explore entrepreneurship and self-employment through the recognition and development of their inventive, creative thinking and problem-solving skills.

Vision:

Our vision is for every student to receive entrepreneurship education and encouragement to become a lifelong partner in building stronger communities.



2021/22 Goals

- ✓ Host First Virtual Education Day at DSU 2/15/21
- ✓ First "LIVE Virtual" Education Day Bowman/Fargo 3/15/21
- ✓ Regular "In-Person" Education Day Williston 4/27/21
- ✓ Regular "In-Person" Education Day Jamestown 5/11/21
- ✓ Regular "In-Person" Education Day Wahpeton 5/17/21

HOW DOES MFK ALIGN WITH CTE'S VISION?

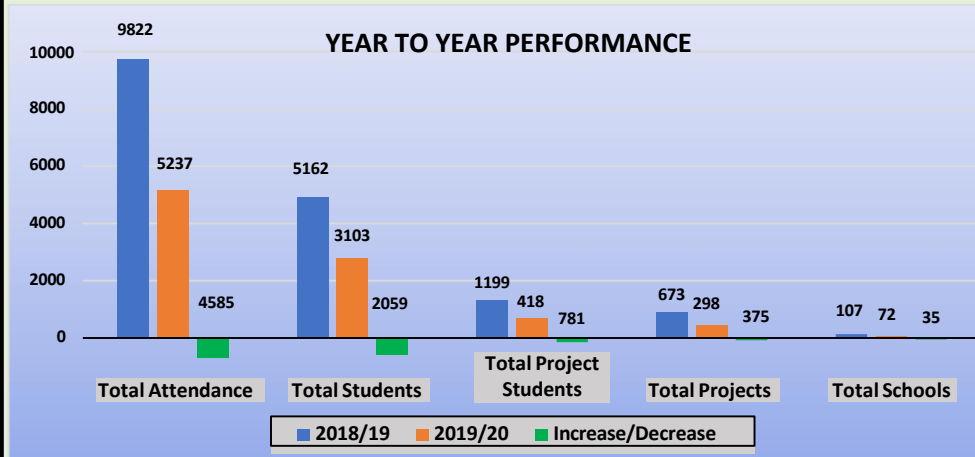
MFK, in partnership with CTE, annually provides ***“entrepreneurial educational experiences based on labor market information relating to the needs of North Dakota's business, industry and the private sector”***. This is accomplished using feedback from students, presenters, business and industry. This information is used to target future programming in the greatest needs areas AND careers that students WANT to get involved with. MFK is ***“committed to providing career awareness”*** by partnering directly with Career & Tech Centers, Colleges, and industry leaders using their knowledge, equipment and processes to introduce these career choices to thousands of students across the state who may never have this opportunity. This allows our students to use ***“the latest methods of instruction while using up-to-date technology”***. MFK's focus on elementary students in grades 3-8 is the only Statewide program that ***“provides youth with exploration opportunities and the foundation skills needed to enter the world of work”***.

Covid-19 Affects

Registered attendance was 46.7% lower - 3 Education Days were held, 2 - new.
With expected attendance including ALL Education Days scheduled - an increase of 1,439 or 14.7% would have been realized.

2020 Donation Reductions

- ✓ Private donations were down February 1st through December 31 in 2019-20 period (year on year) **-\$21,155.99**
- ✓ Decrease Percentage (Not including CTE) **- 46.4%**



WHERE IS MARKETPLACE FOR KIDS NOW (during/after Covid-19)?

- ❖ In 2021/22 Marketplace for Kids has **5 Education Days** tentatively scheduled
- ❖ Currently we are in the testing phase of "**A-Synchronous and Synchronous**" Education Days (3,500 est. attendance this year!)
- ❖ A schedule will be set in the coming weeks for the year including 3 In-Person Education Days (dependent on guidelines).
- ❖ Classes such as "**Electrical Circuits**", "**Power Plant Puzzle**", and "**WHAT DO LAND SURVEYORS REALLY DO?**" at all Education Days for the 20/21 year.
- ❖ Covid-19 virus has had a **Massive Impact** to MFK attendance and finances. A **reduction of nearly 47%** in both total attendance and private sponsor donations.
- ❖ MFK staff and grant writers have been working feverishly to overcome the financial deficit by applying for new grants and reaching out to past and new supporters.

Thank you.
Any questions?





Marketplace for Kids 2021-23

The Entrepreneurs of Tomorrow
Are in Our Schools and Homes Today!



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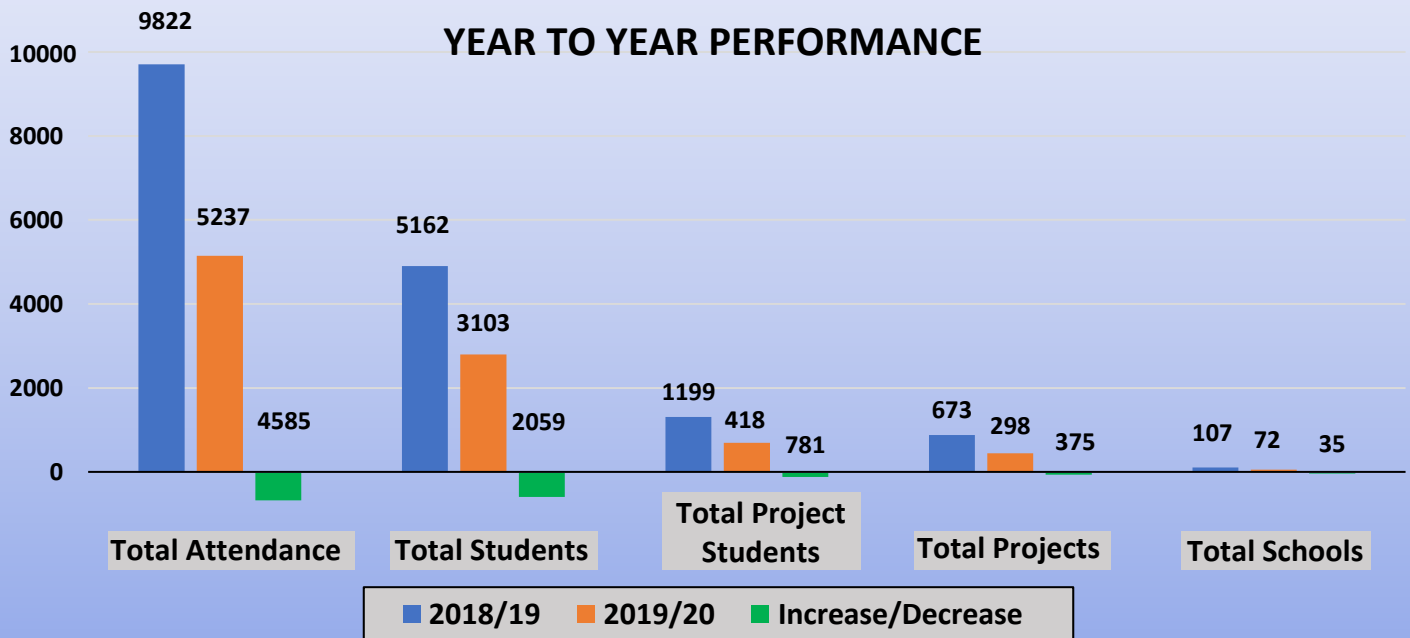
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MFK AND OPPORTUNITY:

Dear Chairman Holmberg,

December 28, 2020

My name is Mary Haugo and I have been a Region 5 co-chair on the Marketplace for Kids (MFK) Leadership Team since 1995 and currently a Board Member for MFK.

I am writing to request sustaining our regular funding for MFK. Governor Burgum suggested a \$50,000 cut for the biennium but due to Covid-19 our private funding for the year is down. If we lose that funding, we will fall short next year.

MFK is an amazing and worthwhile program for young entrepreneurs. The Education Day provides learning and hands-on activities for teachers, parents, and students helping them discover entrepreneurship, explore career fields, new technology and self-employment.

Students can showcase their inventions that they've designed. Each inventor creates a project board that requires using reading, language, and technology skills. They also practice their skills on public speaking, meeting new friends, and listening to others, following the Standards of North Dakota and National Standards in Science, Technology, Entrepreneurship Education, Arts, Math, and Language in all attending grades.

Our vision is for students to become lifelong partners building stronger communities in ND. Showing students these possibilities, they will realize the opportunities in our great state.

I urge you to continue with our regular funding for this worthwhile program. We are investing in the future of North Dakota by educating and keeping the leaders of tomorrow in ND.

Dear Chairman Holmberg,

December 28, 2020

I am Roger Demers, (Partner Acct. Exec.-Wex Health) and I'm asking you to continue to fund the Marketplace for Kids (MFK) at the **same level or even greater** in your next budget round.

I have had the Pleasure of speaking at this event a few years ago. I can tell you that it was a Great day of learning for all of the students, parents and School faculty that attended.

Among the many other skills that Marketplace for Kids teaches these young students, they also focus on Career Opportunities that are available right here in North Dakota. Our goal should be to continually educate your Young Students about the great diversity of career opportunities in our Home state.

Did you know that the many teachers and former teachers who run this program are Volunteers who never take any Salary for their work with this Great program? We should acknowledge these founding members for their Great work over the years!

I urge all North Dakota Legislators to strongly consider funding this program at their current levels, or even digging deeper to add some additional funding to this Great program for the Students of North Dakota!

Respectfully submitted,
Roger Demers



Marketplace for Kids

"The Entrepreneurs of Tomorrow Are Preparing Today!"

WHY DOES MARKETPLACE FOR KIDS HAPPEN?

ND CTE and MFK believe that ***"every student has the right to receive entrepreneurship education and encouragement to become a lifelong partner in building stronger communities."*** We strive to ***"encourage youth to explore entrepreneurship and self-employment through the recognition and development of their inventive, creative thinking and problem-solving skills."***

HISTORY:

- ✓ Marketplace for Kids started in 1995 as a pilot.
- ✓ Elementary teachers designed a concept to encourage students to showcase their innovative ideas and attend age appropriate experiential classes of all types.
- ✓ The Advisory Leadership Team elected Jamestown as the site for that first Education Day was a success with over 600 students/teachers/dvisorsparticipating.
- ✓ 1997 the regional concept was developed, expanding to 12 Education Days in 2015

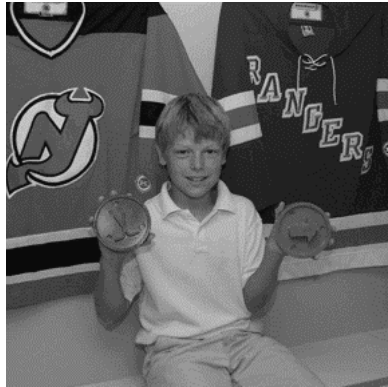
STANDARDS:

- ✓ MFK meets State and National Standards in Science, Technology, Entrepreneurship Education, Arts, Math, and Language.
- ✓ Numerous MFK representatives reviewed the standards and provided feedback to the Consortium for Entrepreneurship Education to validate and/or improve the content and organization of the National Content Standards for Entrepreneurship Education. These standards represent a framework for all organizations to work together to "Accelerate Entrepreneurship in America."

RESOURCES:

- ✓ MFK provides continuing education credit to the education network.
- ✓ Does classroom outreach sessions to help students and teachers get started with planning.
- ✓ Supplies lesson plans (from teachers), Learning Guide and resources to meet the demand of a growing/changing education network.

Success Stories



Riley Giauque is an Ambassador for the MFK Program and has represented the program as a Keynote Speaker at the Consortium for Entrepreneurship Education Annual Meeting and numerous Marketplace for Kids Education Days. Riley's passion for hockey and creativity led him to invent the EZPUCK and ONETIMER. EZPUCK is a stationary disk that allows users to improve their stickhandling and puck control on the ice. ONETIMER is a hockey training device that allows users to practice passing both on and off the ice. Riley featured his EZPUCK invention at Marketplace for Kids when he was in the fourth grade and has since filed and received a patent for both the EZPUCK and ONETIMER. He currently markets his products online through his website www.ezpuck.com and has sold his products across

the globe. Riley was also the recipient of the 2018 Scholarship for Entrepreneurship at North Dakota State University.



Ethan Bowman is an Ambassador for the MFK Program. Ethan's invention, EZGRO, a self-watering system was the 1st Place winner of the Bright Ideas Showcase and Contest in 2012. He has gained national recognition with an interview in a National Agriculture magazine and his garden concept was used at a nursery in his hometown of Jamestown, ND where he also volunteered his time to improve his concept. You can view his EZGRO invention on YouTube at:

<https://bit.ly/3nu6iIi>



Joshua Boen is an Ambassador for the MFK Program. In 2014, his love of competitive swimming and technology came together in the invention, iCoach, a real-time coach-athlete communication tool. iCoach is an app that enables coaches to directly communicate with their athletes while they're in action. The app connects with the athlete's headpiece via Bluetooth allowing the coach to speak to the athlete and gives the coach control over who is receiving their communication. iCoach allows the coach to pick recipients by displaying a list of all the athletes and allowing them to select one or all. Josh's iCoach invention was the 2014 1st Place winner of the Marketplace for Kids Bright Ideas Showcase and Contest held at Minot State University. Also, in 2014, Marketplace for Kids arranged for

Joshua to present his invention to Microsoft, Myriad Mobile, and One Million Cups in Fargo.



Marketplace for Kids “The Entrepreneurs of Tomorrow Are Preparing Today!”

WHAT’S AN EDUCATION DAY?

Education Days are unique, one-of-a-kind experience where students **explore careers, technology, and the future through hands-on activities** that are rooted in **entrepreneurship and innovation**. We have Education Days scheduled throughout North Dakota each year and will be in Dickinson, Bowman (Virtual events), Williston, Jamestown, and Wahpeton (tentative In-person events)!

WHAT DOES MARKETPLACE FOR KIDS TEACH?

MFK has a primary focus on **Entrepreneurship** and is many times a student’s first look at **business ownership, career choices, innovative technology and even college settings**. The vast array of class choices at all Education Days are nothing short of **phenomenal, including STEAM classes, HANDS-ON LEARNING ACTIVITIES** such as **Financial Literacy, Starting a Business, Wildlife, Industry Safety, Railroad, Energy Resources etc., Agriculture, Automotive, Aerospace, Construction, Plumbing, HVAC, Robotics, Electronics, Drones and Virtual Reality applications**.

WHO MAKES MARKETPLACE FOR KIDS HAPPEN?

MFK (in partnership with ND CTE) begins with the programming created and approved by **Regional Advisory Leadership Teams and Marketplace staff**. Hundreds of volunteers including people from **business, Chambers of Commerce, Economic Development Corps., Score, Retired Teachers Associations, students from DECA, 4-H, Honor Societies** etc. present classes and provide guidance, direction, and hands-on help to presenters, students and staff throughout the day. Volunteer hours during the 2018-19 Education Day season amounted to over **2,001.5 hours (\$51,578.67)**.



Marketplace for Kids

“The Entrepreneurs of Tomorrow Are Preparing Today!”

RECOGNITION:

- MFK has been recognized as a program that should be replicated by the Consortium for Entrepreneurship Education.
- Featured in the national publication “Education Update” (a publication of ASCD Association for Supervision and Curriculum Development) as a program to begin teaching entrepreneurship early.
<http://www.ascd.org/publications/newsletters/education-update/jun09/vol51/num06/Educating-Emerging-Entrepreneurs.aspx>
- Recognized in the Midwestern Office of the Council of State Governments Newsletter as “**One of the best youth Entrepreneurship programs in the nation.**” (MFK students have presented at their annual Conference)
- Collaborates with the Consortium for Entrepreneurship Education on National Entrepreneurship Education Standards to provide entrepreneurial education programs to all Americans.

SUMMARY:

Entrepreneurship education positively impacts learners at all levels in a wide number of contexts. Marketplace for Kids is the **only** Elementary (Grades 3-8) Entrepreneurship Education Program (provided in partnership with CTE) in North Dakota. We support entrepreneurship education and the Consortium for Entrepreneurship, CTE and all programs that fall under the framework of the National Standards for Entrepreneurship Education. The North Dakota Legislature has supported Elementary Entrepreneurship Education since 2005 with a total number benefiting from that funding surpassing **155,000**.



Marketplace for Kids

“The Entrepreneurs of Tomorrow Are Preparing Today!”

REMARKS:

My experience, while limited to the one year, has shown me that the Marketplace for Kids program has merit as an instructional tool for a large group of students in a very short period of time.

The diversity of the material and presentations, the interaction between students and presenters, and maybe most importantly, the enthusiasm of the children/students is something that I certainly feel is beneficial for our North Dakota kids. It's an experience worth having and an experience worth funding.

Jim Murphy, Executive Director
Traill County Economic Development Commission

“Fantastic Entrepreneurial day for 3-8th grade students”; “we believe the future of our state’s economy lies in the innovative spirit of our children.”; “It’s a day where students learn that they can do and be anything they want to, and they can do it in North Dakota”; “those contributions do not cover the cost of the event. CTE funding is critical to the continuation of the program”; “there is something for everyone, some students want to showcase business plans, inventions, bring ideas to life and create something”; “MFK allows for both in a non-competitive environment. MFK is something our area students and teachers look forward to year after year”; “It is a program that greatly contributes to the future Workforce Development goals that the state has.” “My son attended one of the first Marketplace for Kids when it was held in Jamestown. He now owns and operates his own home design service. This is one example of how this program is beneficial to the North Dakota population.”; “since 2005 we have had over 7,500 students, teachers, chaperones and parents walk the halls of Dakota College to enjoy a large variety of classes”; “Our community is actively building tomorrow’s workforce with the help of this educational program, which needs the CTE grant to be able to continue.”; “North Dakota’s economy is changing, and we’re seeing the emergence of new solutions built on innovative ideas.”; “My granddaughter is in elementary school (third grade) and she is a builder. Her dad, our son, is a house designer and he attended one of the early Marketplace for Kids in Jamestown while he was a student. When she gets to grades 5-6, I sure hope that she can attend a Marketplace for Kids! This is an age group who really needs to have opportunities like Marketplace for Kids available to them.”

Department of Career and Technical Education
January 7, 2021

Chairman Holmberg and members of the committee, my name is Wayde Sick, State Director of the Department of Career and Technical Education. I am here to provide testimony for Senate Bill 2019 or the Department of Career and Technical Education Appropriations Bill.

2020 has been a year like no other. We have seen drastic changes in how we work, how we live, how we educate. What has become very apparent is the vital role the programs that are housed within SB2019 are to the state's and the nation's economic recovery. The occupations that originate in a high school CTE program have been commonly referred to as "Essential Workers" during the COVID pandemic. Distance education became a necessity, delivered by our schools, our CTE centers, and CTE's Center for Distance Education. Workforce recovery and skilling up workers who have lost their jobs was addressed by our community colleges and TrainND. The backbone of our state's economy is agriculture, making the ND Farm Management Education Program vital in helping North Dakota producers be more profitable and productive, which enables them to provide products that feed the world. This afternoon you will hear testimony from myself and others about the impact the programs embedded within the Department of Career and Technical Education budget have on our state. This is going to be a difficult budget year, we all know that, but the programs and initiatives we will discuss this afternoon will play a key role in economic recovery and a sustained future. I would like to add that many of the priorities of the Department of CTE also align with the strategic themes of the K12 Strategic Vision and the priorities of the North Dakota Workforce Development Council.

My testimony and those of others today will address the requests the Committee had of the

First, North Dakota Century Code that provides the agency the authority to do what it does. The Department of Career and Technical Education can be found in NDCC 15-20.1, 15-20.2 and 15-20.4. 15-20.1 gives the agency the authority to reimburse CTE programs using state and federal funds, develop a STEM grant program, a Career Development and the ND Elementary Student Entrepreneurship program, which is administered by Marketplace for Kids. You will hear later from Bob Heitkamp, director of Marketplace for Kids. 15-20.2 provides guidance and authority to operate area career and technology centers. 15-20.4 provides the State Board for Career and Technical Education the authority to approve private postsecondary career schools to operate in North Dakota. Examples of postsecondary career schools that required approval are Lynnes Welding, Emerging Digital Academy and Rasmussen College.

The North Dakota Center for Distance Education is created in 15-19-01. NDCC states NDCDE shall provide K-12 course, comprehensive educational support and High School Diplomas. Dr. Matthew Lonn is here to provide deeper testimony later in the hearing.

The mission of ND Career and Technical Education is to work with others to provide all North Dakota citizens with the technical skills, knowledge, and attitudes necessary for successful performance in a globally competitive workplace. I bring this up because the work CTE does is often through partnerships with industry, the various Career and Technical Student Organizations, higher education and other state agencies.

The next request was the agency organizational chart. NDCTE is a relatively flat agency. The agency is divided into divisions, with most overseeing the various program areas. Dr. Lonn, with NDCDE, is on this organizational chart as he reports directly to me and will explain his organization in greater detail.

The most recent audit completed in March 2020 by the State Auditor's Office found no areas of concern.

Moving on, the committee asked what has the agency accomplished in the 2019-21 biennium. First, the agency wrote state plan for the Strengthening Career and Technical Education in the 21st Century Act, also known as Perkins V. Rewriting the state plan was a requirement of the federal law. The first step in rewriting the plan was stakeholder feedback. We needed to connect with multiple organizations, spanning tribal, employers, educators, labor unions, workforce development council, etc. and gather feedback. Perkins IV and V were relatively similar, but with a few major changes. The first was the requirement of the agency to create and require completion of a comprehensive local needs assessment. Each school district, receiving Perkins funds, was required to complete the CLNA. The CLNA was to guide the school districts on how best to use their federal funds, based on student performance and enrollments, identify any gaps that may be based on demographics and program alignment with in-demand, high wage, and high skill jobs. The agency developed the CLNA within our current reimbursement system and provided all the data and Labor Market Information to complete the CLNA. We also provided multiple workshops over the winter of 2019-20 to help administrators complete the process. A second change brought upon by Perkins V was the selection of a new secondary performance quality indicator. The indicator under Perkins IV was the completion of a Technical Assessment, which was simply a posttest after completing a program. The state selected Work-Based Learning as it's new indicator. This is an attempt to create more opportunities for students to receive hands on experience, either with an employer or some sort of simulated experience, to further enhance their skills. The agency is rolling out guidance in the spring of 2021 for programs to use to stand up and expand WBL. The final change, spurred by Perkins V, was the state to develop a federally funded Innovation Grant Program. On an annual basis, we are setting aside approximately \$300,000 of the current federal allocation we receive for schools, centers and colleges to apply for funds, with a required match, to enhance their programming opportunities. The first grants were awarded in this fall.

Internal agency accomplishments are as follows:

We have a looked at many of our internal processes, looking for efficiencies. Two processes we are improving upon are new program approval and teacher endorsement approval. We have had retirements in the past year, that allowed us to evaluate those positions prior to re-hiring. In two instances, we were able to absorb duties across the agency, leaving vacant positions. Due to these vacancies, we created a Strategic Projects Manager position within the agency, that will tackle projects that we currently do not have the staffing to do so. Once onboarded, this person will begin working on streamlining CTE distance education and expanding on work-based learning and dual credit opportunities. Finally, COVID-19 has changed how we did our work. We, as many others, had to move to a virtual world. We also compiled a list of distance learning resources for schools to use when all education moved to virtual in April 2020. Finally, it gave the agency the opportunity to evaluate our office needs and begin to make decisions on what we need in the capitol.

Next is an overview of the accomplishments that have occurred in our schools and area career and technology centers.

- 1) Growth of new and expanding programs – As you can see we do lose programs every year, typically due to a school district being unable to replace a teacher. Our largest growth in new and expanding programs tend to be at our area career and technology centers, where they are able to serve multiple school districts. Expanding programs are programs that added course sections due to enrollments or add new courses, to add to the existing program.
- 2) The number of students in North Dakota that enroll in CTE courses and become concentrators continues to grow. We did see a dip in enrollment in 2019-20, but this doesn't concern us as fluctuations can occur. Also, we continue to improve our data collection, so it is possible past years enrollments may include duplications. A concentrator is a federal term that is defined as a student that take at least two courses in the same Career Cluster. The state defines a cou

as a full credit. In the 2019-20 school year 23,007 students enrolled in at least one course, with 8,129 becoming a concentrator. Postsecondary enrollment at our community colleges are 8,929 and concentrator count is 4,752. A post-secondary concentrator is a student that has completed at least 12 credits in a program or completed a program that is less than 12 credits. As you can see on this next slide is although our secondary programs data is trending up, our post-secondary have dipped. We contribute the most recent dip was due to COVID-19 and again, improved data collection. The data was pulled from the most recent term, where many students in CTE programming may not have been able to finish their coursework due to campuses shutting down.

- 3) CTE coursework continues to have a positive impact on High School Graduation rates. Data from 2018-19 graduates, continues to illustrate that students who complete at least two credits in a CTE program graduate at a higher rate, than those that do not.
- 4) Finally, accomplishments in the enrollment in the North Dakota Farm Management Education Program. This program provides one-on-one assistance to producers across the state to help them become more efficient, more profitable, in turn producing more with the same resources. We unfortunately have seen a dip in enrollments over the past few years, primarily as instructors retire and are programs are unable to find candidates to fill. The ND Farm Management Education Program is working very hard to turn this around. For one, Dakota College at Bottineau is in the process of expanding their program into the Northwest corner of the state. Secondly, the program launched an aggressive marketing campaign, in order to inform producers of this opportunity. Bismarck State College Farm Management Education Instructor Kyle Olson will provide additional details and answer questions later in the hearing.

The Committee asked what we hope to accomplish in the 2021-23 biennium. We have several lofty goals. They are as follows:

- Continue to develop new and expanding programs at our High Schools and Existing Centers
- Increase enrollee and concentrator numbers in both secondary and post-secondary
- Assist in the development of three additional area career and technology centers
 - Development of at least three new programs at each center, serving multiple districts
- Study and potentially restructure CTE funding model
- Coordinate distance education
- Secondary/Post-Secondary alignment
 - Expand Dual Credit CTE Options
- Expand Work-based Learning Opportunities
- Increase ND Farm Management Education Enrollment

Dr. Lonn, Ms. Vollmer, Mr. Olson and Mr. Hietkamp will discuss in greater detail the goals of their respective programs.

To meet these goals, we need assistance from the legislature. It does take funding to meet many of the goals we have set for ourselves. The remainder of my testimony will focus on the various budgets including our current biennial budget, the agency's proposed budget including the various requested change packages as well as the Governor's Executive Budget. I will also be able to address decreases the agency made to its budget to meet the 10% reduction as directed by the Governor's Office. During the change package slide, I will provide more detail on each of the change packages and the importance of each. Again, Dr. Lonn with CDE, Sara Vollmer with TrainND, Kyle Olson with BSC ND Farm Management Education and Bob Heitkamp with Marketplace for Kids will address their specific programs and budgets.

Slide 15 is a comparison of the 2019-21 biennial base budget compared to the 2021-23 agency proposed base budget. I will review each line item and explain the deltas.

Slide 16 is a comparison of the 2021 agency proposed budget, including the optional requests, compared to the Governor's Executive Budget. Again, I will review each line item and explain the variances.

Slide 17 lists the change packages, submitted by the agency and those included in the Governor's Executive Budget. You will find a one-pager document in your packet that includes each of these change packages.

Cost to Continue – Currently, the agency reimburses the existing approved CTE programs at our high schools and centers, based on instructor salaries and other expenses. As those salaries and expenses increase so does the reimbursement. The agency determined that \$1.5M is needed to maintain the existing reimbursement rates. The Governor included \$1,000,000 in the Executive Budget.

New and Expanding Programs – Every year, our schools and centers submit applications to create new or expand their existing programs. Without additional dollars, we will be unable to support those expansions. The agency requested \$1.5M. This was not included in the Executive Budget.

Center for Distance Education Funding – Dr. Lonn can provide details later, but before COVID-19, we were seeing an increase in enrollment. The additional request is to maintain that growth and not turn students away due to staffing capacity.

Funding to Establish new CTE Centers – Currently, there are ten regional area Career and Technology Centers (CTCs) in North Dakota. Instruction at the CTCs varies. It can be provided face-to-face, online, or through interactive television (ITV). Five of the CTCs are considered brick and mortar centers. The other five are considered virtual, meaning they lack a central physical space. A total of eight of the ten CTCs provide distance instruction, whether through ITV and/or online. The virtual centers are almost exclusively distance, but still provide a level of face-to-face hands-on instruction for every program.

The ND CTE approves the operation of the CTCs, approves their programming and supports them through funding and technical assistance. The CTCs also raise revenue through center membership

and course enrollment fees. The ten area CTCs currently have a school district membership totaling 100 school districts.

Career and technical education is available to every high school student in the state; what the CTCs can provide is career specific coursework. This can be done because a CTC is able to scale coursework by providing courses to multiple school districts at the same time.

Another benefit is that CTCs employ an administrator whose primary focus is career and technical education. This focus allows the administrator time to build quality programs, foster employer partnerships, and advocate for career and technical education. It is not that local district superintendents and principals do not do a good job at this; they simply don't often have the time for that level of commitment.

The request is to provide funding to expand access to CTCs through center expansion and start up grants. This would be a \$40 million competitive matching grant program. To ensure partnership and industry alignment, applications will be reviewed by a team comprised of representatives from ND CTE, Department of Public Instruction, Job Service ND, the Department of Commerce, and the ND Workforce Development Council. This idea stems from the success that has been seen from the current CTCs. Applicants will be required to ensure there is industry and community support, higher education partnership including dual credit and postsecondary offerings, and commitment from school districts to agree to partner with the center. As you can see, the Governor's Executive Budget includes \$45million. There is also legislation proposed on the House side that will include funding for CTE Centers.

New and Expanding CTE Center Operating - The intent of this change package is to support the operating of any new area CTCs that happen to come online during the 2021-23 biennium at the current reimbursement rate.

Revised Funding Model - The ND CTE has been exploring various models of funding career and technical education programs. The intent of this funding is to support all programs equally. Currently, Family and Consumer Science Education and Business Education programs receive lower reimbursement rates and are not totally funded. Also, the state does not currently support Middle School CTE programs. This funding could provide opportunities to expand access.

Transfer from Operating to Grants – ND CTE provides funds to the STEM Network, to provide professional development and Regional STEM Days. The STEM Network has attained 501(c)3 status, so the agency wishes to grant funds to the STEM Network instead of managing the funds itself.

Next, the Committee asked if there is any other legislation the agency is following that may impact CTE and CDE. The answer is a definite yes, but as it is early in the session, many may not be filed yet. They include:

- 1) New and Expanding CTE Center funds in the House Bonding Bill
- 2) Legacy Fund Earnings Bill
- 3) Adjustments to the CTE and Academic Scholarship
- 4) Adjustments to the Career Builder Scholarship
- 5) Distance Education bills
- 6) Any bills that may impact graduation requirements
- 7) Learn Everywhere bill

The final request of the Committee was if the agency received any Cares dollars, in response to COVID-19 pandemic. The agency did receive dollars through approval at the November Emergency Commission and the December Budget Section for a total of \$470,980. \$270,980 were used by the ND Center for Distance Education to fund adjunct teachers due to the surge in enrollments because of the pandemic. Mr. Lonn is here to provide more details you may request. \$200,000 was granted

out to our ten area career and technology centers to cover expenses such as PPE, cleaning supplies and equipment that was used for distance education or to cut down on multiple student use. The Centers were not included in any of the specific set aside Cares funds. Examples of equipment include health careers mannequins, cameras and safety goggles that cut down on multiple student use.

Senator Holmberg and members of the Senate Appropriations Committee. This concludes my testimony and I am happy to answer any questions you may have. If not, I would like to turn the podium over to Dr. Matt Lonn, Director for the Center for Distance Education.

Dr. Matthew Lonn Testimony to Senate Appropriations Committee

Chairman Holmberg and members of the senate appropriations committee, I speak to you today on behalf of North Dakota's Center for Distance Education (NDCDE, CDE). For the record, I am Dr. Matthew Lonn, Director at the Center for Distance Education.

Center for Distance Education (CDE) has been given three specific responsibilities under Century Code 15-19-01, that is to provide: (1) K-12 courses, (2) comprehensive educational support, and (3) high school diplomas. Put simply, the guiding purpose of CDE is to provide learning opportunities for ND's K-12 learners. The mission that continues to be at the center of everything the organization does is to ensure that all ND students, regardless of location have access to educational opportunities that meet or exceed customer expectations for quality of curriculum, contact time with highly qualified instructors, course delivery efficiency and effectiveness, and student learning.

Throughout the 2019-2021 biennium, your investment in Center for Distance education proved to be invaluable. When the COVID-19 pandemic broke out in March of 2020, ND schools, students, and parents had a trusted distance learning organization that they could rely on to provide vital services. During the 2019-2021 biennium, CDE will have enrolled ND students in over 15,000 online courses. That is an increase from the previous biennium of over 50%. In addition, over 6,000 enrollments will have worked with schools or organizations that leverage CDE's learning management system, and over 3,000 students will have actively participated hands-on, blended learning labs supported by CDE. Overall, nearly 20,000 students will have been provided learning opportunities through CDE.

It is important to remember that even pre-pandemic, students, parents, and schools utilizing CDE's services had been increasing at annual growth rates of 4-7%. Even without COVID-19, CDE anticipates that over 10,000 online course enrollments would have occurred. The reasons for this are many. But essentially, CDE fills needs across the K-12 educational landscape. These are often unique needs that must be met for specific situations. The following are just a few actual examples that CDE saw over the 2019-2021 biennium.

- A small rural school is notified in December that their math teacher will not be returning.
- Dozens of ND schools want to offer ag. courses but are unable to hire any qualified applicants.
- A district cannot find any qualified business or Spanish instructors.
- A student in a local school fails a course and needs to retake it at their own pace to stay on track for graduation.
- A student cannot fit certain courses that they want to take in their local school schedule.
- Students want to explore topics that their school cannot offer.
- Students want to take courses that help prepare them for industry recognized certifications, asynchronously.
- A school cannot find enough funds to provide students with a quality blended, project-based, hands on learning environment.

- Because of bullying or other mental health issues, a student needs an alternative to traditional, face to face instruction.

Looking forward into the 2021-2023 biennium, CDE has the opportunity to help more kids. Based on feedback from parents and schools, the need is great for CDE's services. CDE anticipates annual growth in students needing supplemental online courses of at least 3% annually. In addition, CDE's growth in industry recognized certification preparation courses, adaptive technology, and competency-based learning opportunities hold great potential to help kids improve mastery of skills in an online delivery format. These developments in online course delivery hold potential to help CDE continue to increase its successful completion rate from 84% to 90% over the next two years. CDE also anticipates growth of blended, hands-on project-based learning with approximately 5 new labs installed and supported annually averaging over 1,500 more students each year. Lastly, CDE will continue to innovate internally to leverage new efficient processes like a rapid enrollment feature that leverages the SLDS database to improve the customer enrollment and payment experience.

To meet these expectations of students, parents, and schools, CDE is not requesting any additional FTE's. CDE is requesting a general fund allocation of \$6.7 million and special fund spending authority of \$3,050,000 for a total budget of \$9,750,000. This request reflects a 6% increase in general funds from CDE's 2019-2021 general fund allocation. This increase is necessary for CDE to continue to provide learning opportunities for the expected 11,000 enrollments utilizing CDE's services. The increase in general funds would be allocated to salaries and wages and would allow CDE the ability to hire the additional adjunct/temporary instructors needed to work with each one these students. CDE's operational expenses for each additional learner will continue to be collected from tuition and fees.

CDE is both a school and a state agency. Just like any other ND K-12 school, it must rely on tax dollars allocated from the state legislature. As a state agency, it must also generate revenue from the services it provides. This delicate balance allows approximately 65% of CDE's funding to come directly from state general funds and 35% of CDE's funding to be obtained by a per user fee or tuition payments. CDE's pricing strategy must meet two key objectives. (1). CDE sets a price that allows nearly all its operational expenses to be paid for with special funds. (2). Prices must be competitive with out of state online providers. Over a decade ago, CDE was asked by both the executive and legislative branches to help reduce the use of poor quality, out of state, online providers being used in ND. Keeping prices at current competitive rates is vital to keeping a quality online K-12 service in ND.

CDE is not simply an add-on to ND's K-12 educational system. CDE is a necessity that ensures a uniform system of education can be provided to every student.

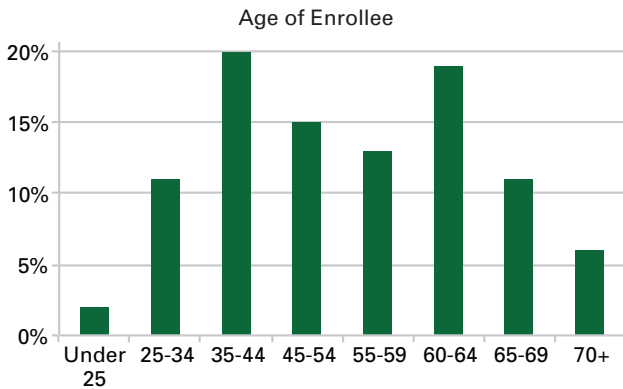
Thank you for your time. I will now stand for any questions.

Dr. Matthew Lonn, State Director
North Dakota Center for Distance Education

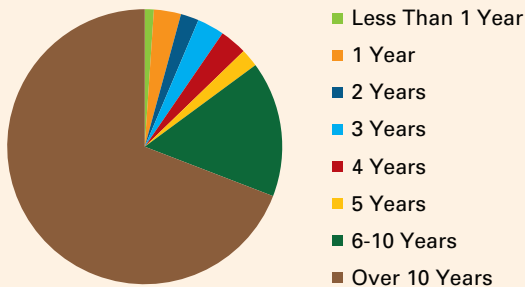
2020 ND FARM MANAGEMENT EDUCATION SURVEY

The following information was gathered through a survey of producers enrolled in the North Dakota Farm Management Education Program in 2020. (105 responders)

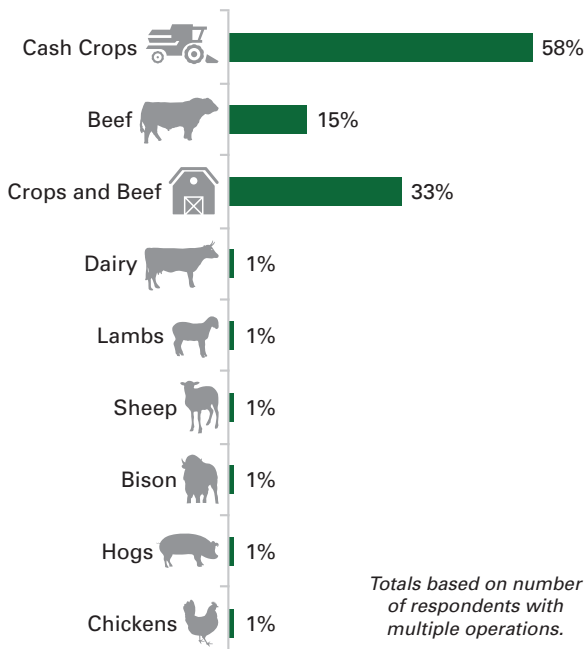
DEMOGRAPHICS



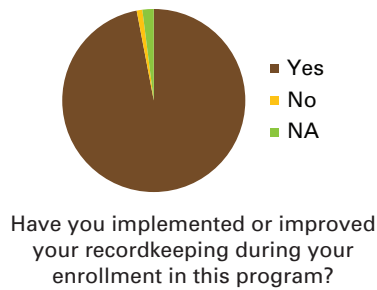
How many years have you been a member of the Farm Management analysis program?



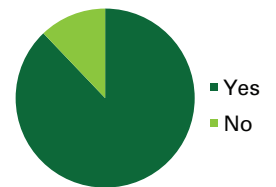
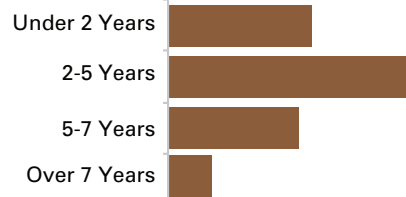
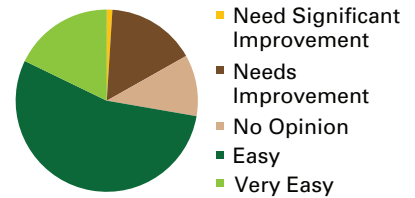
Type of Farm Operations



PROGRAM MEASUREMENT AND BENEFITS

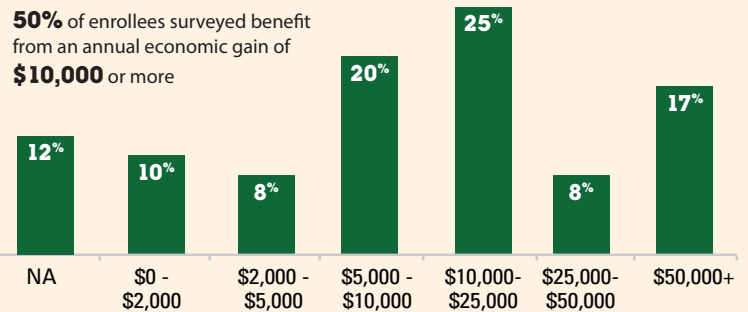


How easy is it to accurately enterprise income and expenses in your operations?

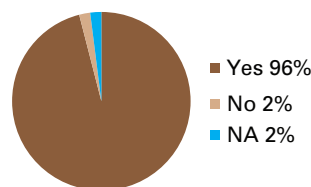


How many years of enrollment in this program did it take to get a high level of accuracy in enterprising?

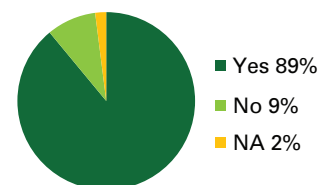
Do you base management decisions on the analysis that you and the instructor put together for your operations?



What is the annual economic gain of participating in the Farm Management program for your farm/ranch?

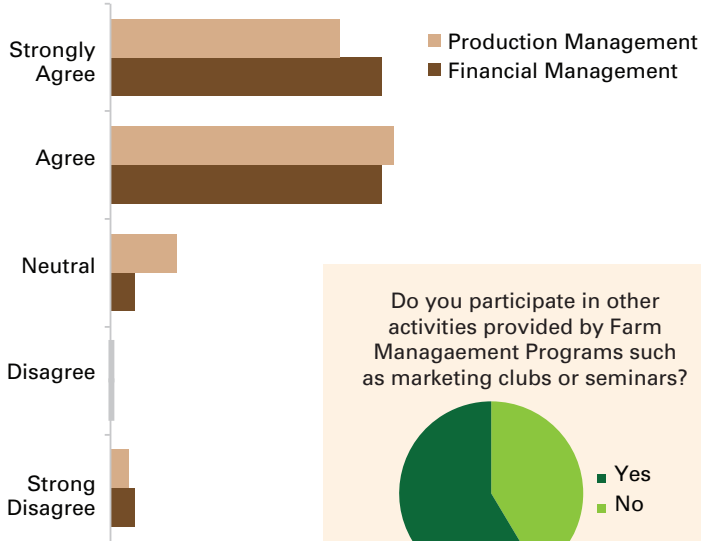


Do the local, regional and state averages have value to you?

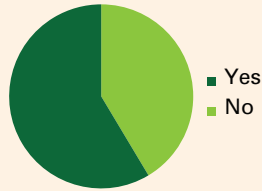


CHANGE IN CONFIDENCE LEVELS

Are you more confident in your ability today versus before you entered the FM program?



Do you participate in other activities provided by Farm Management Programs such as marketing clubs or seminars?



TOP REASONS OUR ENROLLEES HAVE MAINTAINED THEIR ENROLLMENT YEAR AFTER YEAR

- To keep better records
- Enterprise analysis
- Helpful in planning for next year and the future
- Very useful in evaluating my farm and controlling expenses
- Determines profitability and management decisions
- Transitioning the operation to the next generation
- Helpful to bank in securing operating loans
- An unbiased look at the entire operation

96% of participants believe working with the same instructor for several years is a benefit.

Why producers feel the ND Farm Management Program is valuable to their operations:

"I feel it is a very important tool for making good management decisions and it has helped me tremendously. I will continue to participate in the program as long as I am farming. I will encourage others to do the same."

- Glen Ullin Program Enrollee 

"FBM is a wonderful program. It is vital to decision making and success. I feel fortunate to be part of it."

- Dakota College at Bottineau Program Enrollee 

"The Farm Management Program is absolutely a critical tool for my operation. It is vital to securing my operating funds. It is crucial to my decision making. It is extremely useful when comparing to other producers throughout the state to evaluate things that are good or poor. Every farm operation, large or small, should be required to participate in this program."

- Bismarck State College Program Enrollee 

"I feel this program is a benefit to all farmers no matter what your age or experience maybe."

- Dakota College at Bottineau Program Enrollee 


"It's nice to have someone you can talk to that knows and understands your operation and is willing to help you achieve your personal goals. The Farm Management Program is a very valuable source of guidance for my operation."

- North Dakota State College of Science Program Enrollee 

"I tell all of the new farmers in the area that the best money they could spend is to join this program and learn how to do this part of farming correctly. I feel it is one of the most vital parts of my farming regimen. Everybody says a farmer needs a team to help on the farm (loan officer, agronomist, chemical specialist, equipment specialist, insurance agent). My instructor in this program is one of these parts of my farming team, and I hope it continues."

- Bismarck State College Enrollee 

"It helps me realize where I have to improve compared to other farms in the region to stay competitive."

- Lake Region State College Program Enrollee 

"The Farm Management Program has played a huge role in our operation over the years. We used it to help transition the operation from my parents to myself. Now we are using the Farm Management Program to assist in transferring the operation from ourselves to our son."

- Bismarck State College Program Enrollee 

"It has allowed us to make more intelligent decisions based on the information provided to us in the packet. It has allowed our lender to also better understand the farming operation. With the stress and tight margins in the farm sector today, the Farm Management program is a wonderful working tool to assist all involved in the operation."

- Dakota College at Bottineau Program Enrollee 

ND FARM
MANAGEMENT EDUCATION

North Dakota
cte
Career and Technical
Education

CRAIG KLEVEN
Supervisor Agricultural Education
701-328-3162
ckleven@nd.gov
www.ndfarmmanagement.com



Dr. Matthew Lonn Testimony to Senate Appropriations Committee

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- Students want to explore topics that their school cannot offer.
- Students want to take courses that help prepare them for industry recognized certifications, asynchronously.
- A school cannot find enough funds to provide students with a quality blended, project-based, hands on learning environment.

- Because of bullying or other mental health issues, a student needs an alternative to traditional, face to face instruction.

Looking forward into the 2021-2023 biennium, CDE has the opportunity to help more kids. Based on feedback from parents and schools, the need is great for CDE's services. CDE anticipates annual growth in students needing supplemental online courses of at least 3% annually. In addition, CDE's growth in industry recognized certification preparation courses, adaptive technology, and competency-based learning opportunities hold great potential to help kids improve mastery of skills in an online delivery format. These developments in online course delivery hold potential to help CDE continue to increase its successful completion rate from 84% to 90% over the next two years. CDE also anticipates growth of blended, hands-on project-based learning with approximately 5 new labs installed and supported annually averaging over 1,500 more students each year. Lastly, CDE will continue to innovate internally to leverage new efficient processes like a rapid enrollment feature that leverages the SLDS database to improve the customer enrollment and payment experience.

To meet these expectations of students, parents, and schools, CDE is not requesting any additional FTE's. CDE is requesting a general fund allocation of \$6.7 million and special fund spending authority of \$3,050,000 for a total budget of \$9,750,000. This request reflects a 6% increase in general funds from CDE's 2019-2021 general fund allocation. This increase is necessary for CDE to continue to provide learning opportunities for the expected 11,000 enrollments utilizing CDE's services. The increase in general funds would be allocated to salaries and wages and would allow CDE the ability to hire the additional adjunct/temporary instructors needed to work with each one these students. CDE's operational expenses for each additional learner will continue to be collected from tuition and fees.

CDE is both a school and a state agency. Just like any other ND K-12 school, it must rely on tax dollars allocated from the state legislature. As a state agency, it must also generate revenue from the services it provides. This delicate balance allows approximately 65% of CDE's funding to come directly from state general funds and 35% of CDE's funding to be obtained by a per user fee or tuition payments. CDE's pricing strategy must meet two key objectives. (1). CDE sets a price that allows nearly all its operational expenses to be paid for with special funds. (2). Prices must be competitive with out of state online providers. Over a decade ago, CDE was asked by both the executive and legislative branches to help reduce the use of poor quality, out of state, online providers being used in ND. Keeping prices at current competitive rates is vital to keeping a quality online K-12 service in ND.

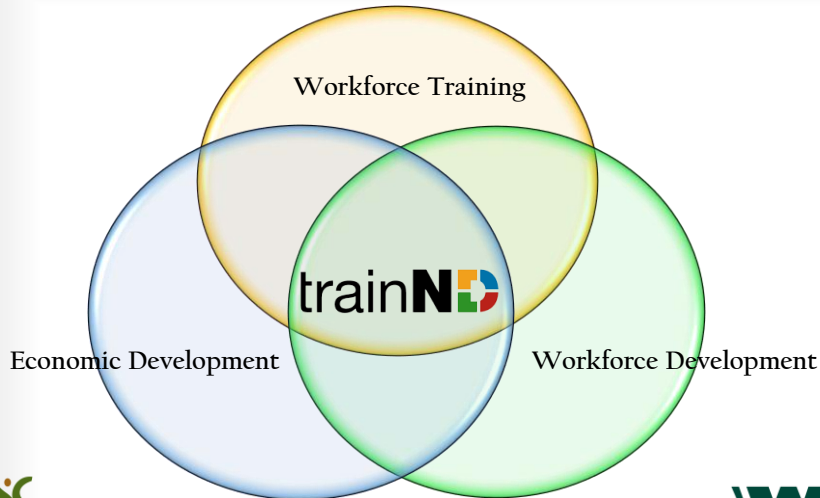
CDE is not simply an add-on to ND's K-12 educational system. CDE is a necessity that ensures a uniform system of education can be provided to every student.

Thank you for your time. I will now stand for any questions.

Dr. Matthew Lonn, State Director
North Dakota Center for Distance Education

An Investment into North Dakota

Building a Sustainable Workforce



1

A Return on Investment

- Workforce Development
 - Brings Trained People Into the Workforce
- Workforce Training
 - Brings greater skills to incumbent workers
- Economic Development
 - Brings growth to communities and state



2

Need is Greater than Ever

- Short term programming for workforce development
- Qualified workers help drive economic development
- Incumbent workers to gain new skills for enhanced work
- Economic recovery amid a pandemic
- Continued funding to assist with program expansion
- Economic diversity within North Dakota
- Investment in our workforce and business growth
- 74% of businesses in North Dakota have less than 10 people



3

Workforce Program Impacts

- Certified Nursing Assistant (CNA Programs)
 - Statewide programming
 - Stackable Certificate & Pathway to Education
 - Job Service WIOA Funding Eligible
 - 326 students
 - 36 classes
 - 636 CNA State Board Exams (Registered Students & Challenge Exams)
 - Pre CNA
 - Fast Track Temporary CNA
 - Quality Service Provider (In Home Care)



4

Workforce Program Impacts

- Commercial Drivers License (CDL Programs)
 - Statewide programming
 - Stackable Certificate & Pathway to Education
 - Job Service WIOA Funding Eligible/Veterans Funding
 - ND Commerce Grant to Expand CDL programming
 - 134 students
 - 22 classes

Williston, Dickinson, Minot, Fargo, Bismarck, Devils Lake



NDUS Annual Enrollment Summary FY20

• Non-Credit TrainND Headcount	19,008
• Total Community College Headcount	35,038
• Percentage of Headcount from TrainND	54%
• Total NDUS Headcount (11 Institutions)	74,014
• Percentage Headcount from TrainND	26%

TrainND Annual Report FY20

• Number of Businesses Receiving Training in FY20	1,412
• Number of Businesses with less than 50 employees	1,026
• Number of Unduplicated Employees receiving Training	19,008

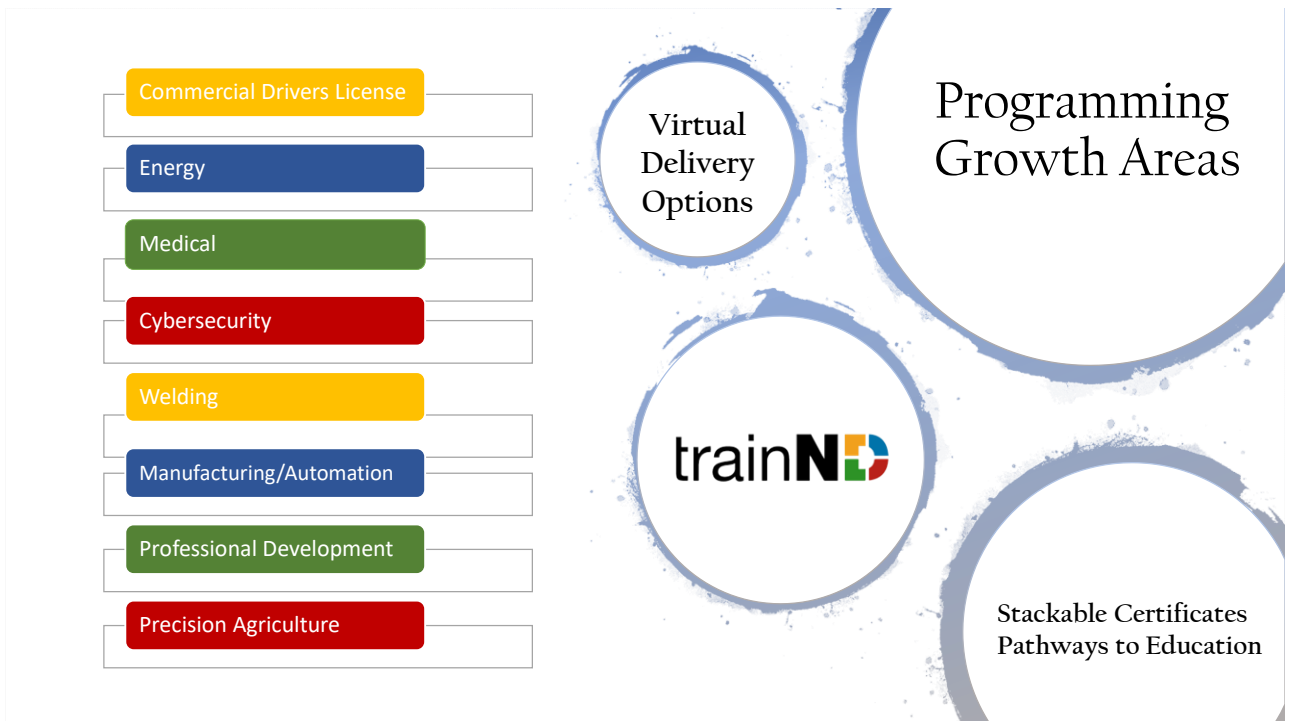


Changing Modes of Delivery

- Accelerated changes to the way people learn
- Flexible with new costs in transition
- Increased options for companies and workers
 - Distance Learning
 - Synchronous/Asynchronous
 - Virtual
 - Hybrid
 - Recorded Presentations
 - Traditional Face-to-Face/In person
 - Mobile labs



7



8

TrainND Request

Request to continue funding at \$2 million based on recommendation from Workforce Development Council

- Reinvention to education
- Expansion of programming
- Flexible modes of delivery
- Delivery at the speed of business



BUSINESS PLAN

Fiscal Years
2021 & 2022



trainND

[It's a competitive world. Train for it.]

TrainND provides training for North Dakota business and industry, enhancing their ability to compete globally.

FOUNDATION

TrainND is the state's most comprehensive and inclusive training network. TrainND resulted from a 31-member statewide task force on workforce development and training formed in 1998 to research "best practices" in other states and to design a more effective workforce training system in North Dakota. This initiative was coordinated by the Greater North Dakota Chamber of Commerce in 1998. These recommendations were enacted into legislation during the 1999 session. House Bill 1443 was passed, setting the stage for North Dakota to develop a world-class workforce training system.

TrainND expands opportunities in North Dakota by training employees to achieve more for themselves and their employers. Four regions cooperate with four community colleges to ensure coverage for all of North Dakota's current workforce needs.

THE KEY COMPONENTS INCLUDE:

- Establishment of four service regions within the state.
- Designation of workforce training to four two-year colleges in the North Dakota University System.
- Establishment of local advisory boards.
- Financial support from state funds, institution support, and training fees.
- Development of collaborative relationships.

Three TrainND Summits have been held to re-evaluate the effectiveness of the four TrainND Regions operating model in meeting the needs of North Dakota Businesses. In addition advisory board meetings are held twice a year with key stakeholders throughout North Dakota. While the original TrainND model was solid, the following recommendations have been made:

- Raise awareness of TrainND Services through social media tools and technologies
- Develop stronger relationships with the business community
- Expand training services throughout the state
- Obtain training equipment and software to deliver effective training
- Leverage current training results and strengthen TrainND's personnel to identify/develop skill shortages for existing and new companies.

VALUE STATEMENT

Timely – Provided **WHEN** our customers need it

Relevant – Designed for **WHAT** our customers need

Adaptable – Customized to **SUIT** our clients

Innovative – Developed with **CURRENT** trends in mind

National – Recognized **CERTIFICATIONS** and credentials

Network – Partner to **COLLABORATE** efficiently

Dependable – Committed to **RESPOND** promptly

FINANCIAL HISTORY AND PROJECTIONS

A financial history for TrainND activity in FY 2018, 2019, and 2020 is provided on the following spreadsheet. TrainND has also provided the financial projections for FY 2021 and 2022.

The four TrainND Regions collectively delivered over \$4,716,886 in training to individuals and businesses in the state during Fiscal Year 2018. Comparing direct training revenue to state aid, TrainND earns approximately \$4.72 for every dollar provided by the Legislature. This return on the state investment reflects the quality training developed and delivered throughout the state. Employee training and education has a direct impact on employee confidence, safety, and overall business productivity.

State allocated funds are currently divided by region the number of employees in each region. Job Service provides this information based on the Quarterly Census of Employment and Wages Program Report. The funding is based on most recent data available to ND Job Service, which is based on 2020 annual averages from the 2020 Employment and Wages by Industry publication.

Both state appropriations and net margin are used to pay for costs that are non-billable to the client. Such costs include program management, support staff, outreach to potential new clients, awareness building, new initiatives, and office supplies.

Operational expenses total \$310,693 for Fiscal Year 2020. These expenses include marketing, travel, office operations, professional development, and new initiatives. Total Direct Training Expenditures were \$1,612,327 and include all costs associated directly to the delivery of training. These items include books, supplies, trainer salaries, food, etc. Salaries for the four regions totaled \$3,598,066 for Fiscal Year 2020. This line item includes all salaries and benefits for full time staff.

Funds listed under net results for the future investments can include grant dollars received that fiscal year, but not spent. Many times, grant dollar expenses cross several fiscal years. These dollars are often used to enhance programs such as purchase curriculum, provide software, upgrade equipment, and to invest in professional development.

Of great value are the in-kind services provided by the four community colleges charged with operating the TrainND regions in the state. These institutions provide physical space, utilities, and equipment for both office and training activities. Leadership is provided by the College President, along with indirect services provided by payroll, business offices, plant services, and others too numerous to mention. For FY 16 and 17 the total amount of indirect services is \$2,027,909. For FY 18, 19, and 20 the total of indirect services is \$2,156,087. This downward trend for yearly in-kind contributions is a direct result of TrainND Northwest building its own campus thus requiring substantially less in-kind investment from WSC.

The original funding formula (HB 1443) adopted in 1999 is an excellent working model that continues to be effective despite current changes in workforce needs. Funding is provided from the following areas: Training, State Legislative funds, and Business Donations (equipment, cash, etc.). Legislative funds are allocated to pay for infrastructure, awareness of services, additional employees, and the cost to continue workforce

training services. Business and industry are to pay for their employee training programs. Businesses have donated equipment, cash, and services to assist TrainND with specific types of training.

- In FY 20, Direct Training Revenue accounts for 75.7% (\$4,716,886) of the total funding
- In FY 20, State legislative funds account for 16% (\$1,000,000) of the total funding
- In FY 20, other funding sources, community/regional funds, and grants account for 6.1% (\$382,448) of the total funding
- In FY 20 the four community colleges provided in-kind services for office space, training rooms, IT support, business office support, etc. that amounts to \$714,324

incoming revenue

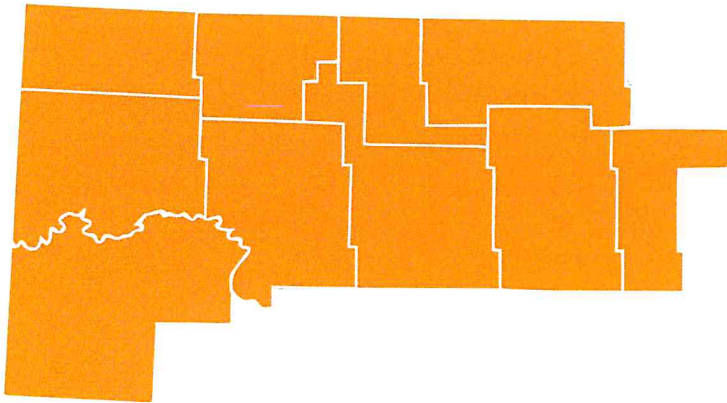
- WSC received additional workforce training moneys as defined in HB 1003. \$250,000 of those moneys are identified in the State General Fund (HB 1003) and reflected in 2021 as itemized in the overall budget

FISCAL YEAR 2021 AND 2022 PROJECTIONS

- Training revenue projections are projected to drop as a result of the current downturn. We are projecting a modest recovery in revenue during FY 2022
- State General Funds are projected to hold steady at \$2,000,000 for the biennium and is defined in HB 1019
- Expenses are projected to fall in response to the lack of

FY 2018-2022 Statement of Revenues, Expenses and Funding Sources

	Actual FY 2018	Actual FY 2019	Actual FY 2020	Budget FY 2021	Budget FY 2022
REVENUES					
Direct Training Revenues	\$4,772,101	\$4,974,939	\$4,716,886	\$3,486,173	\$4,060,000
Community/Regional Funds	\$176,700	\$129,000	\$110,000	\$125,000	\$130
Institutional Funds	\$0	\$0	\$0	\$0	\$0
Other	\$132,541	\$119,790	\$147,205	\$80,000	\$100,000
Grant Funding	\$230,000	\$68,000	\$125,140	\$0	\$0
State General Fund (HB 1003)	\$0	\$0	\$125,000	\$125,000	\$0
State General Fund (HB 1019)	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Total Revenues	\$6,311,341	\$6,291,729	\$6,224,231	\$4,816,173	\$5,290,000
EXPENDITURES					
Total Direct Training Expenditures	\$1,763,408	\$1,470,842	\$1,612,327	\$897,515	\$1,132,374
Outreach/Coordination Expenses					
Total Salaries/Wages and Benefits	\$3,309,502	\$3,202,843	\$3,598,066	\$3,483,385	\$3,409,382
Marketing	\$46,910	\$31,578	\$35,941	\$67,320	\$59,633
Travel	\$60,523	\$45,063	\$37,567	\$42,500	\$36,750
Other Operating Expense	\$208,496	\$184,376	\$105,679	\$101,165	\$168,655
New Initiatives	\$230,000	\$68,453	\$118,994	\$118,500	\$157,655
Professional Development	\$17,818	\$12,233	\$12,511	\$17,000	\$43,500
Total Operational Expenses	\$563,748	\$341,703	\$310,693	\$346,485	\$465,538
Total Expenditures	\$5,636,658	\$5,015,388	\$5,521,086	\$4,727,385	\$5,007,294
Net Result For Future Investments	\$674,683	\$1,276,341	\$703,144	\$87,248	\$281,166
College In-Kind	\$720,351	\$721,412	\$714,324	\$797,792	\$832,594



GOALS AND STRATEGIES

Through strategic planning and partnerships TrainND Northwest will continue a focus on serving business and industry partners through safety and technical training. TrainND Northwest will also pursue efforts to diversify. Despite challenges brought about by the recent downturn and the COVID-19 pandemic the target industries for training in the northwest region remain oil and gas and related auxiliaries. Exclusive opportunities to provide producer required safety orientations continue to provide relatively consistent revenue for TrainND Northwest. Additionally, our flagship Commercial Driver and Crane Programs endure in providing consistent revenue as high demand for these skills remains prevalent in the northwest region.

TrainND Northwest has made great efforts to diversify into high need training areas such as: Well Control, Industrial Maintenance Technology (Apprenticeship), Lease Operator, Gas Plant Operator and Technician, Polish Rod Maintenance, Introduction to Production Equipment for Roustabout, and Short-Term Welding. Additionally, TrainND Northwest is working to develop programs for Unmanned Aerial Systems (UAS), Heavy Equipment Operator, Soft Skills, and Mechatronics. These efforts to diversify will allow TrainND Northwest the opportunity to expand our scope of services and provide our industry partners and region with highly skilled workers in high demand areas.

An effort to expand our training services to include distance learning format has been successful during the COVID-19 Pandemic. We have effectively designed curriculum and trained our instructors to provide the same high quality of training our customers have come to expect while allowing the convenience and safety of instructor-led distance delivery. TrainND Northwest will continue to offer our high-quality trainings in face-to-face and distance learning formats as determined by the demand of our customers.

OBJECTIVES FOR FY 2021:

- Provide training to over 800 regional businesses each fiscal year with a minimum 45% repeat rate.
- Train 1,000 employees (unduplicated count) each fiscal year.
- Provide over 80,000 contact hours each fiscal year
- Maintain a client satisfaction rate of 98%.
- Meet budgeted training revenue as outlined in the TrainND Northwest Business Plan.

STRATEGIES IMPLEMENTED IN ORDER TO ACCOMPLISH OR EXCEED OBJECTIVES:

- Serve as marketer, broker, and coordinator of training programs.
- When requested serve as developer of custom curriculum.
- Implement an infrastructure that is supportive to business, industry, and organizations.
- Collaborate with stakeholders to promote economic development.
- Identify the highest quality trainers and continue to develop and expand their abilities.
- Continued refinement of the TrainND Northwest strategic plan
- Develop a marketing plan.
- Expand services within the region.
- Constantly seek partnerships with business and industry in our Region.
- Develop leaders within our organization.

BUDGET NARRATIVE

Funding sources come from:

- Direct training revenue
- State general fund dollars
- Other
- WSC in-kind match

Direct training revenue has increased for the third fiscal year in a row despite the challenges of the COVID-19 pandemic and the industry downturn Oil and Gas experienced the second half of fiscal year 2020. This success is a direct result our continued efforts to expand partnerships within business, industry, and organizations in the northwest region of North Dakota and beyond. TrainND Northwest was successful in pivoting to distance learning very early into the COVID-19 crisis and as a result was successful in generating revenue during a time that many businesses were not so fortunate.

TrainND Northwest has established a goal that earnings and profits will be used to fund the following:

- Expand and strengthen training offerings that are vital to the workforce of North Dakota
- Continue to invest in cutting edge technologies to ensure our offerings are of the highest quality

The strategic use of excess funds over the next biennium will ensure that TrainND Northwest is able to emerge from the current downturn primed to train the workforce of Western North Dakota and continue as the premier training facility in North Dakota.

TrainND Northwest will receive allocations from the state general fund this biennium through HB1019 and HB 1003. HB 1019 TrainND Northwest will receive a percentage of the funds outlined for the statewide TrainND system (\$2,000,000). TrainND Northwest's portion is estimated to be \$408,560. HB 1003 granted WSC \$700,000 for workforce training and technical programs for the 20-21 biennium. The additional funds will be used for costs associated with expansion of programs including salaries and equipment. During fiscal year 2020 TrainND used these funds to upgrade and expand our CDL with the purchase of a CDL simulator, 2 semi-trucks. Additionally, a quality control specialist

position was developed and hired with a focus to ensure our training programs are of the highest quality. This funding specifically allocated to TrainND Northwest is identified in the "State General Fund (HB 1003)" line item in the budget for the 2020 and 2021 fiscal years.

TrainND Northwest has 8 FTE staff positions and 8 FTE trainer positions. Due to the demand of the oil and gas industry, with the various training certifications needed full time trainer positions are required to meet industry training needs.

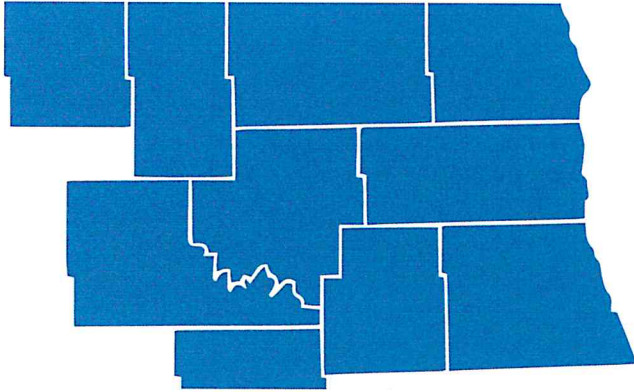
TrainND Northwest generates revenue that is classified as "other" through room rentals, catering, the operation of a bistro on the training campus, and training equipment rentals. TrainND Northwest continues to look for opportunities to meet the needs of the northwest region and state of North Dakota in providing space, training equipment rentals, and value-added services.

Williston State College contributes in-kind services to TrainND Northwest in the following ways: presidential leadership, business office support, human resources support, maintenance, and custodial services.



FY 2018-2022 Statement of Revenues, Expenses and Funding Sources

	Actual FY 2018	Actual FY 2019	Actual FY 2020	Budget FY 2021	Budget FY 2022
REVENUES					
Direct Training Revenues	\$2,620,497	\$2,835,655	\$3,082,690	\$1,845,275	\$2,240,000
Community/Regional Funds	\$25,000	\$0	\$0	\$0	\$0
Grant Funding	\$230,000	\$0	\$125,000	\$125,000	\$0
State General Fund (HB 1003)	\$0	\$0	\$125,000	\$125,000	\$0
State General Fund (HB 1019)	\$194,760	\$194,760	\$204,280	\$204,280	\$204,280
Other	\$132,541	\$119,790	\$147,205	\$80,000	\$100,000
Total Revenues	\$3,202,797	\$3,150,205	\$3,684,315	\$2,254,555	\$2,544,280
EXPENDITURES					
Total Direct Training Expenditures	\$914,805	\$605,332	\$945,189	\$384,372	\$550,000
Outreach/Coordination Expenses					
Total Salaries/Wages and Benefits	\$1,412,086	\$1,478,439	\$1,919,010	\$1,662,698	\$1,500,000
Marketing	\$25,025	\$7,415	\$17,292	\$33,300	\$25,633
Travel	\$21,710	\$17,514	\$25,009	\$16,000	\$15,000
Other Operating Expense	\$89,024	\$22,087	\$30,061	\$25,000	\$90,000
New Initiatives	\$230,000	\$0	\$118,994	\$115,000	\$150,000
Professional Development	\$7,384	\$7,172	\$5,927	\$10,000	\$30,000
Total Operational Expenses	\$373,143	\$54,188	\$197,284	\$199,300	\$310,663
Total Expenditures	\$2,700,034	\$2,137,959	\$3,061,483	\$2,246,370	\$2,360,663
Net Result For Future Investments	\$502,764	\$1,012,246	\$622,831	\$8,185	\$186,647
WSC In-Kind	\$42,720	\$51,264	\$58,682	\$59,730	\$59,730



GOALS AND STRATEGIES

The goals, objectives, and strategies are created through a team effort, approved by the executive team, and adopted by the Advisory Board. The performance objectives are reported and measured annually to determine if the strategies are producing the desired results. By executing the strategies, TrainND Northeast can fulfill its mission as set forth by legislation, facilitate economic development of the region, build long-term relationships, and position itself to sustain the vision of an efficient workforce training system.

TrainND Northeast will continue to adapt to the training needs of business and industry. The COVID-19 crisis has not only demanded the innovative delivery of training but has also created increased demand to train displaced workers. Collaboration and partnering with the other TrainND regions, businesses and state organizations will be key to servicing the wide-ranging training needs of the workforce.

Goal: To deliver innovative, cost-effective, results-oriented, workforce training and services for the businesses and industries in the Northeast region.

OBJECTIVES FOR FY 2021:

- Provide training to 100 businesses each fiscal year with minimum of 45% repeat rate.
- Train 1,500 employees (unduplicated head count each fiscal year).
- Provide 12,000 contact hours each fiscal year.
- Maintain a client satisfaction rating of 100%.
- Meet budgeted training revenues as outlined in the TrainND Business Plan.

STRATEGIES TO BE IMPLEMENTED IN ORDER TO MEET AND EXCEED OBJECTIVES:

- Collaborate with other TrainND regions to expand training offerings and deliver best-value training solutions to our clients.
- Continually identify training needs and prospective clients to expand client base.
- Leverage curriculum and seek instructional expertise from Lake Region State College (LRSC) to expand training offerings.
- Continue developing innovative training delivery methods, primary focus is distance synchronous learning.
- Lean out administrative processes to reduce lead times to rapidly deploy accelerated training.
- Market and promote TrainND Northeast solutions and services, using social media marketing.
- Expand outreach and sales efforts.
- Become an extension of our clients' human resources and training departments; using client needs assessments to determine fits for training.
- Collaborate with regional and state economic development resources to gain further focus on training to support diversification and economic development goals.
- Research, evaluate, and invest in new training initiatives to strengthen North Dakota's workforce.

BUDGET NARRATIVE

Funding sources for TrainND Northeast come from direct training revenue, state allocated dollars, and institutional in-kind funds.

Direct training revenue and net results for FY2020 were lower than original forecasts; a decline in training revenue due to COVID-19 crisis occurred during Q3 and Q4. Pivoting to distance learning, quickly establishing COVID-19 safety protocols for in-person classes, and rapidly standing up an accelerated wind tech training for dislocated oil workers assisted TrainND NE with bouncing back during Q4. Distance synchronous learning is slowly being embraced by clients as a means of training delivery and upside exists to reach out to rural areas with an affordable method of training delivery.

Lake Region State College continues to support the efforts of TrainND Northeast by providing indirect services including President and Vice President of Academic and Student Affairs time, Administrative Services support, office space & utilities, meeting rooms, classrooms, lab equipment, human resources, IT support, security, and plant services. The LRSC in-kind amount is calculated based on LRSC's authorized federal indirect rate.

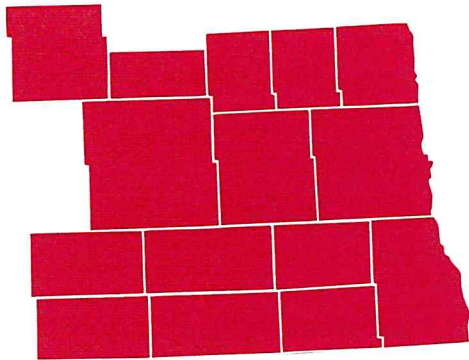
TrainND Northeast has 3.0 staff positions and all trainers are adjunct trainers.



Michael Griffin and Reed Neset, wind technician students, stand atop the GE 1.6 MW turbine at Lake Region State College during training in June 2020.

FY 2018-2022 Statement of Revenues, Expenses and Funding Sources

	Actual FY 2018	Actual FY 2019	Actual FY 2020	Budget FY 2021	Budget FY 2022
REVENUES					
Direct Training Revenues	\$291,825	\$211,129	\$183,206	\$200,000	\$275,000
Community/Regional Funds	\$0	\$0	\$0	\$0	\$0
Grant Funding	\$0	\$0	\$0	\$0	\$0
State General Fund (HB 1019)	\$159,920	\$159,920	\$155,550	\$155,550	\$155,550
Total Revenues	\$451,745	\$371,049	\$338,756	\$355,550	\$430,550
EXPENDITURES					
Total Direct Training Expenditures	\$140,557	\$78,580	\$106,182	\$94,570	\$107,124
Outreach/Coordination Expenses					
Total Salaries/Wages and Benefits	\$211,138	\$214,625	\$218,201	\$236,324	\$260,342
Marketing	\$200	\$1,246	\$55	\$2,000	\$3,000
Travel	\$1,714	\$1,178	\$466	\$500	\$750
Other Operating Expense	\$1,878	\$5,100	\$2,438	\$10,155	\$5,655
New Initiatives	\$0	\$453	\$0	\$0	\$5,655
Professional Development	\$0	\$0	\$0	\$0	\$1,000
Total Operational Expenses	\$3,792	\$7,977	\$2,959	\$12,655	\$15,405
Total Expenditures	\$355,487	\$301,182	\$327,342	\$343,549	\$382,871
Net Result For Future Investments	\$96,258	\$69,867	\$11,414	\$12,001	\$47,679
LRSC In-Kind	\$72,695	\$80,763	\$72,443	\$78,460	\$86,434



GOALS AND STRATEGIES

CUSTOMIZED TRAINING

Every business and organization is different, with distinctive processes, singular needs and unique objectives. One-size-fits-all training just won't cut it.

TrainND (SE) offers open enrollment courses and customized programs for nearly every industry. More importantly, we make our training fit your organization and your needs, not the other way around. Our staff will:

- Train at the NDSCS-Wahpeton, NDSCS-Fargo or at your site.
- Customize every program to address your specific challenges and need.
- Tailor courseware to deliver only topics you select.
- Maximize cost effectiveness by training on multiple topics in a single program.
- Deliver private training on any of the topics we regularly offer.

COVID-19 IMPACT

In response to the impacts of the COVID-19 pandemic, the NDSCS TrainND program is responding to business and industry workforce needs by delivering virtual training formats as well as traditional face to face training by adopting CDC social distancing guidelines.

Examples of recent training events include: Situational Leadership II Concepts, Management Essentials, Forklift Train the Trainer, Customized Excel Formulas & Functions Training, Designing Ads & Marketing Materials and Supervisor and Manager Training.

OBJECTIVES FOR FY 2021

- Business Served: Provide customized training to 120 regional businesses each fiscal year.
- Repeat Rate: Minimum of 45% each year
- Unduplicated Headcount: Train 675 employees each fiscal year.
- Satisfaction Rate: Maintain a 98% or higher satisfaction level for training
- Contact Hours: 25,000 each year
- Meeting Revenue Goal: Obtain budgeted training sales revenue goals.

STRATEGIES TO BE IMPLEMENTED IN ORDER TO ACCOMPLISH THE OBJECTIVES

- Provide sales and marketing services to deliver quality training programs.
- Collaborate with business and industry to promote economic development.
- Create awareness of training services across the region.
- Maintain an inventory of qualified trainers and facilitators with areas of expertise.
- Provide training for business and industry to compete globally.

BUDGET NARRATIVE

Funding sources for TrainND SE:

- Direct training revenue
- State allocated dollars
- Institutional funds
- Workforce Partner Memberships
- Grant funds

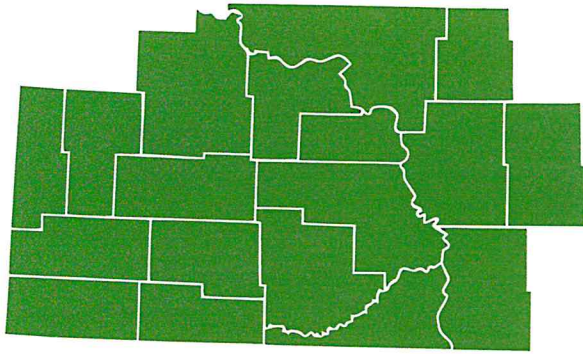
North Dakota State College of Science contributes to the division by providing projected 30% in-kind support. In-kind support includes office space, and plant services as well as indirect services including human resources, payroll, security, IT support, etc. Additional support is provided by the NDSCS President and the Vice President of the Division for Workforce Affairs.

TrainND has 5.0 FTE staff positions.



FY 2018-2022 Statement of Revenues, Expenses and Funding Sources

	Actual FY 2018	Actual FY 2019	Actual FY 2020	Budget FY 2021	Budget FY 2022
REVENUES					
Direct Training Revenues	\$680,372	\$784,455	\$489,215	\$461,200	\$500,000
Community/Regional Funds	\$151,700	\$129,000	\$110,000	\$125,000	\$130,000
Grant Funding	\$0	\$68,000	\$0	\$0	\$0
State General Fund	\$383,940	\$383,940	\$385,480	\$385,480	\$385,480
Total Revenues	\$1,216,012	\$1,365,395	\$984,695	\$971,680	\$1,015,480
EXPENDITURES					
Total Direct Training Expenditures	\$227,205	\$337,030	\$204,720	\$206,300	\$225,000
Total Salaries/Wages and Benefits	\$878,636	\$791,646	\$698,000	\$614,400	\$640,000
Operational Expenses					
Marketing	\$10,976	\$11,022	\$11,541	\$12,000	\$15,000
Travel	\$32,641	\$23,750	\$8,656	\$15,000	\$15,000
Other Operating Expense	\$111,095	\$145,136	\$64,147	\$52,500	\$60,000
New Initiatives	\$0	\$68,000	\$0	\$0	\$0
Professional Development	\$7,506	\$1,539	\$4,024	\$4,000	\$10,000
Total Operational Expenses	\$162,218	\$249,447	\$88,368	\$83,500	\$100,000
Total Expenditures	\$1,268,059	\$1,378,123	\$991,088	\$904,200	\$965,000
Net Result For Future Investments	(\$52,047)	(\$12,728)	(\$6,393)	\$65,940	\$48,940
NDSCS In-Kind	\$209,191	\$237,500	\$209,400	\$184,320	\$192,000



GOALS AND STRATEGIES

The goals, objectives, and strategies for TrainND Southwest are created as a cooperative process with our advisory board, industry partners and Bismarck State College (BSC). The goals and objectives are measured and reported annually to our advisory board. Through this process, TrainND Southwest assesses our programs and products to equip the workforce with the tools they need to succeed in the changing environment.

In the age of swift and dramatic technological disruption, TrainND Southwest and BSC must respond just as swiftly and dramatically to ensure that all incumbent and future workers have access to quality employment throughout their careers. Technology will continue to change the way that we work, requiring workers to continuously learn new skills, adapt to new workplace technologies, and even new work environments.

Due to the pandemic and uncertainty in the business and environment, TrainND Southwest and BSC will pivot to provide resources to not only incumbent workers but workers looking to re-skill. We will modernize the delivery of training and education to meet the rapidly evolving needs of the workforce.

As we move forward, TrainND Southwest will fulfill its mission by enabling all citizens to engage in lifelong learning and high-quality employment.

OBJECTIVES FOR FY 2021:

- Provide training to 200 businesses each fiscal year with 50% repeat rate
- Train 2,000 employees (unduplicated head count) each fiscal year
- Provide 60,000 contact hours each fiscal year
- Maintain a client satisfaction rate of 98%
- Meet budgeted training revenues as outlined in the TrainND Business Plan

THE FOLLOWING STRATEGIES WILL BE IMPLEMENTED TO ACCOMPLISH OUR GOALS AND OBJECTIVES:

Develop and promote a culture of lifelong learning for all current and future workers.

Collaborate with business and industry to train new and incumbent workers. Provide integrated options for participants to move quickly into career pathway programs/programs of study.

Develop and offer industry recognized stackable credentials to non-degree or degree seeking students to expand their skill sets and enhance career pathway options.

- Collaborate with business and industry to address essential and occupational skill gaps in our region as well as partnering to educate and re-skill their existing workforce.
- Continue to develop training programs in the area of technology, cybersecurity and healthcare.
- Expand technical training offerings and delivery methods for businesses and industry including virtual, hybrid, online and hands-on training.
- Rely on our accountability measures to ensure that training programs are industry driven and produce positive outcomes for learners.
- Consult through assessments and needs analysis to become part of our client's business strategy.
- Continue to provide talent development services to our clients to increase their human capital.
- Collaborate with other regions to ensure coverage of all North Dakota's workforce.
- Research and invest in curriculum development for in-demand skills.

It is our intent to shift the conversation from training being a public expense to training being an economic investment. The return on investment of a talent development system that serves the private sector is undeniable. TrainND Southwest is a critical driver in maintaining economic stability and advancement of the region's growth by tactically fulfilling the key talent needed for the high priority occupations.

BUDGET NARRATIVE

The primary funding source for TrainND Southwest comes from direct training revenues paid for by the companies, along with state allocated dollars and institutional in-kind funding. BSC continues to support the efforts of TrainND Southwest by providing indirect services including office space, human resources, IT, security and plant services (maintenance, parking, snow removal, etc.) The BSC in-kind amount is calculated based on BSC's authorized federal indirect rate.

TrainND Southwest has FTE 8.74 staff positions and 1.07 FTE trainer positions.



FY 2018-2022 Statement of Revenues, Expenses and Funding Sources

	Actual FY 2018	Actual FY 2019	Actual FY 2020	Budget FY 2021	Budget FY 2022
REVENUES					
Direct Training Revenues	\$1,179,407	\$1,143,700	\$961,775	\$979,698	\$1,045,000
Community/Regional Funds	\$0	\$0	\$0	\$0	
Grants	\$0	\$0	\$0	\$0	
State General Fund (HB 1019)	\$261,380	\$261,380	\$254,690	\$254,690	\$254,690
Total Revenues	\$1,440,787	\$1,405,080	\$1,216,465	\$1,234,388	\$1,299,690
EXPENDITURES					
Total Direct Training Expenditures	\$480,841	\$449,900	\$356,236	\$212,273	\$250,250
Outreach/Coordination Expenses					
Salaries/Benefits	\$807,642	\$718,133	\$762,855	\$969,963	\$1,009,040
Operational Expenses					
Marketing	\$10,709	\$11,895	\$7,053	\$20,020	\$16,000
Travel	\$4,458	\$2,621	\$3,436	\$11,000	\$6,000
Other Operating Expense	\$6,499	\$12,053	\$9,033	\$13,510	\$13,000
New Initiatives	\$0	\$0	\$0	\$3,500	\$2,000
Professional Development	\$2,928	\$3,522	\$2,560	\$3,000	\$2,500
Total Operational Expenses	\$24,594	\$30,091	\$22,082	\$51,030	\$39,500
Total Expenditures	\$1,313,077	\$1,198,124	\$1,141,173	\$1,233,266	\$1,298,790
Net Result For Future Investments	\$127,710	\$206,956	\$75,292	\$1,122	\$900
BSC In-Kind	\$395,745	\$351,885	\$373,799	\$475,282	\$494,430

trainND

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Good Afternoon Mr. Chairman and members of the Committee,

Thank you for providing the time to talk about the Farm Management Education program

My name is Kyle Olson. I run the Farm Management Education Program at the Bismarck Campus of Bismarck State College. I am one of 14 instructors across the state in 5 different educational institutions.

BSC located in Bismarck and Dickinson; Dakota College at Bottineau located in Bottineau, Rugby, Minot and is now in a new additional location in Williston; Lake Region State College located in Devils Lake, Langdon, and Carrington; ND State College of Science located at Wahpeton, Fargo, and Jamestown, and finally Glen Ullin Public School located at Glen Ullin.

Instructors, at these institutions, work one on one with active agricultural producers on financial and production recordkeeping in order to generate and accrual-based income statement for their specific operation. Instructors aid in developing a projection for the upcoming year derived from past financial and production performance.

New producers / students are introduced to bookkeeping software to track cash income and cash expenditures. Yes, I have had students begin the program with a shoe box full of receipts. One even came into my office with a laundry basket full of paperwork. We help set up the software specifically for their operation and the different enterprises they participate in. We also set up this software to track loan advances and payoffs throughout the year. With returning students, we review the input and look for entry errors or misinterpretations they have entered previously. This data is the foundation for the accrual adjustments made in the income statement.

In addition, we provide methods to track production. This is typically done with spreadsheet software.

We provide guidance in filling out balance sheets to accurately represent what is owned and what is owed. This is accomplished with either spreadsheet templates or FINPACK which is a computer program developed decades ago by the University of Minnesota, Center for Farm Financial Management. It is specifically designed for agriculture.

With these two activities completed, we can start developing the accrual-based income statement also referred to as the analysis or closeout.

We effectively balance out the beginning balance sheet and the ending balance sheet. Almost 40 different accrual adjusted categories of expenses are review. It's an involved process that is accomplished using FINPACK.

Now with these three activities completed, the producer and instructor allocate these accrual-based incomes and expenses to a specific enterprise, let's say Wheat, Sunflowers, or Cow/Calf.

The next step is building the projection for the coming year. We use the information gathered in the analysis to look forward to the potential profitability of the next time period, usually the next calendar year. If we have 3 years of history, we use a 3-year average. If we have 5 years, we use a 5-year average. Every projection is based on past performance.

The top end, or highest level, for students in the program is when they can complete all the tasks I just talked about on their own, develop a break-even forecast price for each crop and livestock enterprise, and develop a marketing plan based on that forecast.

What happens next? Data generated from the individual analysis of farms and ranches is pooled and sent to NDSU Extension in Fargo where those numbers are combined to produce the regional and state averages. There are both private and public entities that utilize these averages in business and economic research.

Are there any questions at this point?

Now I would like to focus on the impact of the program. As a group, the program instructors surveyed producers enrolled in the program and I want to focus on one question that 93 of the survey respondents answered.

Producers were asked -- **What is the annual economic gain of participating in the Farm Management program for your farm/ranch?**

Please refer to the slide.

The weighted average of the response to this question is \$19,885.

There were 494 students/producers enrolled statewide last fiscal year.

Last biennium the State of North Dakota appropriated \$947,000 dollars annually for the Farm Management Education program and state got a return of economic activity for their investment.

When I was putting this presentation together, I originally thought that I could utilize the survey numbers, come up with an economic multiplier, and give a series of positive statements about what the Farm Management Education is returning to the state. I got into it a little way and realized that the last time I dealt with economic multipliers was 30 plus years ago for a class project in college. Not really my area of expertise.

Minnesota and Utah Farm Management Education programs have surveyed their producers with a very similar question. The results were a \$12,000 gain for producers in Minnesota and a \$13,000 gain for producers in Utah.

Please take some time, in the near future, to review some of the other information derived from the survey.

Over the last three years, an average of 18% of total students are brand new to the program.

Many of the new students are young and just starting in production agriculture.

We have contracts with the ND Department of Agriculture to help with Credit Counseling and Mediation when workload allows.

The Farm Management Education program provides Borrower Training for producers required to do so by the Farm Service Agency.

Several programs across the state coordinate marketing clubs focusing on commodities marketing with producers. I work alongside both Burleigh and Morton County Extension to coordinate these meetings in the Bismarck area.

Part of the goal within these Farm Management Education programs is to have a diverse group of producers with a diverse group of enterprises. Young producers just starting out, mid-career producers with some years behind them, and older producers who have experienced many diverse years. Enterprises like irrigated crops and beef backgrounding are also important to the program due to limited financial information about these enterprises.

In my program specifically, I have a lot of mechanics. Those who graduated high school, went to State College of Science and received their Diesel Mech degree. They worked in that career for 3 to 10 years and then, when presented with the chance to enter production agriculture, they jumped at the it.

These individuals were never been exposed any finance or bookkeeping methods. That's where the Farm Management Education program comes into their situation. The same could be said for agronomy or animal science graduates. They have limited knowledge of financial methods. The same could be said for those coming straight out of high school and entering a crop or livestock operation.

The bottom-line goal for North Dakota Farm Management Education is education. Teaching the critical thinking it takes to make sound business decisions.

With that, I would love to answer any questions you have.

SB 2019
Senate Appropriations Committee
January 7, 2021
Presented by: Rocky Bateman, New Salem ND

Mr. Chairman and members of the Senate Appropriations Committee, my name is Rocky Bateman and I stand before you today in support of Senate Bill 2019, specifically as it pertains to the Farm Management Education budget.

I was first introduced to the Farm Management Education program in 1973 when I graduated from high school, bought my farm from the neighbor and started college at what was then Bismarck Junior College. The Farm Management Education accounting system was part of my very first class as a freshman. Continual education is crucial to the success of any business and today, I'm proud to say that I've continued to invest in enrolling in this course through my nearly fifty years of farming and am still involved today. The benefits of this program have been immeasurable and I have only positive things to say about it and the instructors I've been privileged to work with.

Solid, accurate data is what makes or breaks a farmer or rancher. Without it, what we think are good business decisions are really only a guess. It's my opinion that the information I receive through this program is as good or better than any other accounting and analysis program on the market, and my banker would tell you the same.

Over the years I have watched this program grow and evolve. It started with handwritten spreadsheets, but today, the experience and expertise of the instructor combined with the ability to effectively utilize the electronic data makes both that person and the program a valuable team member in my operation. I can take a year-end analysis to my tax preparer and banker with total confidence that I am giving the most accurate view possible of my business. We all work off of one set of numbers, made available consistently through this program, and that is huge!

For those of you who might not know, I moonlighted as a legislator here for six years in the early 90s, with four of those years spent on House Appropriations. I bring this up because, at that time we reviewed the compilation of all producer profit and loss statements statewide, to determine the health of agriculture in our state, and how it impacts this very budgeting process. Those numbers came from this program. I hope you continue to use this program and the statewide numbers it provides to make accurate decisions and help build the best budget possible for the State of North Dakota.

These numbers are real and unbiased. I have heard some be critical of the program and that it should only be for beginning farmers. In my opinion, that couldn't be farther from the truth. It is true that some participants are mandated by the federal government to be in a management program like this. Then there are the rest of us that choose to pay and take advantage of the benefits this program offers. Allowing a broad base of producers to participate provides an accurate picture of what is happening in agriculture as a whole, and continuity of data over time.

The Farm Management Education program is one of those rare programs offered by the state, that is extremely valuable to the farmers and ranchers participating, and also has direct benefits back to the state government, in helping committees like this manage the fiscal affairs of the state. Agriculture is still the largest industry in North Dakota, with ag proceeds turning over at least three to four times in our economy. Having the data from the Farm Management Education program to use in assessing the status of this segment of our economy is vitally important.

Mr. Chairman and members of the committee, this program delivers and, in my opinion, it is imperative that funding be restored to the level it was at in the previous biennium.

Thank you for your time and I'd be happy to answer any questions.



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Contact:
Matt Perdue, Lobbyist
mperdue@ndfu.org | 701.641.3303

**Testimony of
Matt Perdue
North Dakota Farmers Union
Before the
Senate Appropriations Committee
January 7, 2021**

Mr. Chairman and Members of the Committee,

Thank you for the opportunity to testify on Senate Bill No. 2019. My name is Matt Perdue, and I am here on behalf of North Dakota Farmers Union's (NDFU) members.

NDFU supports SB 2019, specifically the Adult Farm Management (AFM) line item, which maintains the base funding level for the AFM program.

The AFM program is an important resource to family farmers and ranchers. The program offers critical support for goal setting, recordkeeping and financial management. During the last several years, low commodity prices, market disruptions, adverse weather and eroding financial conditions have created major challenges for agricultural producers. The AFM program gives farmers the tools they need to persevere through the tough times and flourish in the good times.

NDFU is also concerned by the consistent increase in the average age of farmers and ranchers. According to the 2017 Census of Agriculture, the average North Dakota producer is 56 years old. The AFM program gives beginning farmers the tools they need to continue their families' and our state's proud agricultural tradition.

By maintaining the current level of funding, you will ensure the Adult Farm Management program remains a valuable resource for farmers and ranchers.

Thank you for your time. I will stand for questions.





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January 5, 2021

Good morning Chairman Holmberg and members of the Senate Appropriations committee, my name is Lyle Krueger. I am the assistant director of the Central Regional Area Career and Technical Center (CRACTC), the virtual hybrid CTE center based out of Bismarck. I am providing written testimony in support of SB 2019 with a request for a couple modifications.

As you know, there are many strong Career and Technical Education (CTE) programs throughout our great State of North Dakota, both brick & mortar centers, as well as virtual hybrid centers such as the one I oversee, the Central Regional Area Career and Technical Center (CRACTC) based out of Bismarck. Currently CRACTC is serving 700 students within mostly central/western North Dakota, both public and private school students, at 46 different high schools with approximately 923 overall CTE course enrollments (a single student can take more than one course). The number of students, as well as our course offerings, has increased each year as students are more interested in gaining career-oriented coursework and hands-on learning experiences and skills while still in high school. For most classes, we use a virtual hybrid format where students utilize an online learning management system (LMS) such as Moodle, to receive the curricular content and communicate with their teachers (along with other communication tools). They then meet with the instructor and other students at a centralized location to perform hands-on application of the learning associated with the online curriculum or to participate in career exploration learning opportunities with local or regional industry-related partners.

As the need for coursework and programming for skilled jobs, workforce, and parallel learning experiences for High School, College, and Adult Education students continues to grow, the need for growth and expansion of CTE programming is ever more necessary. The interest and desire to provide Career Academies such as the one in Bismarck, has a purpose and I look forward to the ongoing discussions throughout the session. Nonetheless, I would like to request a couple modifications to SB2019 that may help to impact learners throughout the State.

Modification 1: modify the budget to restore the \$1.5 million funding request from the State Career and Technical Education Department for new and expanding Secondary Programs. Such funding helps centers and high school programs throughout North Dakota provide new and current learning opportunities for students that they currently may not have access to, including additional sections of popular relevant career-oriented classes. In the last two years alone, the CRACTC has been able to provide such coursework and learning opportunities to students in areas such as Teaching, Housing & Interior Design, Emergency Medical Response, Coding, Video Game Design, and Engineering. With additional funding to help supplement the costs to implement these endeavors, the learning opportunities would not be able to occur for interested students.

Modification 2: modify the budget to restore the original \$1.5 million funding request from the State Career and Technical Education Department to maintain Secondary Program Reimbursement Rates. This funding is vital to schools and centers to help ensure we are able to cover the costs to continue current programming without going backwards. A reduction in such funding may result in possible teacher reductions, equating to less course offerings and less student learning opportunities.

Dale Hoerauf, Director
Dale_Hoerauf@bismarckschools.org

Lyle Krueger, Assistant Director
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Alissa Thiele, Secretary
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Modification 3: modify the budget to restore the original \$3 million funding request from the State Career and Technical Education Department to create equitable CTE funding across all programs. Currently, most programs have a set base reimbursement rate for CTE centers of 40% for teacher salary, benefits, travel, and supplemental consumable materials (equipment is not included). However, some program areas have lower base reimbursement rates such as Technology & Engineering (27%) and Family & Consumer Sciences (19%), which is only applied to teacher salaries, travel, and supplemental materials (benefits are not included). In order to make ends meet, centers may need to reduce student learning opportunities due to a limitation on funding for course supplies and/or increase student-to-teacher ratios for these classes. As a result, teacher burnout and higher turnover rates. This request for the \$3m would help to create equal reimbursement funding levels for all CTE program areas (i.e Agriculture, Business, Family & Consumer Sciences, Information Technology, Marketing, STEM, etc.), elevating the lower base reimbursement rates to help provide more opportunities for students, while maintaining current funding reimbursement rates for the others to sustain those program operations moving forward.

Chairman Holmberg and members of the Senate Appropriations committee, thank you for your time and consideration of my written testimony and request for modifications of SB 2019. Please feel free to contact me at your convenience if you have any questions or would like to discuss things further.

Sincerely,

Lyle P Krueger

Lyle P. Krueger
Assistant Director
Central Regional Area Career and Technical Center



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DATE: January 5, 2021
TO: Senate Appropriations Committee
FROM: Dave Farnsworth & Reese Boehm
SUBJECT: TrainND Letter of Support on behalf of Great River Energy

Dear Senate Appropriations Committee,

The purpose of this letter is to communicate the importance of continued State funding for the TrainND program. TrainND is North Dakota's most comprehensive training network which provides training for ND Business and Industry, enhancing ND's ability to compete globally.

Some statistics, specific to the entire TrainND effort for 2020 include:

- 383 companies served
- More than 80,000 hours of training delivered
- 100% client and 99% participant satisfaction rates received respectively

Great River Energy consistently utilizes TrainND's Mobile Welding Unit to certify our in-house maintenance welders. The state-of-the-art mobile welding trailer is managed by competent TrainND trainers, and the welding training is conducted by subject matter expert instructors who produce proven, quality results in Great River Energy's employees. The Professional Development Continuing Education Training program has also been leveraged. The subject material is current and relevant and taught by competent and accomplished instructors. Other TrainND programs, such as the Commercial Driver's License (CDL) program help to train individuals in a career greatly needed by the North Dakota Energy Industry.

In conclusion, TrainND provides a value-added benefit to Great River Energy and our great State of North Dakota as it bolsters our workforce's knowledge, skills and abilities. TrainND positions the ND workforce competitively in their respective markets globally and helps to quickly retrain industry workers displaced by an ever-changing economy.

We encourage you to support TrainND into the future with the requested State funding.

Sincerely,

Great River Energy, Manager Power Generation and Engineering,

A handwritten signature in blue ink that reads 'David E. Farnsworth'.

Dave Farnsworth

TrainND Southwest Advisory Board Member & Great River Energy Leader, O&M Support Services

A handwritten signature in blue ink that reads 'Reese Boehm'.

Reese Boehm



NDSBA
NORTH DAKOTA SCHOOL
BOARDS ASSOCIATION

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SB 2019

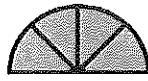
**Testimony of Alexis Baxley
Senate Appropriations Committee
January 7, 2021**

Chairman Holmberg and members of the Senate Appropriations Committee, my name is Alexis Baxley. I am the executive director of the North Dakota School Boards Association. NDSBA represents all 175 North Dakota public school districts, their boards, and a number of special education units. I am here today in support of SB 2019.

The Department of Career and Technical Education is a very important partner to K-12 education in North Dakota. The work that they do has always been integral to the success of many districts across the state, but that has become even more true over the past year.

NDSBA, and I personally, appreciate our partnership with Wayde, Mark, and their staff very much.

NDSBA supports SB 2019 and the CTE budget and encourages this committee to give it a do pass recommendation.



Security First Bank

OF NORTH DAKOTA

(701) 667-7000 614 West Main Street P.O. Box 1150 Mandan, ND 58554

Mr. Chairman thank you for the time today to hear my concerns for any reduction in the budget for the Adult Farm Management program in Senate Bill Number 2019 LC # 21.0301.01000

My name is Todd Neurohr I am an Ag Lender at Security First Bank of ND located in Mandan. To give you a little background on myself I was raised on the family farm in Gladstone with my brother who is still farming there today. I regularly go back to help with the farming and also do all the bookwork and marketing for the operation.

When I am not farming, I have been assisting farmers and ranchers with their lending needs for over the past 28 years. I started with the old FMHA Farmers Home Administration back in 1993. During that time, I worked with most of the Ag banks, NDSU Extension Service, Bank of ND, Ag Mediation, Adult Farm Management program just to name a few. Then roughly 7 years ago I started working in the private banking sector. I have seen a lot of change in Agriculture from my prospective over the past 28 years.

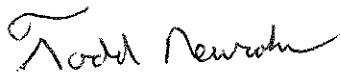
But do you know the one thing that no matter how far back in time you go that has not changed? No, it's not Grandmas apple pie recipe.... It's how important the numbers are. Big or small, it doesn't matter, the numbers will show how profitable or unprofitable a farming operation is. Most farmers while attending High School and College never realized the importance of truly knowing their operation numbers, so they likely never took the accounting/business courses that would have educated them on how to apply this to their farming operation. I have seen so many farming operations fail due to not knowing how to complete a budget and knowing their breakeven costs. This is where the Adult Farm Management program is so vital to this state. I have referred countless farmers and ranchers to the program over the years. Most farmers come out of the program wishing they had enrolled in the program long ago. The program teaches farmers budgeting, profitability, and marketing. They also hold marketing meeting with speakers to better educate and inform their clients. The financial analysis that they assist the farmer in putting together balance sheet, cash flow and break-even analysis are typically provided to the bank. This information is so important in the bank's lending decisions regarding a farmer's operation. As lenders we are confident that the numbers coming from the Adult Farm Management clients are accurate. In addition, the Adult Farm Management program provides an annual report of all its clients income and expense averages. They even break it down by region, so it is more applicable to a specific area. We typically use this information as a resource for our other bank clients.

An example of the impact this program has had on one of my former FMHA clients was back nearly 15 years ago. This farmer came to me for assistance and had basically no equity left in his operation and he was ready to sell out and quit farming. We worked and put a plan

together, I contacted the Adult Farm Management Program and got him enrolled. Slowly but surely, they taught this man the importance of knowing his farming numbers and how to use them to his advantage. This farmer stayed enrolled in the program for over 15 years, as he knew the importance of this program to his operation. Fast forward to 2021 this man now has one of the most profitable and successful farming operations in the area, he now also has 3 sons involved in the farming operation. That's 3 new young farmers that are so vital to this state and its economy. This would not have been possible without the help of the Adult farm Management Program and its efforts to teach and assist their father 15 years ago.

This is just one of many farmers that have successfully turned their operations around from the brink of disaster to profitable levels. The Adult Farm Management Program works as it should for farmers young and old. As a lender I would love to see all my clients enrolled in the program as I believe this is yet another one of the tools in the toolbox that a farmer can use to be successful.

As a lender and a farmer, I would ask that the members of this committee not only continue to fully fund this program but to also look to expand this program into the high schools for the up and coming young farmers. Teach them early the importance of knowing their numbers and budgeting through the Adult Farm Management Program. I believe that this is an invaluable program for North Dakota in order to educate and maintain our great states farming and ranching heritage. Again, thank you for the time to listen today.



Todd Neurohr
Vice President
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**Testimony of Jennifer Greuel
Economic Development Association of North Dakota
In Support of SB 2019
January 7, 2021**

Chairman Holmberg and members of the Senate Appropriations Committee:

I am Jennifer Greuel, executive director of the Economic Development Association of North Dakota (EDND). On behalf of EDND, I write to you in support of SB 2019.

EDND represents more than 80 state economic development organizations and related businesses on the front line of economic development efforts throughout North Dakota. The primary purpose of the organization is to promote the creation of new wealth throughout North Dakota to develop more vibrant communities and improve quality of life.

Although North Dakota's unemployment rate has gone up slightly due to the pandemic (4.5 percent in Nov. 2020), workforce availability is still a significant challenge facing North Dakota businesses, limiting the growth potential of the state's economy. EDND supports the development of workforce attraction, development and retention strategies that address the needs of the state's businesses and industries.

North Dakota is especially in need of skilled, trained workers, which the Department of Career and Technical Education (CTE) helps provide and equip. Information technology (IT) professionals, welders, CDL drivers, diesel technicians, electricians, and HVAC technicians, for example, are all desperately needed in most communities across the state and are areas in which CTE provides training. Workforce development is integral in creating a diversified economy and creating better employees and competitive companies. The training programs provided by CTE are tailored to the needs of businesses and provide tools for more efficient and productive employees.

TrainND is a CTE program providing critical support and training for businesses and employees across the state. Through collaboration between state, business and education systems, comprehensive and customized employee training is created to address critical workforce shortages. EDND supports the agency's request to restore funding back to \$2 million, as this viable program brings business, higher education and employees together.

EDND also supports the Executive Budget Recommendation of \$45 million for the building of career and technical education centers throughout the state, as well as subsequent needed funding for ongoing operations. An investment in the skillset of people in North Dakota is an investment in the state's future economy and programs which target youth and encourage students to consider in-demand, technical degree career paths to which they might not otherwise be exposed.

The availability of a high-quality competitive workforce will continue to be a significant challenge facing North Dakota businesses. Even though, due to the pandemic, there are more people looking for jobs, North Dakota does not have enough skilled workers to fill in-demand and technical job openings. EDND supports the investments included in this bill and the development of workforce training strategies that address the diversification and growth of businesses and employees.

Thank you for this opportunity to address your committee and express our support of SB 2019.

Testimony of Kyle Martin

Executive Director

Technology Council of North Dakota

In Support of SB 2019

January 7, 2021

Chairman Holmberg and members of the Senate Appropriations Committee:

My name is Kyle Martin, executive director of the Technology Council of North Dakota (TechND). I am writing to voice support of SB 2019.

TechND was created in 2000 by North Dakota business, government and education leaders who recognized the need to strengthen the state's information technology infrastructure and reposition the state as a national leader in IT. The organization has since expanded its focus to include members from the technology industry as a whole. TechND has over 60 member organizations, with representatives from both the public and private sector.

As North Dakota weathers the COVID-19 pandemic, our reliance on technology has never been greater, compounding the need for a high-quality workforce ready to meet the technology challenges of tomorrow. By 2028, TechND anticipates 7,500 new and replacement technology workers will be needed in North Dakota. Career and technical education centers will be paramount to filling these positions by serving as a gateway to the technology sector by

providing critical skills training and exposing students to the endless career opportunities available within the technology sector.

Although North Dakota's economy has been historically strong, it has not been immune from COVID-19's economic impact. Unemployment in North Dakota as of November 2020 was 4.5 percent (up from 2.4 percent in November 2019). Nearly every industry has been impacted to an extent, resulting in career changes and layoffs. Technology-related careers provide workers with high wages, great benefits and flexibility. Career and technical education centers play a vital role in sparking the interest of tomorrow's technology workforce and providing them with skills they will utilize throughout their careers.

TechND supports the Executive Budget Recommendation of \$45 million for career and technical education centers through a competitive matching grant program. This is an opportunity for North Dakota to invest dollars today to build tomorrow's information technology workforce. Additionally, TechND would also ask the Senate Appropriations Committee to consider supporting the long-term costs of career and technical education centers through additional funding—the \$45 million bonding proposal does not include dollars to support operational costs for new centers. TechND also supports CTE's \$2 million request to restore funding back to TrainND. This program is critical to providing training for businesses and employees across North Dakota.

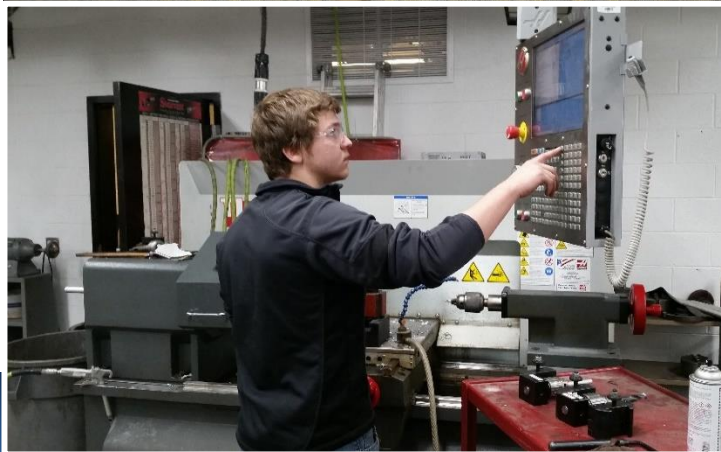
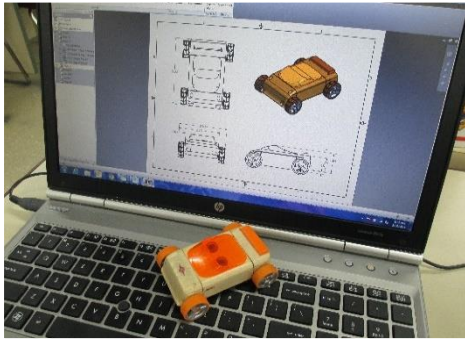
Since the launch of TechND's IT Career Awareness Program in 2009, CTE has been a strong partner in promoting careers to students and educators through the program. TechND and CTE have worked together to reach tens of thousands of students in dozens of communities statewide with technology education and career information.

We thank you for your support of technology education opportunities in the past and urge your support of SB 2019.



CAREER PATHWAYS

Planning Guide 2020-2021



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Dear Students, Parents, and Community members:

Students are often asked,

“What do you want to be when you grow up?”

From kindergarten through elementary, middle school to high school, learners in the Fargo Public Schools are afforded access to academic, career-based, and extra-curricular activities to begin this journey. Academic foundations provide the knowledge and essential skills learners need to be successful across all disciplines. Extra-curricular experiences often promote teamwork, leadership and perseverance, while career-based curriculums open the door for career awareness, exploration and preparation related to specific career clusters.

Career and technical education and academic elective courses are designed to enrich learner education through a career lens including career awareness, real-world projects, industry aligned skills, technology integration, job shadowing, and post-secondary partnerships. Learner self-reflection compels students to discover interests and acknowledge aptitudes which can set the stage for beginning exploration of career pathways in high school.

The Fargo Career Pathways booklet is a resource to inform learners and families on this quest to:

- provide awareness of the 16 Career Clusters for career discovery
- outline the coursework for Fargo career pathways
- communicate essential information to students, parents, staff, and community stakeholders
- connect high school academic and career and technical education coursework with students to begin career exploration
- align student interests and aptitude with career pathways
- inform learners about future viable job opportunities related to each career pathway
- provide information about North Dakota post-secondary colleges and degree programs aligned to each career pathway
- provide parents and students with tools to plan and make informed decisions
- promote requirements to be eligible for the North Dakota Academic, CTE scholarship and Choice-Ready indicators
- outline Fargo graduation requirements and Profile of a Graduate disposition
- communicate important assessments for self-reflection and college preparation
- connect essential career support resources with students and families

Fargo Public School’s mission is “Educating and empowering all students to succeed!” The exploration of career pathways provides choice to engage students in their own learning and discovery in passion areas. Coursework exposes students to future career options and skills to prepare them for the next steps beyond high school. With so many career options to choose from, making the most of the high school experience is critical! The Career Pathway Guide is a resource to inform and begin intentional four-year planning to make sure all Fargo learners graduate Choice-Ready, and ultimately, understand their options on their pathway as an adult!

Thank you for your support and participating in the career planning for student success!

NORTH DAKOTA CHOICE READY



ESSENTIAL SKILLS

Earn a *North Dakota high school diploma* or *GED* and

Complete a *9-week Career Education/Individual Counseling* (15.1-21-18), *Financial Literacy* (15.1-21-21), and pass *ND Civics Test* (15.1-21-27) and **four or more** additional indicators:

- 25 hours of Community Service
- 95% Attendance (not counting school related absences)
- Workplace Learning Experience
- Two or more years in organized Co-Curricular Activities
- Two or more years in organized Extra-Curricular Activities
- Successfully complete a Capstone Project
- Successfully complete an on-line learning course
- Demonstrate competency in 21st Century Skills

Students shall then complete **two or more** of the **CHOICE READY** components below.



POST-SECONDARY READY

Complete a *Four Year Rolling Career Plan*, earn a **2.8 GPA or greater**, and complete one academic indicator set below:

ACT Composite score of 22 or greater

OR

ACT / SAT minimum or subsection scores

- ACT English – 18 ▪ SAT Reading/Writing – 480
- ACT Reading – 22 ▪ SAT Math – 530
- ACT Math – 21
- ACT Science – 23

OR

Two or more additional indicators:

- Advanced Placement Course (A, B or C)
- Dual Credit Course (English or Math) (A, B or C)
- Algebra II (A, B or C)
- Advance Placement Exam (3+)
- International Baccalaureate Exam (4+)
- 3.0 GP in core course requirement for NDUS admission
- CLEM/CREAM (Eng/Math) Course (70% or greater)



WORKFORCE READY

Complete a *Four Year Rolling Career Plan*, and complete two or more additional indicators:

- Complete three CTE courses or more (A, B or C)
- Complete Career Ready Practices (3.0)
- Dual Credit Course (A, B or C)
- Work Keys (Gold or Silver)
- Technical Assessment / Industry Credential
- Work-place Learning Experience (75 hours)
- CLEM/CREAM (Eng/Math) Course (70% or greater)
- NDSA (Reading/Math) Level 3 or greater or (ACT for Accountability: English 19/Mathematics 22)



MILITARY READY

- Complete a *Four Year Rolling Career Plan*,
- **ASVAB score of 31 or greater** (as determined by branch),
- **Quality Citizenship** (No Expulsions/Suspensions), **Physically Fit** (Students who have successfully completed required PE courses (A, B, or C) and Complete **two or more** additional indicators from the **Post-Secondary** or **Workforce** options.



The proper selection of courses by students is an important matter. Each course should be carefully selected as an integral part of the student's four-year educational plan. **Carefully thought-out course selections are equally important to the school district because commitments for staffing for the ensuing year are based on the student selections. Therefore, follow building guidelines for schedule change requests.**

Graduation requirements are minimum standards. Students are encouraged to take additional courses during the school year and summer school sessions.

Fargo Graduation Requirements

<u>Required Course</u>	<u>Credits</u>
English	4
Math.....	3
• Algebra I	
• Geometry	
• one other math credit	
Science.....	3
• Physical Science	
• Biology or AP Biology	
• one other Science Credit	
Physical Education.....	1½
• PE 1 (1/2), PE2 (1/2), and other PE Elective (1/2)	
Health.....	½
Social Studies (listed below)	
• Western Civilization or AP European History	1
• US History or AP US History.....	1
• Government or AP Government	½
• Economics or AP Economics.....	½
World Language, Fine Arts, Career Technical Education	3
Elective Credits	6
Credits Required for Graduation.....	24

The **Advanced Placement Program**, a part of *College Board*, encourages high schools to offer challenging college-level work to able students. The Advanced Placement exam scores provide an opportunity for high school students to earn college credit. Fargo high school students may qualify for the examinations in most areas by taking the AP courses offered at Davies, North, or South High Schools. The exact cost of the exam will be announced before students order their tests and is payable at the time of the order.

Students in grade 10 - 12 are allowed to earn [dual credit](#) for some classes and apply the credit earned to both their high school and college transcripts.

**Refer to the Program of Studies for more details related to graduation requirements .

North Dakota

Academic and CTE Scholarship

In planning your future, every dollar counts!



North Dakota resident students may apply for either the Academic Scholarship or Career and Technical Education Scholarship to attend any North Dakota institution of higher education. The amount of each scholarship is \$750 per semester or \$500 per quarter. Students may be eligible for up to \$6,000 within six academic school years (do not have to be consecutive years) after graduation from high school. Applications are submitted online and will be accepted from January 6 - June 5, 2020. (One Unit = One Full Credit)

Common Requirements for Both Scholarships

1. ND resident graduating from a ND high school, a public high school in a bordering state according to NDCC 15.1-29, **or** a nonpublic school in a bordering state while residing with a custodial parent in ND (NDCC 15.1-21-02.4), **or** (15.1-21-02.5) completes a program of home education supervised in accordance with NDCC chapter 15.1-23
2. Any 4 units of English
3. 3 units of Science: Biology (1 unit), and either Physics (1 unit) AND Chemistry (1 unit) **or** Physical Science (1 unit) AND any other science course (1 unit)
4. 3 units of Social Studies: US History (1 unit), Problems of Democracy (1 unit) **or** US Government (½ unit) AND Economics (½ unit), and any other social studies course (1 unit)
5. 3 units of Mathematics: Algebra II (1 unit) and any other math courses (2 units). This may include a computer science course (1 unit) approved by the Superintendent of Public Instruction.
6. Physical education (1 unit) **or** physical education (½ unit) AND Health (½ unit)
7. Earn no grade lower than a “C” on any unit required for the scholarship
8. Earn a cumulative GPA of a 3.0 or higher on a 4.0 scale

ND Academic Scholarship

1. Complete: 1 unit of math for which Algebra II is a prerequisite; 2 units of the same foreign language, the same Native American language, American Sign Language, **or** 2 units of CTE from a coordinated plan of study or the 3 credit educational pathway approved by NDDPI
2. Any 5 additional units
3. Complete 1 unit of an AP course AND exam, **or** ½ unit of a dual credit course, **or** 1 unit of an early entrance college course from a college which has a physical presence in North Dakota
4. Earn a composite score of 24 or higher on an ACT

ND Career and Technical Education Scholarship

1. Complete: 4 units of CTE in which two units must be in a coordinated plan of study **or** 2 units of CTE and the 3 credit educational pathway approved by NDDPI
2. Any 3 additional units
3. Earn a composite score of 24 or higher on an ACT **or** score of at least “5” on each of the 3 designated WorkKeys assessments

ND Department of Public Instruction:

<https://www.nd.gov/dpi/uploads/85/DirectionstoStudentsAcademicorCareerTechEducationScholarshipApp.pdf>

Student Name: _____

Year of Graduation: _____

The six items below are **Common Eligibility requirements for both the Academic and CTE Scholarship Programs** – the student must complete all of the six following requirements for either scholarship.

Check the boxes below as the six common eligibility requirements are met.

- 1. North Dakota resident.
- 2. Graduate from a high school in North Dakota, from a public high school in a bordering state (according to provisions set forth in ND Century Code 15.1-29), from a nonpublic high school in a bordering state while the student resides with a custodial parent in ND (NDCC 15.1-21-02.6), or completes a program of home education supervised in accordance with NDCC chapter 15.1-23.
- 3. Complete the diploma requirements from sections 1-7 listed on page 1 (NDCC 15.1-21-02.2)
- 4. Obtain a grade of at least "C" in each unit **OR** 1/25 unit required by each respective scholarship.
- 5. Obtain a cumulative grade point of at least a 3 on a 4.0 scale based on the 23 units required by ND for high school graduation, including specific scholarship course requirements. The GPA must be rounded to the nearest hundredth for eligibility purposes.
- 6. Complete 1 unit of Algebra II.

ND Career and Technical Education Scholarship Eligibility Requirements

Check the boxes below as the CTE Scholarship eligibility requirements are met. Transfer information to the first page.

In addition to the common eligibility requirements listed above, the student must also complete the following:

- Four units of career and technical education in which two units must be from a coordinated plan of study recommended by the ND Dept of Career and Technical Education. Coordinated Plans of Study may be viewed at: <http://www.nd.gov/cte/programs/career-dev/plans-of-study.html>
- List the Name of the Coordinated Plan of Study: _____
- One unit selected from foreign languages, Native American languages, American Sign Language, fine arts, or career and technical education
- Receive a composite score of at least 24 on an ACT, or a score of at least '5' on each of the three designated WorkKeys assessments listed below. (*Deadline is the March ACT national test date from senior year.**)

List the ACT Composite Score OR

ACT Composite Score

List the 'Level Score' for each WorkKeys assessments

- Applied Math score
- Graphic Literacy score
- Workplace Documents score

ND Academic Scholarship Eligibility Requirements

Check the boxes below as the Academic Scholarship eligibility requirements are met. Transfer information to the first page.

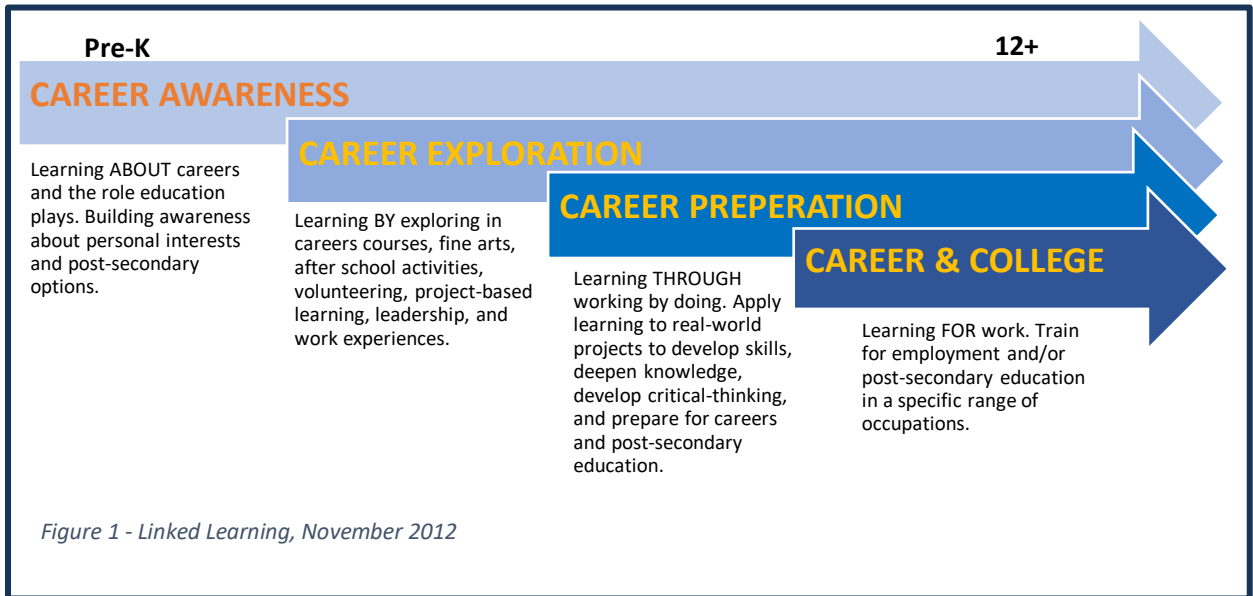
- In addition to the common eligibility requirements listed above, the student must also complete the following:
One unit of mathematics for which Algebra II is a prerequisite
- Two units of the same foreign language; the same Native American language; American Sign Language; or career and technical education from a coordinated plan of study
- One unit selected from foreign languages; Native American languages; American Sign Language; fine arts; or career and technical education
- One unit of an advanced placement course and examination; or ½ unit of a dual credit course; or one unit of an early entrance college course from a college which has a physical presence in North Dakota
- Receive a composite score of at least 24 on an ACT (*Deadline is the March ACT national test date from senior year.**)

**Any ACT tests taken later than the deadline have no guarantee that the results will be back by the June 1 deadline. Any official results for ACT tests taken after the March deadline must be sent to NDDPI by the student.*

CAREER PATHWAYS

**What are you passionate about?
Can you identify your strengths and skills?
Where do you see yourself after high school?**

The Career Pathway process allows you to explore who you are, discover interests, and select courses to help you think critically, develop creativity, communicate, collaborate, and prepare a plan for high school and your future!



What are career pathways?

They are 16 clusters of careers sharing common interests, skills, and strengths. Each pathway outlines courses that will provide learners options to explore content and develop skills necessary for each career cluster. Since there are many roads to success, learners are not locked into one pathway, but can begin by exploring those of interest first. As learners experience more, they will develop a better understanding of themselves and best options for their future.



How will you know which pathway is a good fit?

In Fargo Public Schools, ALL students are provided with “Career Education” curriculum focused on understanding themselves in relation to their career. Beginning in kindergarten and continuing through graduation, students participate in planned activities that focus on learning about themselves including their strengths, interests, natural abilities, aptitudes, likes, and dislikes. The findings are compared and contrasted to information about various careers in which the students have an interest. Through these exercises’ students become more informed and are better able to develop career goals for themselves. They also gain a deeper appreciation for the inter-relatedness between what they learn in school and what they need to know to be successful employees.

← **FARGO K-12 CAREER PATHWAY ACTIVITIES** →

Career Awareness	Career Exploration	Career Preparation
K – Career Lessons	6th – Career Cluster Interests & Passions 7th - RU Ready Work Values Sorter, Soft Skills, Interpersonal, Work Skills Career on Wheels	9th – Career Lessons Career Expo – Fargo Dome
1st – Career Lessons		10th – Career Lessons Career Interest Profiler SAT, Pre-ACT
2nd – Career Lessons		
3rd – PAWS in Jobland	8th – RU Ready Career Cluster Survey & Interest Profile Fantasy Future & Goal Setting HS Counselor visit – POS & 4-Year Plans State Scholarship & College Resources	11th – Career Lessons Personality Inventory Job Shadow ACT
4th – Career Interest Inventory		12th – Senior Conference College Application Job Shadow Plan Your Future, Career Day
5th – Career Lessons Transition to Middle School		

**Do You Need Help?
Stop by the Counseling Center!**

- Interest inventory results
- Assessment resources
- Career information and exploration
- Job shadowing experiences
- Service-learning experiences
- Post-secondary education options
- College catalogs, view books, & applications
- Letter of recommendation form
- Scholarship & financial aid information
- Job-find support
- Student career portfolios
- One-on-one career planning

Davies High School Counseling Team 701-446-5600
North High School Counseling Team 701-446-2412
South High School Counseling Team 701-446-2015
Woodrow Wilson Counseling Team 701-446-3020



How will you start planning your career?

Assessments and interest inventories are designed to capture and quantify learner information and skills to guide them in their selection of career pathways, high school courses, and to create a career plan for the future. Results are viewed with students and School Counselors, Career Specialists, and/or parents and guardians. Learners are also encouraged to hold a part-time job, job shadow, volunteer, and/or participate in extra-curricular activities to explore interests and careers beyond the school setting as they offer real-world experiences and leadership opportunities.

Important Assessments for College and Career Planning

PreACT™ is a multiple-choice assessment that helps students prepare for the experience of taking the ACT® test and provides information regarding their future performance on the exam.

ASVAB is a multiple-aptitude battery that measures developed abilities and helps predict future academic and occupational success in the military and civilian careers.

PSAT is a three hour practice version of the SAT exam which can be taken once per year. Many students take the test in both 10th and 11th grade. A high score on the PSAT can qualify students to receive a National Merit Scholarship.

ACT® college readiness assessment is a standardized test for high school achievement and college admissions in the United States.

SAT measures critical reading skills, math problem-solving skills and writing skills.

Work Keys® Assessments measure foundational skills required for success in the workplace. The three

North Dakota Choice Ready - Four-Year Rolling Plan

The four-year plan is intended to serve as a guide for students and parents to navigate high school and beyond. The plan begins in eighth grade and focuses on academics, college, career, and military readiness, which allows students to project their four year goals for high school and into the future for their education and career. Each year, students will meet with a staff member who is familiar with Choice Ready from their school and best suited to discuss the student's needs to complete or update their plan. [ESSA Guide to Four-Year Rolling Plan](#)

Fargo Career Planning with RU Ready

RU Ready is a free online career resource available to all North Dakota K-12 schools to assist in career planning and lessons, assessments and activities. RU Ready is supported by the Department of Career and Technical Education.

Students will:

1. Complete career activities and interest assessments. Results are viewed at www.ruready.nd.gov.
2. Meet with a School Counselor or Career Specialist to find the career pathway that most closely matches interests and skills.
3. Look up course descriptions in the [Program of Studies](#) and develop a 4-Year Plan to include required courses and career specific electives to complete their Career Pathway of choice.
4. Follow, and revise, the 4-Year Plan to include required courses and career specific electives to complete a Career Pathway(s).
5. Consider exploring activities and courses, such as Career & Technical Education (CTE), Advanced Placement (AP), and Dual Credit (DC) college courses, that are related to the career pathway you choose

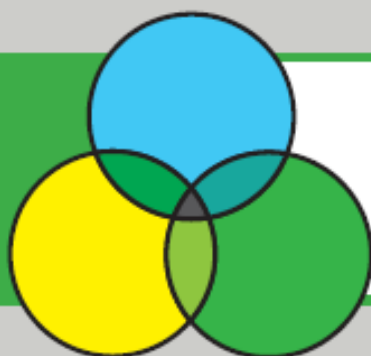
21st Century Skills

Metro 4Cs Rubric Performance Areas



Critical Thinking

- Information & Discovery
- Interpretation & Analysis
- Reasoning
- Constructing Arguments
- Problem Solving
- Systems Thinking



Collaboration

- Leadership & Initiative
- Cooperation
- Flexibility
- Responsibility & Productivity
- Collaborate Using Digital Media
- Responsiveness & Constructive Feedback



Communication

- Engaging in Conversations & Discussions
- Communicate Using Digital Media
- Communicating in Diverse Environments
- Delivering Oral Presentations
- Effective Listening

Writing to:

- Inform
- Support an Argument With Claims
- Engage and Entertain



Creativity

- Idea Generation
- Idea Design & Refinement
- Openness & Courage to Explore
- Work Creatively with Others
- Creative Production & Innovation

Shared Performance Areas for All 4Cs:

- Digital Citizenship & Ethical use
- Self Regulation & Reflection



Agriculture, Food & Natural Resources Career Cluster



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Agribusiness Systems	Sales Manager • Ag Lender • Ag Economist • Ag Products Buyer/Distributor • Feed-Supply Store Manager • Farm Investment Manager • Ag Commodity Broker
Animal Systems	Wildlife Biologist • Animal Nutritionist • Livestock Buyer • Livestock Geneticist • Veterinarian • USDA Inspector • Aquaculturist • Equine Manager
Environmental Service Systems	Pollution Prevention Technician • Hazardous Materials Handler • Water Quality Manager • Health and Safety Sanitarian • Toxicologist
Food Products & Processing Systems	Food Scientist • Quality Control Specialist • Biochemist-Nutritionist • Dietician • Microbiologist • Bacteriologist • Food and Fiber Engineer • Produce Buyer
Natural Resources Systems	Park Manager • Range Technician • Ecologist • Fish & Game Officer • Forest Technician • Geology Technician • Mining Engineers • Hydrologist
Plant Systems	Soil/Water Specialist • Botanist • Tree Surgeon • Plant Pathologist • Commodity Marketing Specialist • Golf Course Superintendent • Custom Hay/Silage Operator
Power, Structural & Technical Systems	Remote Sensing Specialist • Equipment/Parts Manager • Welder • GPS Technician • Machinist • Heavy Equipment Maintenance Technician



Is this Pathway for you?

- Do you get satisfaction from helping people, animals and/or the environment?
- Are you interested in how things grow and make the best use of the earth's natural resources?
- Are you curious about how machines and systems work?
- Are you someone who likes to work with data to solve problems?
- Are you interested in science and enjoy spending time with nature?
- Do you like to be outdoors in all kinds of weather?
- Are you comfortable with situations that are unpredictable and rapidly changing?
- Do you like to plan, work with budgets, and keep records?

Agriculture, Food & Natural Resources Career Cluster	
Environmental Services Systems or Plant Systems	
Course Name	Cr
Introduction to Agriculture	.5
Plant Science I	.5
Plant Science II	.5
World & International Agriculture	.5
Cooperative Education	.5
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Other Electives to Consider for Agriculture Pathway Preparation
<p>CTE Electives</p> <p>Basics of Business, Exploring Business Software Personal Finance, Accounting 1, Web Design Marketing, Management/Entrepreneurship Exploring Foods, Cultures & Cuisine Civil Engineering & Architecture Intro to Engineering Design, Principles of Engineering Manufacturing Woods 1, 2 Welding I, II</p> <p>Academic Electives</p> <p>Foreign Language, Human Geography AP Biology, Anatomy/Physiology Environmental Science, Chemistry Genetics, Earth Science, Field Biology **AP options may exist for some courses</p>



North Dakota Agriculture, Food & Natural Resources Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Agribusiness Systems	<input type="checkbox"/> Agriculture (BSC, DCB, NDSCS) <input type="checkbox"/> Agricultural Sales and Service (DSU) <input type="checkbox"/> Agriculture transfer (BSC, DCB, NDSCS, WSC) <input type="checkbox"/> Farm/Ranch Management (BSC, DSU, NDSCS) <input type="checkbox"/> Precision Agriculture (LRSC)	<input type="checkbox"/> Agribusiness (NDSU, VCSU) <input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Agricultural Communication (NDSU) <input type="checkbox"/> Agricultural Economics (NDSU) <input type="checkbox"/> Agricultural Education (NDSU) <input type="checkbox"/> Agricultural Studies (DSU) <input type="checkbox"/> Agricultural Systems Management (NDSU) <input type="checkbox"/> General Agriculture (NDSU)	<input type="checkbox"/> Agribusiness and Applied Economics (NDSU) <input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Agricultural Education (NDSU) <input type="checkbox"/> International Agribusiness (NDSU)
Animal Systems	<input type="checkbox"/> Animal Science (NDSCS) <input type="checkbox"/> Pre-Veterinary Medicine transfer (BSC, DCB, TMCC) <input type="checkbox"/> Wildlife Management (DCB, NDSCS, TMCC)	<input type="checkbox"/> Animal Science (NDSU) <input type="checkbox"/> Equine Science (NDSU) <input type="checkbox"/> Fisheries and Wildlife Science (UND, VCSU) <input type="checkbox"/> Vet Technology (NDSU)	<input type="checkbox"/> Animal Science (NDSU)
Environmental Service Systems	<input type="checkbox"/> Energy Technician (SBC) <input type="checkbox"/> Environmental Science/Technology (CCCC, DCB, NHSC, SBC, TMCC, UTTC) <input type="checkbox"/> Water & Wastewater Treatment (BSC)	<input type="checkbox"/> Energy Management (BSC) <input type="checkbox"/> Environmental Design (NDSU) <input type="checkbox"/> Environmental Science (DSU, NHSC, SBC)	<input type="checkbox"/> Environmental and Conservation Science (NDSU) <input type="checkbox"/> Environmental Science (SBC) <input type="checkbox"/> Environmental Engineering (NDSU, UND)
Food Products & Processing Systems		<input type="checkbox"/> Food Safety (NDSU) <input type="checkbox"/> Food Science (NDSU)	<input type="checkbox"/> Cereal Science (NDSU) <input type="checkbox"/> Food Safety (NDSU)
Natural Resources Systems	<input type="checkbox"/> Land Management (DCB) <input type="checkbox"/> Natural Resources Management (CCCC)	<input type="checkbox"/> Natural Resources Management (NDSU)	<input type="checkbox"/> Natural Resources Management (NDSU) <input type="checkbox"/> Sustainable Energy Engineering (UND)
Plant Systems	<input type="checkbox"/> Agriculture Industry and Technology-Agronomy (BSC) <input type="checkbox"/> Crop Production Sales & Technology (NDSCS) <input type="checkbox"/> Forestry (DCB) <input type="checkbox"/> Horticulture (DCB) <input type="checkbox"/> Sustainable Vegetable Production (DCB)	<input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Crop and Weed Sciences (NDSU) <input type="checkbox"/> Horticulture (NDSU) <input type="checkbox"/> Range Science (NDSU) <input type="checkbox"/> Soil Science (NDSU) <input type="checkbox"/> Sports and Urban Turfgrass Management (NDSU)	<input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Horticulture (NDSU) <input type="checkbox"/> Plant Pathology (NDSU) <input type="checkbox"/> Plant Sciences (NDSU) <input type="checkbox"/> Range Science (NDSU) <input type="checkbox"/> Soil Science (NDSU)
Power, Structure, & Technical Systems	<input type="checkbox"/> Caterpillar Dealer Service Technician (NDSCS) <input type="checkbox"/> Diesel Technology: Case IH, Gen. Diesel, Komatsu (NDSCS) <input type="checkbox"/> John Deere Tech (NDSCS) <input type="checkbox"/> Nuclear Power Technology (BSC) <input type="checkbox"/> Oil Drilling/Operations (NHSC, SBC, TMCC) <input type="checkbox"/> Petroleum Engineering Technology (BSC) <input type="checkbox"/> Petroleum Production Technology (BSC, WSC) <input type="checkbox"/> Power Plant Technology (BSC) <input type="checkbox"/> Process Plant Technology (BSC, TMCC) <input type="checkbox"/> Renewable Generation Technology (BSC) <input type="checkbox"/> Wind Energy Technician (LRSC)	<input type="checkbox"/> Energy Management (BSC)	



The National FFA Organization is a local, state, and national co-curricular student association serving high school, college and middle school students enrolled in Agriculture Education courses. The National FFA is dedicated to making a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. Fargo students enrolled in agriculture courses in collaboration with Northern Cass or Central Cass Agriculture Education will have the opportunity to participate in the National FFA Chapter. Contact your FFA Advisor to join.



Architecture & Construction Career Cluster



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Construction	Carpenter • Drywall Installer • Painter • Equipment and Materials Manager • Electrician • Plumber • Specialty Contractor • Project Inspector • Construction Engineer
Design/Pre-Construction	Building Code Official • Interior Designer • Architect • Surveying and Mapping Technician • Specification Writer • Drafter • Regional and Urban Planner
Maintenance/Operations	Code Official • Construction Engineer • Estimator • System Installer • Subcontractor • Hazardous Material Remover • Security and Fire Alarm System Manager



Is this Pathway for you?

- Are you curious to read and/or follow instructions, blueprints?
- Can you picture in your mind what a finished product could look like?
- Do you like to work with your hands?
- Are you attentive when completing work that requires patience and precise results?
- Are you interested in learning how to apply math to real projects?
- Do you work best with logical, step-by-step procedures to solve technical problems?
- Do you like to create or design projects that interest others?
- Does it interest you to use tools, technology, and/or operate machines?
- Can you see yourself working as a member of a team?

Trade & Industry – Coordinated Plan of Study	
Construction	
Course Name	Cr
Construction Technology 1	1
Construction Technology 2	2
Construction Cooperative Education	.5-1
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Other Electives to Consider for Trade & Industry Pathway Preparation
<p>CTE Electives</p> <p>Woods 1, 2</p> <p>Construction Technology</p> <p>Intro to Engineering, Civil Engineering & Architecture</p> <p>Explore Business Software, Business Law, Personal Finance</p> <p>Basics of Business</p> <p>Marketing</p> <p>Housing and Interior Design</p> <p>Living on Your Own</p> <p>Academic Electives</p> <p>Art Electives</p> <p>Geometry, Informal Geometry, Calculus</p> <p>Environmental Science, Earth Science</p> <p>Public Speaking</p>





North Dakota Architecture & Construction Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Construction	<input type="checkbox"/> Building Construction Technology (NDSCS, TMCC) <input type="checkbox"/> Building Trades (SBC) <input type="checkbox"/> Carpentry (BSC, BJCC, CCCC) <input type="checkbox"/> Concrete (SBC, TMCC) <input type="checkbox"/> Construction Management/Technology (CCCC, NDSCS, NHSC) <input type="checkbox"/> Electrical Technology (NDSCS, SBC, TMCC) <input type="checkbox"/> Framing (SBC) <input type="checkbox"/> Heating Ventilation & Air Conditioning (BSC, CCCC, NDSCS, TMCC) <input type="checkbox"/> Interior Construction (SBC) <input type="checkbox"/> Land Surveying and Civil Engineering Technology (NDSCS) <input type="checkbox"/> Plumbing (NDSCS) <input type="checkbox"/> Sustainable Construction Technology (BSC)	<input type="checkbox"/> Construction Engineering (NDSU) <input type="checkbox"/> Construction Management (NDSU)	<input type="checkbox"/> Construction Management (NDSU)
Design/Pre-Construction	<input type="checkbox"/> Architectural Drafting and Estimating Technology (NDSCS) <input type="checkbox"/> Land Surveying and Civil Engineering Technology (NDSCS)	<input type="checkbox"/> Architecture (NDSU) <input type="checkbox"/> Civil Engineering (NDSU) <input type="checkbox"/> Construction Engineering (NDSU) <input type="checkbox"/> Landscape Architecture (NDSU)	<input type="checkbox"/> Architecture (NDSU) <input type="checkbox"/> Civil Engineering (NDSU)
Maintenance/Operations	<input type="checkbox"/> Facilities Maintenance (BJCC) <input type="checkbox"/> Mechanical Systems (NDSCS) <input type="checkbox"/> Mechanical Maintenance Technology (BSC)		



SkillsUSA is a local, state, and national co-curricular association serving high school, college and middle school students who are preparing for careers in trade, technical and skilled service occupations, including health occupations. SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens the SkillsUSA Framework of personal, workplace and technical skills. Ask about your SkillsUSA Advisor to learn more.



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Audio and Video Technology and Film	Audio Systems Technician • Audio-Video Designer and Engineer • Technical Computer Support • Videographer • Special Effects and Animation Designer Technician
Journalism and Broadcasting	Control Room Technician • Design Director • Broadcast Technician • Editor • Producer • Station Manager • Audio-Video Operator
Performing Arts	Actor/Actress • Lighting Designer • Scenic Designer • Musician • Composer • Makeup Artist • Playwright • Digital, Video and State Production Manager
Printing Technology	Desktop Publishing Specialist • Computer Typography • Pre-production Technician • Plate Maker • Graphics Equipment Operator • Web Page Designer • Lithographer
Telecommunications	Network Designer • Telecommunications Technician • Telecommunication Equipment: Cable, Line Repair and Installation • Computer Programmer and Systems Analyst
Visual Arts	Fashion Designer • Commercial Artist • Commercial Photographer: Digital, Still, Video, Film • Illustrator • Textile Designer • Interior Designer • Computer Animator



Is this Pathway for you?

- Do ideas inspire you to create?
- Are you passionate to overcome obstacles?
- Do you find multiple ways to express your creativity?
- Do you like to communicate your ideas?
- Do you enjoy drawing, performing or writing stories?
- Do you seek opportunities to learn about and be engaged in history or culture?
- Does the idea of working in or being a part of a community that creates excite you?
- Do you enjoy exploring new technologies?
- Are you able to communicate your ideas to diverse audiences?

Arts, AV Technology & Communication – Coordinated Plan of Study	
Visual Arts	
Course Name	Cr
Photography 1	.5
Photography 2	.5
Video Communication	.5
Communication Technology	.5
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Other Electives to Consider for Arts, AV Technology, & Communication Pathway Preparation
<p>CTE Electives</p> <ul style="list-style-type: none"> Basics of Business, Exploring Business Software Marketing, Sports & Entertainment Marketing Management and Entrepreneurship Housing & Interior Design, Construction Technology Web Design 1 & 2, Yearbook 1 & 2 IT Essentials 1 & 2, Cisco 1 & 2, Intro to Coding
<p>Academic Electives</p> <ul style="list-style-type: none"> Performing Arts, Theatre Arts Visual Arts: Drawing, Painting, Design, and Clay Sculpture Geometry, Informal Geometry Music: Band, Choir, Orchestra, Music Composition Communications, Creative Writing, Journalism 1 & 2 Exploratory Mas Media/Communication Psychology 1 & 2 Sociology, Humanities, Philosophy



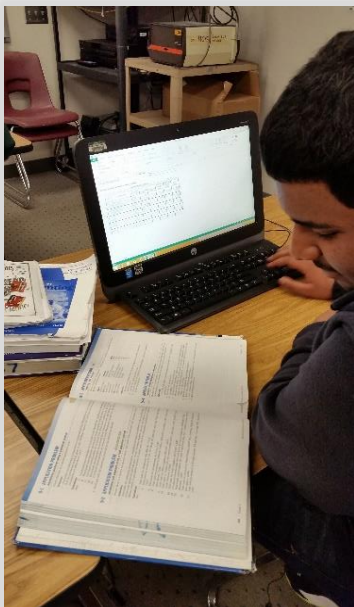
North Dakota Arts, A/V Technology & Communications Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Audio and Video Technology and Film	<input type="checkbox"/> Digital Audio Production (BSC) <input type="checkbox"/> Web Page Development and Design (BSC, NDSCS)	<input type="checkbox"/> Multimedia Studies (MiSU) <input type="checkbox"/> New Media & Web Design (NDSU)	<input type="checkbox"/> Library/Information Technology (VCSU)
Journalism and Broadcasting	<input type="checkbox"/> English transfer (BSC, DCB, TMCC) <input type="checkbox"/> Mass Communications (BSC) <input type="checkbox"/> Speech Communication transfer (BSC)	<input type="checkbox"/> Broadcasting (MiSU) <input type="checkbox"/> Communication (DSU, MaSU, MiSU, UJ, UND, VCSU) <input type="checkbox"/> English (DSU, MaSU, MiSU, NDSU, UJ,UM,UND,VCSU) <input type="checkbox"/> English Education (DSU, MaSU, MiSU, NDSU, UM,VCSU) <input type="checkbox"/> Journalism/Professional Writing (NDSU) <input type="checkbox"/> Mass Communications (UM)	<input type="checkbox"/> Communication (NDSU) <input type="checkbox"/> English (NDSU) <input type="checkbox"/> Mass Communications (NDSU) <input type="checkbox"/> Speech Communication (NDSU)
Performing Arts	<input type="checkbox"/> Music transfer (BSC, NDSCS, TMCC, WSC) <input type="checkbox"/> Theatre Arts - Performance (BSC) <input type="checkbox"/> Theatre Arts – Technical Theatre (BSC)	<input type="checkbox"/> Music (DSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Music Education (DSU, MiSU, UM, UND, VCSU) <input type="checkbox"/> Music Performance (UM, UND) <input type="checkbox"/> Musical Theatre (UND) <input type="checkbox"/> Theatre Arts (DSU, MiSU, NDSU, UND) <input type="checkbox"/> Theatre Education (MiSU)	<input type="checkbox"/> Music (NDSU, UND) <input type="checkbox"/> Theatre Arts (NDSU)
Printing Technology		<input type="checkbox"/> Print Communications Concentration (MiSU)	
Telecommunications	<input type="checkbox"/> Electronics Technology (BSC) <input type="checkbox"/> Electronics/Telecommunications Technology (BSC)	<input type="checkbox"/> Communication (DSU, MaSU, MiSU, UJ, UND, VCSU) <input type="checkbox"/> Strategic Communication (NDSU)	
Visual Arts	<input type="checkbox"/> Art transfer (DCB, TMCC) <input type="checkbox"/> Fine Art (CCCC) <input type="checkbox"/> Graphic Arts/Design (CCCC, RC, UTTC) <input type="checkbox"/> Graphic Design & Communications (BSC) <input type="checkbox"/> Photography (DCB) <input type="checkbox"/> Visual Art transfer (BSC)	<input type="checkbox"/> Apparel, Retail Merchandising, and Design (NDSU) <input type="checkbox"/> Art/Art Studies (DSU, MiSU, NDSU, UJ, VCSU) <input type="checkbox"/> Arts Administration (MiSU) <input type="checkbox"/> Art Education (DSU, MiSU, NDSU, VCSU) <input type="checkbox"/> Art Entrepreneurship (DSU) <input type="checkbox"/> Fine Arts (MiSU) <input type="checkbox"/> Graphic Design (RC) <input type="checkbox"/> Graphic Design & New Art Media (UND) <input type="checkbox"/> Graphic Design Technology (UND) <input type="checkbox"/> Interior Design (NDSU) <input type="checkbox"/> Visual Arts (UND)	<input type="checkbox"/> Visual Arts (UND)

The **Mission of Trollwood** is simple “to inspire those we serve through the arts to realize their full potential and be a positive influence in the global community.” Trollwood’s youth arts programs include a wide array of arts centered classes and performing opportunities. Trollwood’s youth programs includes 12 annual arts education, youth leadership and performance programs. Explore <http://trollwood.org/> to learn more.



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Administrative Support	Administrative Assistant • Office Manager • Customer Service Assistant • Desktop Publisher • Data Entry Specialist • Receptionist • Medical Transcriptionist • Legal Secretary
Business Information Management	Information Systems Manager • Accounting Clerk or Supervisor • Adjuster • Chief Technology Officer • Budget Analyst • Auditor • Business Consultant
General Management	General Manager • Business & Development Manager • Risk Manager • Public Relations Manager • Chief Executive Officer • Entrepreneur
Human Resources Management	Human Resource Manager • Industrial Relations Director • Compensation & Benefits Manager • Corporate Trainer • Personnel Recruiter • Public Relations Manager
Operations Management	Training & Development Manager • Sales Representative or Manager • Budget Analyst • Research & Development Manager • E-Commerce Analyst



Business Education – Coordinated Plan of Study					
Business Management & Administration Career Cluster				Finance Career Cluster	
Administrative Support		General Management		Accounting	
Course Name	Cr	Course Name	Cr	Course Name	Cr
Exploring Business Software	.5	Exploring Business Software	.5	Exploring Business Software	.5
Intro to Computer Usage	.5	Basics of Business	.5	Basics of Business	.5
Accounting 1	1	Accounting 1	1	Accounting 1	1
Accounting 2	1	Accounting 2	1	Accounting 2	1
Personal Finance	.5	Personal Finance	.5	Personal Finance	.5
Business & Personal Law	.5	Business & Personal Law	.5	Business & Personal Law	.5
Skills for Success in School	.5	Skills for Success in School	.5	Skills for Success in School	.5
Web Design 1	.5				
Web Design 2	.5				
Yearbook 1: Desktop	.5				
Yearbook 2: Coop.	1				
Must earn at least 2 credits in a pathway to qualify for the CTE Scholarship Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship					

Is this Pathway for you?

- Are you someone who likes to work with data to solve problems?
- Do you like to interact with all kinds of people?
- Do you like to come up with new ideas?
- Do you like to follow directions to complete a task?
- Do you consider yourself a leader who could be part of a team?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you enjoy using math to solve problems?

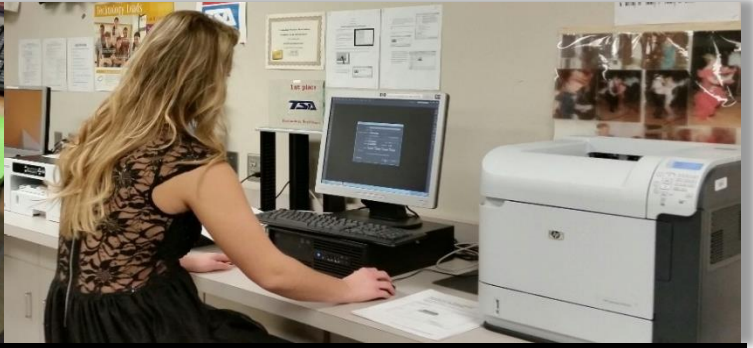
Other Electives to Consider for Business Education Pathway Preparation

CTE Electives

IT Essentials 1 & 2, Intro to Coding & Gaming
Culinary Arts, Exploring Foods, Restaurant Skills
Entertainment and Sports Marketing, Marketing, Store
Manager, Management/Entrepreneurship
Photography 1 & 2

Academic Electives

Mathematics in Action, AP Math
Communications; Creative Writing, Yearbook
Foreign Language
Microeconomics, Publications/Media
Psychology 1 & 2, Sociology
Public Speaking, Debate



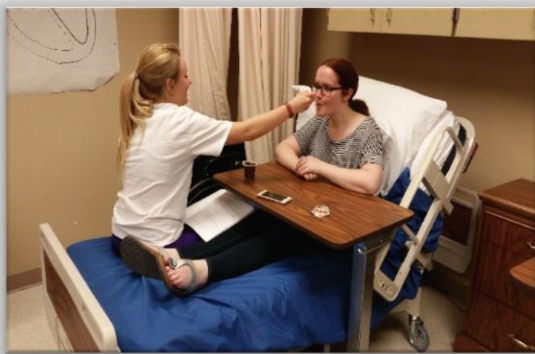
North Dakota Business Management & Administration Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Administrative Support	<input type="checkbox"/> Administrative Assistant (BSC, DCB, LRSC, NHSC) <input type="checkbox"/> Bookkeeping (DCB) <input type="checkbox"/> Business/Office Technology (CCCC, NDSCS, SBC, UTTC) <input type="checkbox"/> Computer Applications (CCCC) <input type="checkbox"/> Computer Support Specialist (BSC, TMCC) <input type="checkbox"/> Office Administration (BJCC, DSU) <input type="checkbox"/> Reception Services (DCB)		
Business Information Management	<input type="checkbox"/> Business Management (MaSU, NDSCS, RC, UTTC, WSC) <input type="checkbox"/> Computer Information Systems (BSC, DCB, NDSCS) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Information Tech/Management (DCB, LRSC, NDSCS, NHSC, RC, SBC, WSC) <input type="checkbox"/> Management Information Systems (NDSCS) <input type="checkbox"/> Small Business Management (DCB)	<input type="checkbox"/> Applied Business Information Technology (MiSU) <input type="checkbox"/> Business Communication (UM) <input type="checkbox"/> Business Process Integration Management (VCSU) <input type="checkbox"/> Computer Information Systems (MaSU, UM, UND) <input type="checkbox"/> Information Technology Management (RC, UM) <input type="checkbox"/> Management Communication (NDSU) <input type="checkbox"/> Management Information Systems (MiSU, NDSU)	<input type="checkbox"/> Information Systems (MiSU)
General Management	<input type="checkbox"/> Business Administration transfer (BSC, CCCC, DCB, LRSC, NDSCS, NHSC, SBC, TBC, TMCC) <input type="checkbox"/> Business Education transfer (BSC, DCB) <input type="checkbox"/> Computer Support Specialist (BSC, TMCC) <input type="checkbox"/> Entrepreneurship (BSC, CCCC, NDSCS, SBC, TMCC) <input type="checkbox"/> Management (BSC)	<input type="checkbox"/> Applied Management (MiSU) <input type="checkbox"/> Business Administration (DSU, MaSU, NDSU, SBC, TBC, UTTC, UJ, UM, VCSU) <input type="checkbox"/> Business Education (DSU, MiSU, UM, VCSU) <input type="checkbox"/> Entrepreneurship (UND) <input type="checkbox"/> International Business (MiSU) <input type="checkbox"/> Management (MiSU, NDSU, RC, UND, VCSU) <input type="checkbox"/> Public Administration (UND)	<input type="checkbox"/> Business (UM) <input type="checkbox"/> Business Administration (NDSU, UM, UND) <input type="checkbox"/> Management (MiSU) <input type="checkbox"/> Project Management (UM) <input type="checkbox"/> Public Administration (UM, UND)
Human Resources Management	<input type="checkbox"/> HR and Organizational Leadership (RC)	<input type="checkbox"/> Human Resource Management (DSU, UND, VCSU) <input type="checkbox"/> Human Resources and Organizational Leadership (RC)	
Operations Management		<input type="checkbox"/> Business Economics (UND) <input type="checkbox"/> Business Management (RC, UM) <input type="checkbox"/> Business Systems Analysis (RC) <input type="checkbox"/> Management Communication (NDSU) <input type="checkbox"/> Operations & Supply Chain Management (UND)	



Future Business Leaders of America is a co-curricular student organization for students enrolled in Business Education courses. FBLA inspires and prepares students to become community-minded business leaders in a global society through relevant career preparation and leadership experiences. FBLA focuses on leadership development, academic competitions, high school programs, membership benefits, community service, and awards. Contact your high school FBLA Advisor to learn what it takes to become a member.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Biotechnology Research & Development	Research Scientist/Assistant • Microbiologist • Biostatistician • Cell Biologist • Biomedical Chemist • Geneticist • Genetics Lab Assistant • Quality Assurance Technician
Diagnostic Services	Clinical Lab Technician • Phlebotomist • Geneticist • Nutritionist • Magnetic Resonance (MR) Technologist • Radiologist • Pathologist • Exercise Physiologist
Health Informatics	Health Information Coder • Admitting Clerk • Transcriptionist • Medical Librarian • Public Health Educator • Ethicist • Medical Assistant • Epidemiologist
Support Services	Dietary Aide • Hospital Maintenance Engineer • Environmental Services Manager • Industrial Hygienist • Biomedical Engineer • Transport Technician
Therapeutic Services	Dental Assistant/Hygienist • Occupational Therapist • EMT/Paramedic • Physician • Nurse • Veterinarian • Social Worker • Massage Therapist • Physical Therapist • Pharmacist



Is this Pathway for you?

- Do you get satisfaction from helping people, animals, and/or the environment?
- Do you enjoy dealing with a problem that isn't easily solved or doesn't have the correct answer?
- Are you comfortable with situations that are unpredictable and rapidly changing?
- Are you interested in math and science?
- Do you like listening and working with others who have differing viewpoints?
- Do you enjoy puzzles, exploring and solving problems?
- Can you respond quickly and calmly in unexpected situations?
- Do you like to volunteer and do service work that focuses on helping other people or the environment?

Health Science – Coordinated Plan of Study	
Therapeutic Services	
Course Name	Cr
Certified Nurse Assistant	.5
Health Science I	1
Health Science II	1
Medical Terminology - Online & Dual Credit Option	.5
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Other Electives to Consider for Health Science Pathway Preparation
<p>CTE Electives</p> <ul style="list-style-type: none"> Exploring Business Software Child Development, Intro to Teaching, Child Care Careers Exploring Foods, Food Revolution Intro to Engineering Design, Principles of Engineering Marketing Management/Entrepreneurship <p>Academic Electives</p> <ul style="list-style-type: none"> Communications, College Learning Lab Foreign Language Junior Educator of Tomorrow (JET) AP Statistics, Pre-Calculus, AP Calculus, College Learning Lab Anatomy/Physiology, Athletic Injuries AP Biology, AP Chemistry, AP Physics I Psychology I, II, AP Psychology Sociology



North Dakota Health Science Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Biotechnology Research & Development	<input type="checkbox"/> Biotechnology transfer (NDSCS) <input type="checkbox"/> Pharmacy Technician (NDSCS, RC, TMCC)	<input type="checkbox"/> Bioinformatics (MiSU) <input type="checkbox"/> Biotechnology (NDSU) <input type="checkbox"/> Pharmaceutical Sciences (NDSU)	<input type="checkbox"/> Biomedical Sciences (UND) <input type="checkbox"/> Genomics and Bioinformatics (NDSU) <input type="checkbox"/> Pharmaceutical Sciences/Pharmacy (NDSU)
Diagnostic Services	<input type="checkbox"/> Clinical Laboratory Science transfer (NDSCS) <input type="checkbox"/> Dialysis Technician (NDSCS) <input type="checkbox"/> EMT – Paramedic Technician (BSC, DCB, NDSCS) <input type="checkbox"/> Medical Laboratory Technician (BSC, TMCC) <input type="checkbox"/> Medical Laboratory transfer (BSC) <input type="checkbox"/> Phlebotomy Technician (BSC, TMCC)	<input type="checkbox"/> Medical Lab Science (MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Communication Sciences and Disorders (UM, UND) <input type="checkbox"/> Radiologic Technology (MiSU, NDSU, UJ, UM)	<input type="checkbox"/> Medical Lab Science (UND)
Health Informatics	<input type="checkbox"/> Community Health Worker (SBC) <input type="checkbox"/> Health Information Technician/Management (DCB, NDSCS) <input type="checkbox"/> Medical Administrative Asst. (BJCC, DCB, RC) <input type="checkbox"/> Medical Coding/Billing (DCB, NDSCS, RC, UTTC, WSC)	<input type="checkbox"/> Community Nutrition (UND) <input type="checkbox"/> Forensic Science (UND) <input type="checkbox"/> Healthcare Management (RC) <input type="checkbox"/> Health Administration (UM) <input type="checkbox"/> Health Communication (NDSU)	<input type="checkbox"/> Health Care Administration (UM) <input type="checkbox"/> Nurse Administrator (UM) <input type="checkbox"/> Public Health (NDSU, UND)
Support Services	<input type="checkbox"/> Caregiver Services (DCB) <input type="checkbox"/> Environmental Public Health (TMCC) <input type="checkbox"/> Fitness Trainer Technician (LRSC) <input type="checkbox"/> Social Work transfer (BSC, CCCC, NDSCS, TMCC, WSC)	<input type="checkbox"/> Corporate Fitness/Wellness (MaSU, MiSU) <input type="checkbox"/> Exercise Science (DSU, NDSU, UJ, UM) <input type="checkbox"/> Kinesiology (UND) <input type="checkbox"/> Social Work (MiSU, UM, UND)	<input type="checkbox"/> Clinical Exercise Physiology (UM) <input type="checkbox"/> Exercise Science and Nutrition (NDSU) <input type="checkbox"/> Exercise Physiology/Kinesiology (UM, UND) <input type="checkbox"/> Social Work (UND)
Therapeutic Services	<input type="checkbox"/> Addictions Studies Transfer (NHSC) <input type="checkbox"/> Dental Assisting/Hygiene (NDSCS) <input type="checkbox"/> Health/Medical Assistant (CCCC, DCB) <input type="checkbox"/> Massage Therapy (JSHDF, JSHDGF, TSPA, WSC) <input type="checkbox"/> Mental Health/Addictions Technician (WSC) <input type="checkbox"/> Nursing transfer (BSC, CCCC, DCB, LRSC, NDSCS, SBC, WSC) <input type="checkbox"/> Occupational Therapy Assistant (NDSCS) <input type="checkbox"/> Practical Nursing (BSC, BJCC, DCB, DSU, NDSCS, NHSC, SBC, TMCC, UTTC, WSC) <input type="checkbox"/> Pre-Professional transfer (BSC, DCB, MaSU, NDSCS, TMCC, WSC) <input type="checkbox"/> Surgical Technology (BSC)	<input type="checkbox"/> Addiction Studies (MiSU) <input type="checkbox"/> Athletic Training (MiSU, UM, UND) <input type="checkbox"/> Dietetics (NDSU, UND) <input type="checkbox"/> Music Therapy (UND) <input type="checkbox"/> Nursing (DSU, MaSU, MiSU, NDSU, RC, UJ, UM, UND) <input type="checkbox"/> Pre-Professional Programs (MaSU, MiSU, UM) <input type="checkbox"/> Rehabilitation and Human Services (UND) <input type="checkbox"/> Respiratory Care/Therapy (NDSU, UM)	<input type="checkbox"/> Advanced Nursing Practice (NDSU) <input type="checkbox"/> Advanced Athletic Training (NDSU) <input type="checkbox"/> Dietetics (NDSU) <input type="checkbox"/> Health, Nutrition and Exercise Science (NDSU) <input type="checkbox"/> Gerontology (NDSU) <input type="checkbox"/> Nursing (NDSU, UM, UND) <input type="checkbox"/> Nutrition (UND) <input type="checkbox"/> Occupational Therapy (UM, UND) <input type="checkbox"/> Physical Therapy (UJ, UM, UND) <input type="checkbox"/> Physician Assistant (UND) <input type="checkbox"/> Psychological Clinical Science (NDSU) <input type="checkbox"/> Respiratory Therapy (UM)



HOSA is an international student organization recognized by the Health Science Education (HSE) Division of ACTE. HOSA's goal is to encourage all health science instructors and students to join and be actively involved in leadership and demonstrate these skills through local, state and national competitions. HOSA provides a unique program of leadership development, motivation, and recognition exclusively for secondary, postsecondary, adult, and collegiate students enrolled in health science education and biomedical science programs or have interests in pursuing careers in health professions. Contact your HOSA Advisor to learn more. Currently offered at Fargo North.



Human Services Career Cluster

Family & Consumer Science



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Consumer Services	Customer Service Representative • Financial Advisor • Market Researcher • Consumer Credit Counselor • Certified Financial Planner • Sales Consultant
Counseling & Mental Health Services	Career Counselor • Mental Health Counselor • Psychologist • Vocational Rehabilitation Counselor • School Counselor • Sociologist
Early Childhood Development & Services	Child Care Worker • Nanny • Preschool Teacher/Teacher Assistant • Child Care Center Director • Parent Educator
Family & Consumer Services	Human Services Worker • Religious Leader • Volunteer Coordinator • Social Worker • Day Care Worker • Emergency Relief Worker • Social Services Worker
Personal Care Services	Cosmetologist • Personal Trainer • Personal and Home Care Aide • Funeral Director • Massage Therapist • Exercise Physiologist • Nail Technician

Family and Consumer Science – Coordinated Plan of Study									
Human Services Career Cluster				Hospitality & Tourism Career Cluster		Arts, AV Technology & Communications Career Cluster		Education & Training Career Cluster	
Family and Community Services		Early Childhood Development		Restaurant/Food Service		Visual Arts		Teaching/Training	
Course Name	Cr	Course Name	Cr	Course Name	Cr	Course Name	Cr	Course Name	Cr
Exploring Food	.5	Child Development	.5	Exploring Foods	.5	Sewing and Fashion	.5	Child Development	.5
Child Development	.5	Relationships	.5	Food Revolution	.5	Textile Arts	.5	Childcare Careers	1
Food Revolution	.5	Living on your own	.5	Cultures & Cuisine	.5	Housing & Interior Design	.5	Intro to Education	.5
Relationships	.5	Childcare Careers	1	Culinary Arts	.5	Living on your own	.5	Teaching Field Experience	.5
Living on your own	.5	Child Careers Coop.	.5	Living on your own	.5			Educating the Exceptional Student	.5
			.5	Restaurant Skills, Restaurant Coop.	1 .5				

Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship

Is this Pathway for you?

- Are you open-minded when helping others solve problems?
- Are you self-motivated?
- Do you enjoy working as a team?
- Are you compassionate and empathetic?
- Do you have a desire for a career in public service?
- Do you have an interest in human development and behavior?
- Do you consider yourself a leader who could be a part of a team?
- Are you curious to design, create, and/or work with your hands?

Other Electives to Consider for Family & Consumer Science Pathway Preparation

CTE Electives

Accounting 1 & 2
Basics of Business, Exploring Business Software
Business & Personal Finance, Marketing
Health Science I, CNA

Academic Electives

Art courses
Mathematics in Action
Communications, Creative Writing, Public Speaking
Foreign Language, Junior Educator of Tomorrow (JET)
Microeconomics, Publications/Media
Psychology 1 & 2, AP Psychology, Sociology



North Dakota Human Services Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Consumer Services	<input type="checkbox"/> Business Administration transfer (BSC, CCCC, DCB, NDSCS, NHSC, SBC, TBC, TMCC) <input type="checkbox"/> Management (BSC, DCB, RC, SBC, UTTC, WSC)	<input type="checkbox"/> Business Administration (NDSU, UJ, SBC, TBC, UTTC, VCSU) <input type="checkbox"/> Management (MiSU, NDSU, RC, UTTC, UM, UND, VCSU)	<input type="checkbox"/> Business Administration (NDSU)
Counseling & Mental Health Services	<input type="checkbox"/> Addiction Studies (NHSC) <input type="checkbox"/> Mental Health/Addictions Technician (WSC) <input type="checkbox"/> Psychology transfer (BSC, DCB, NDSCS, TMCC, WSC)	<input type="checkbox"/> Addiction Studies (MiSU) <input type="checkbox"/> Applied Psychology (MaSU) <input type="checkbox"/> Psychology (MiSU, NDSU, UJ, UM, UND, VCSU)	<input type="checkbox"/> Clinical Counseling (UJ) <input type="checkbox"/> Counseling (NDSU, UM, UND) <input type="checkbox"/> Counseling Education and Supervision (NDSU) <input type="checkbox"/> Counseling Psychology & Community Services (UND) <input type="checkbox"/> Couple and Family Therapy (NDSU) <input type="checkbox"/> Psychology (NDSU, UND)
Early Childhood Development & Services	<input type="checkbox"/> Child Development (DCB, NHSC) <input type="checkbox"/> Early Childhood (MaSU) <input type="checkbox"/> Early Childhood Education transfer (BSC, CCCC, DCB, LRSC, NDSCS, NHSC, SBC, RC)	<input type="checkbox"/> Early Childhood (MaSU) <input type="checkbox"/> Early Childhood Education (MaSU, MiSU, RC, SBC, UM, UND) <input type="checkbox"/> Human Development & Family Science (NDSU)	<input type="checkbox"/> Early Childhood Education (UND) <input type="checkbox"/> Developmental Science (NDSU) <input type="checkbox"/> Human Development & Family Science (NDSU)
Family & Community Services	<input type="checkbox"/> Biblical Studies (TBC) <input type="checkbox"/> Caregiver Services (DCB) <input type="checkbox"/> Community Health Worker (SBC) <input type="checkbox"/> Human Services/Eligibility Worker (BSC, NHSC, RC, SBC) <input type="checkbox"/> Religion transfer (BSC, WSC) <input type="checkbox"/> Social Work transfer (BSC, CCCC, DSU, NDSCS, TMCC, WSC)	<input type="checkbox"/> Catholic Studies (UM) <input type="checkbox"/> Human Development & Family Science (NDSU) <input type="checkbox"/> Human Services (RC, VCSU) <input type="checkbox"/> Pastoral/Youth/Children's Ministry (TBC, UM) <input type="checkbox"/> Rehabilitation and Human Services (UND) <input type="checkbox"/> Religious/Theology/Biblical Studies (UJ, UM, UND, TBC) <input type="checkbox"/> Social Work (MiSU, UM, UND)	<input type="checkbox"/> Gerontology (NDSU) <input type="checkbox"/> Human Development & Family Science (NDSU) <input type="checkbox"/> Missional Leadership (TBC) <input type="checkbox"/> Public Health (NDSU, UND) <input type="checkbox"/> Social Work (UND)
Personal Care Services	<input type="checkbox"/> Fitness Trainer Technician (LRSC) <input type="checkbox"/> Barbering and Cosmetology (MBC) <input type="checkbox"/> Cosmetology (HAHD, JSHDF, JSHDGF, JSHDW, JZT, THA, TSPA) <input type="checkbox"/> Esthetician/Skin Care (JSHDGF, JSHDW, THA, TSPA) <input type="checkbox"/> Massage Therapy (JSHDGF, JSHDW, TSPA, WSC) <input type="checkbox"/> Nail Technology (JSHDW, JZT, THA, TSPA)	<input type="checkbox"/> Athletic/Fitness Training (MiSU, UM, UND) <input type="checkbox"/> Exercise Science (DSU, NDSU, UJ, UM) <input type="checkbox"/> Sport Management (NDSU)	<input type="checkbox"/> Advanced Athletic Training (NDSU) <input type="checkbox"/> Clinical Exercise Physiology (UM) <input type="checkbox"/> Exercise Science and Nutrition (NDSU)



FCCLA is a national Career and Technical Student Organization that provides personal growth, leadership development, and career preparation opportunities for students in Family and Consumer Sciences education. **Our Mission** is to promote personal growth and leadership development through Family and Consumer Sciences education. Focusing on the multiple roles of family member, wage earner and community leader, members develop skills for life through: character development, creative and critical thinking, interpersonal communication, practical knowledge, and career preparation. Ask who your FCCLA advisor is to learn more about becoming a member.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Information Support & Services	Database Administrator • Account Manager • Help Desk Specialist • Information Systems Architect • Systems Analyst • Instructional Designer • Testing Engineer
Network Systems	User Support Specialist • Network Administrator • Network Engineer • Information Technology Engineer • Network Security Analyst • Telecommunications Network Technician
Programming & Software Development	Computer Engineer • Software Applications Specialist • Game Developer • Software Applications Tester • Project Lead • Software Design Engineer
Web & Digital Communications	Multimedia Specialist • Web Designer • Web Site Developer • Animator • Blog Developer • Streaming Media Specialist



Information Technology - Coordinated Plan of Study			
Information Technology Career Cluster			
Network Systems		Computer Programming	
Course Name	Cr	Course Name	Cr
IT Essentials 1	.5	Intro to Coding and Gaming	.5
IT Essentials 2	.5	Computer Programming Java I	.5
CISCO I	.5	Mobile App Development & Cyber Security	.5
CISCO II	.5	AP Computer Programming Java II	.5
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship			

Other Electives to Consider for Information Technology Pathway Preparation

CTE Electives

Accounting 1 & 2
 Aviation IA, Aviation IB, Aviation II, UAV
 Business & Personal Finance, Business Law
 Exploring Business Software, Web Design 1 & 2
 Marketing, Management/Entrepreneurship
 Intro to Engineering Design, Principles of Engineering

Academic Electives

Communications
 College Algebra, AP Calculus, AP Statistics
 Physics
 Publications/Broadcast
 STEM

Is this Pathway for you?

- Do you enjoy working with computers?
- Are you curious to learn reasoning and logic to solve complex problems?
- Are you comfortable with situations that are unpredictable and rapidly changing?
- Are you interested in how procedures make machines work?
- Do you like to read technical materials and diagrams and solve technical problems?
- Are you patient when problem-solving to find a solution?
- Do you enjoy working as a team or independently?
- Do you like playing video games and figuring out how they work?
- Can you concentrate for long periods without being distracted?

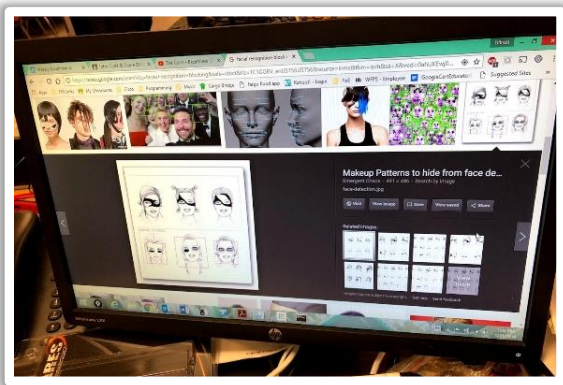
Cyber Security & Coding



Connecting the world!

North Dakota Information Technology Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Information Support & Services	<input type="checkbox"/> Computer Applications (CCCC) <input type="checkbox"/> Computer Information Systems (BSC, DCB) <input type="checkbox"/> Computer Support Specialist (BSC, TMCC) <input type="checkbox"/> Computer Technology/Information Technology (DCB) <input type="checkbox"/> Geographic Information Systems Technician (BSC) <input type="checkbox"/> Information Systems Administrator (NDSCS) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Information Management (NHSC, RC) <input type="checkbox"/> Information Technology (LRSC, NDSCS, RC, SBC, WSC) <input type="checkbox"/> IT Forensics (NDSCS) <input type="checkbox"/> Management Information Systems transfer (NDSCS)	<input type="checkbox"/> Applied Business Information Technology (MiSU) <input type="checkbox"/> Computer Technology Management (DSU) <input type="checkbox"/> Information Security (RC) <input type="checkbox"/> Management Information Science (UJ) <input type="checkbox"/> Information Technology (UJ) <input type="checkbox"/> Information Technology Management (RC, UM) <input type="checkbox"/> Technology Education (DSU, VCSU)	<input type="checkbox"/> Information Systems (MiSU) <input type="checkbox"/> Library/Information Technology (VCSU) <input type="checkbox"/> Technology (UND)
Network Systems	<input type="checkbox"/> Information Management (NHSC, RC) <input type="checkbox"/> Information Technology (LRSC, NDSCS, RC, SBC, WSC)	<input type="checkbox"/> Computer Information Systems (MaSU, UM, VCSU) <input type="checkbox"/> Information Systems (UND) <input type="checkbox"/> Management Information Systems (NDSU)	<input type="checkbox"/> Computer Science (NDSU, UND) <input type="checkbox"/> Electrical and Computer Engineering (NDSU)
Programming & Software Development	<input type="checkbox"/> Computer Science transfer (BSC, NDSCS) <input type="checkbox"/> Mobile Application Developer (NDSCS) <input type="checkbox"/> Software Application Development (RC)	<input type="checkbox"/> Computer Engineering (NDSU) <input type="checkbox"/> Computer Science (DSU, MiSU, NDSU, RC, UJ, UM, UND) <input type="checkbox"/> Electrical and Computer Engineering (NDSU) <input type="checkbox"/> Software Engineering (VCSU)	<input type="checkbox"/> Electrical and Computer Engineering (NDSU) <input type="checkbox"/> Software Engineering (NDSU)
Web & Digital Communications	<input type="checkbox"/> Computer Technology/Webmaster and Web Design (DCB) <input type="checkbox"/> Web Design (NDSCS) <input type="checkbox"/> Web Developer (NDSCS) <input type="checkbox"/> Web Page Development and Design (BSC) <input type="checkbox"/> Web Programming (RC)	<input type="checkbox"/> New Media and Web Design (NDSU)	



Cyber Patriot Tech Wars Esports



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Health, Safety & Environmental Assurance	Environmental Engineer • Health and Safety Specialist • Safety Team Leader • Environmental Specialist • Safety Coordinator • Environmental Field Technician
Logistics & Inventory Control	Dispatcher • Freight/Stock/Material Mover • Industrial Truck & Tractor Operator • Materials Handler • Logistical Engineer • Quality Control Technician
Maintenance, Installation & Repair	Computer Repair Technician • Boilermaker • Communication Systems Installer • Laser Systems Technician • Industrial Machinery Mechanic • Instrument Calibration Technician
Manufacturing Production Process Development	Industrial Engineer • Manufacturing Technician • Purchasing Agent • Precision Inspector, Tester and Grader • Production Manager • Electronics Engineer
Production	Welder • Calibration Technician • Precision Layout Worker • Assembler • Tool & Die Maker • Sheet Metal Worker • Micro and Nano Fabrication Technicians
Quality Assurance	Process Control Technician • Inspector • Quality Control Technician • Calibration Technician • Lab Technician • Statistical Process Control (SPC) Coordinator



Trade & Industry – Coordinated Plan of Study	
Production	
Course Name	Cr
Manufacturing I, 2 or 3 (South High)	1 to 3
Welding I (NDSCS-Fargo)	1
Welding II (NDSCS-Fargo)	1
Manufacturing Cooperative Education	.5-1
Technology & Engineering	
Manufacturing Production Process Development	
Construction Technology	.5
Intro to Engineering	1
Principles of Engineering	1

Is this Pathway for you?

- Are you curious about how things are made or how they work?
- Do you like to interact with all kinds of people?
- Do you enjoy creating, inventing, or imaging new and different ways to do things?
- Do you consider yourself a leader who could be part of a team?
- Are you curious to work in a laboratory?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you like to follow directions and use precise detail to complete a task?

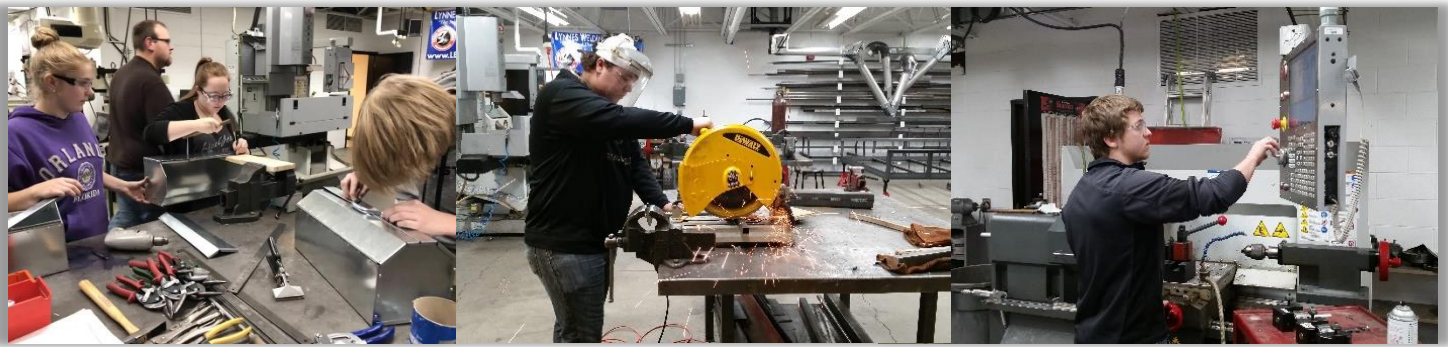
Other Electives to Consider for Manufacturing Pathway Preparation

CTE Electives

Civil Engineering & Architecture
 Computer Applications, Business and Personal Finance
 Fundamentals of Business
 Marketing
 Living on Your Own
 Woods 1 & Woods 2

Academic Electives

Arts
 Consumer Math; Geometry
 Environmental Science, Earth Science
 Public Speaking



North Dakota Manufacturing Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Health, Safety & Environmental Assurance	<input type="checkbox"/> Emergency Management transfer (NDSCS) <input type="checkbox"/> Environmental Public Health (TMCC) <input type="checkbox"/> Environmental Technology/Science transfer (NHSC, SBC, TMCC, UTTC, WSC)	<input type="checkbox"/> Emergency Management (NDSU) <input type="checkbox"/> Environmental Design (NDSU) <input type="checkbox"/> Environmental Science (DSU, NHSC, SBC) <input type="checkbox"/> Health Communication (NDSU)	<input type="checkbox"/> Emergency Management (NDSU) <input type="checkbox"/> Environmental and Conservation Sciences (NDSU, SBC) <input type="checkbox"/> Environmental Engineering (NDSU, UND)
Logistics & Inventory Control	<input type="checkbox"/> Information Technology (DCB) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Management Information Systems (NDSCS)	<input type="checkbox"/> Business Process Integration Management (VCSU) <input type="checkbox"/> Computer Technology Management (DSU) <input type="checkbox"/> Energy Economics and Finance (MiSU) <input type="checkbox"/> Management Information Systems (MiSU, NDSU) <input type="checkbox"/> Operations and Supply Chain Management (UND)	<input type="checkbox"/> Transportation and Logistics (NDSU)
Maintenance, Installation & Repair	<input type="checkbox"/> Electrical Lineworker (BSC) <input type="checkbox"/> Electrical Power Technology (BSC) <input type="checkbox"/> Electrical Transmission Systems Technology (BSC) <input type="checkbox"/> Electronics Technology (BSC) <input type="checkbox"/> Electronics and Telecommunications Technology (BSC) <input type="checkbox"/> Mechanical Maintenance Technology (BSC) <input type="checkbox"/> Welding Technology (BSC, BJCC, LW, NDSCS, NHSC, SBC, TMCC, UTTC, WSC) <input type="checkbox"/> Wind Energy Technician (LRSC)	<input type="checkbox"/> Industrial Technology (UND)	
Manufacturing Process Production Development	<input type="checkbox"/> Engineering Technology (BSC) <input type="checkbox"/> Power Plant Technology (BSC) <input type="checkbox"/> Process Plant Technology (BSC, TMCC) <input type="checkbox"/> Energy Services & Renewable Technician (BSC)	<input type="checkbox"/> Engineering Science (UJ, UM) <input type="checkbox"/> Industrial Engineering and Management (NDSU) <input type="checkbox"/> Manufacturing Engineering (NDSU)	<input type="checkbox"/> Industrial Engineering and Management (NDSU) <input type="checkbox"/> Manufacturing Engineering (NDSU)
Production	<input type="checkbox"/> Heating, Ventilation, and Air Conditioning (BSC, CCCC, NDSCS, TMCC) <input type="checkbox"/> Precision Machining Technology (NDSCS) <input type="checkbox"/> Production Operations/Refinery Training (NHSC) <input type="checkbox"/> Robotics, Automation and Mechatronics Technology (NDSCS) <input type="checkbox"/> Welding Technology (BSC, BJCC, LW, NDSCS, NHSC, SBC, TMCC, UTTC, WSC)	<input type="checkbox"/> Energy Management (BSC)	<input type="checkbox"/> Materials and Nanotechnology (NDSU)
Quality Assurance	<input type="checkbox"/> Instrumentation and Control Technology (BSC)	<input type="checkbox"/> Industrial Engineering and Management (NDSU)	<input type="checkbox"/> Industrial Engineering and Management (NDSU)



SkillsUSA is a local, state, and national co-curricular association serving high school, college and middle school students who are preparing for careers in trade, technical and skilled service occupations, including health occupations. SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens the SkillsUSA Framework of personal, workplace and technical skills. Contact your SkillsUSA Advisor to learn more.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Marketing Communications	Account Executive • Advertising Manager • Creative Director • Media Buyer • Marketing Associate • Public Information Director • Interactive Media Specialist
Marketing Management	Database Manager • Customer Service Representative • Brand Manager • Director of Market Development • Marketing Services Manager • Planning Analyst
Marketing Research	Research Associate • Research Specialist • Market Research Manager • Strategic Planner • Research Analyst • Forecasting Manager • Marketing Strategist
Merchandising	Merchandise Buyer • Operations Manager • Retail Marketing Coordinator • Receiving Clerk • Visual Merchandise Manager • Department Manager • Sales Associate
Professional Selling	Account Executive • Broker • Manufacturer's Representative • Field Representative • Sales Executive • Solutions Advisory • Client Relationship Manager



Marketing Education - Coordinated Plan of Study			
Marketing Career Cluster			
Professional Sales/Merchandising		Marketing Management	
Course Name	Cr	Course Name	Cr
Entertainment & Sports Marketing	.5	Marketing	1
Marketing	1	Management/Entrepreneurship	1
Management/Entrepreneurship	1	Store Manager	.5-1
Store Manager	.5-1	Marketing Cooperative Work	.5
Marketing Cooperative Work	.5-1		

Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship

Is this Pathway for you?

- Are you someone who likes to work with data to solve problems?
- Do you like to interact with all kinds of people?
- Do you like to come up with new ideas?
- Do you like to follow directions to complete a task?
- Do you consider yourself a leader who could be part of a team?
- Are you interested in being a team captain, officer, or having a role in an organization?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?

Other Electives to Consider for Marketing Pathway Preparation

CTE Electives

Computer Applications, Web Design 1 & 2
Accounting I, II
Business & Personal Finance, Business Law
Culinary Arts, Cultures & Cuisine, Exploring Foods,
Restaurant Skills, Housing and Interior Design

Academic Electives

Communications, Journalism 1 & 2
Exploratory Mass Media/Communication
Creative Writing, Debate
AP Statistics, AP Human Geography
Foreign Language
AP Macroeconomics, AP Microeconomics
Sociology



North Dakota Marketing Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Marketing Communications	<input type="checkbox"/> Advertising and Marketing (DCB) <input type="checkbox"/> Advertising transfer (WSC) <input type="checkbox"/> Information & Communications Technology (NDSCS) <input type="checkbox"/> Mass Communications (BSC)	<input type="checkbox"/> Business Communication (UM) <input type="checkbox"/> Communication (UND) <input type="checkbox"/> Mass Communication (UM) <input type="checkbox"/> Public Relations (UM)	
Marketing Management	<input type="checkbox"/> Advertising & Marketing (DCB) <input type="checkbox"/> Business Management (NDSCS, RC, UTTC, WSC) <input type="checkbox"/> Information Management (NHSC) <input type="checkbox"/> Management (BSC) <input type="checkbox"/> Management Entrepreneurship (BSC) <input type="checkbox"/> Marketing (LRSC, RC) <input type="checkbox"/> Marketing and Management transfer (DCB) <input type="checkbox"/> Small Business Management (DCB)	<input type="checkbox"/> Business Management (RC, UM, VCSU) <input type="checkbox"/> Management (MiSU, NDSU, UND) <input type="checkbox"/> Management Communication (NDSU) <input type="checkbox"/> Marketing (MiSU, NDSU, RC, UM, UND, VCSU) <input type="checkbox"/> Sport & Leisure Management (UM)	<input type="checkbox"/> Management (MiSU)
Marketing Research	<input type="checkbox"/> Business Systems Analysis (RC)	<input type="checkbox"/> Business Systems Analysis (RC)	
Merchandising	<input type="checkbox"/> Art Marketing (UTTC) <input type="checkbox"/> Marketing (LRSC, RC)	<input type="checkbox"/> Apparel, Retail Merchandising, & Design (NDSU) <input type="checkbox"/> Operations and Supply Chain Management (UND)	<input type="checkbox"/> Merchandising (NDSU)
Professional Selling	<input type="checkbox"/> Entrepreneurship (CCCC, NDSCS, SBC, TMCC)	<input type="checkbox"/> Art Entrepreneurship (DSU) <input type="checkbox"/> Computer Information Systems/ Customer Relationship Management (VCSU) <input type="checkbox"/> Entrepreneurship (UND)	



DECA is a co-curricular student organization that connects the Marketing Education classroom curriculum to leadership experiences. DECA's mission is to prepare emerging leaders in marketing, finance, hospitality and management. North Dakota DECA was chartered in 1954 and continues to provide opportunities for its members today. DECA members are encouraged to be involved in local, state and national competitions, community service projects, and leadership. Contact your DECA advisor to learn more about what you can do to get involved.



Marketing education students also can compete in Junior Achievement's Titan Competition where students apply their knowledge of business to compete in an interactive business simulation or the JA Company Program which challenges student entrepreneurial spirit to start, operate, and liquidate their own company brand. Individual and team scholarship awards are available.

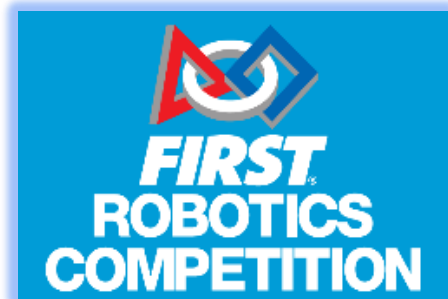


Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Engineering & Technology	Aerospace Engineer • Architectural Engineer • Automotive Engineer • CAD Technician • Civil Engineer • Computer Programmer • Electrical Engineer • Mapping Technician • Mining Engineer • Metallurgist • Petroleum Engineer • Survey Technician • Biomedical Engineer • Agricultural Technician • Application Engineer
Science & Mathematics	Anthropologist • Astronomer • Chemist • Geneticist • Ecologist • Environmental Scientist • Geologist • Research Technician • Economist • Analytical Chemist • Meteorologist • Nuclear Chemist/Technician • Statistician • Atmospheric Scientist • Zoologist • Astrophysicist • Quality-Control Scientist

Technology & Engineering Courses <i>* Indicated 1 credits</i>	Agriculture	The Arts	Aviation	Business
	<ul style="list-style-type: none"> • Intro to Agriculture • Plant Science I • Plant Science II • World Agriculture 	<ul style="list-style-type: none"> • Visual Arts • Performing Arts • Music • Music Composition 	<ul style="list-style-type: none"> • Photography • Yearbook • Theatre Arts Tech * 	<ul style="list-style-type: none"> • Aviation IA & Aviation 1B • Aviation II* • Unmanned Aerial Vehicle • AFJROTC 1, 2, 3, 4
	Engineering	Graphic Design	Information Technology	Medical
<ul style="list-style-type: none"> • Robotics • PLTW—Intro to Engineering* • PLTW—Principles of Engineering* • Project Lead the Way—Civil Engineering* • Engineering Design Capstone 	<ul style="list-style-type: none"> • Communication Tech • Video Communications • Digital Photography 1 & 2 	<ul style="list-style-type: none"> • AP Computer Science – Java • CISCO 1, 2 • IT Essentials 1 & 2 • Computer Programming Java I • Introduction to Coding & Gaming • Mobile App Development & Security 	<ul style="list-style-type: none"> • CNA Skills • Health Science 1 & 2* • Medical Terminology • Athletic Injuries 	

Is this Pathway for you?

- Are you curious about how things are made or how they work?
- Do you like to interact with all kinds of people?
- Do you enjoy creating, inventing, or imaging new and different ways to do things?
- Do you consider yourself a leader who could be part of a team?
- Are you curious to work in a laboratory?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you like to follow directions and use precise detail to complete a task?
- Are you curious how math/science can be applied to build things or solve problems?





North Dakota STEM Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Engineering & Technology	<input type="checkbox"/> Architectural Drafting & Estimating Technology (NDSCS) <input type="checkbox"/> Engineering Technology (BSC) <input type="checkbox"/> Land Surveying and Civil Engineering (NDSCS) <input type="checkbox"/> Nanoscience Technology (NDSCS) <input type="checkbox"/> Nuclear Power Technology (BSC) <input type="checkbox"/> Petroleum Engineering Technology (BSC) <input type="checkbox"/> Petroleum Production Technology (BSC, NHSC, WSC) <input type="checkbox"/> Engineering transfer (BSC, CCCC, DCB, NDSCS, NHSC, SBC, TMCC, WSC) <input type="checkbox"/> Robotics, Automation & Mechatronics Technology (NDSCS) <input type="checkbox"/> Simulator Maintenance Technology (LRSC) <input type="checkbox"/> Technical Studies (BSC, NDSCS)	<input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Chemical Engineering (UND) <input type="checkbox"/> Civil Engineering (NDSU, UND) <input type="checkbox"/> Computer Engineering (NDSU) <input type="checkbox"/> Construction Engineering (NDSU) <input type="checkbox"/> Electrical Engineering (NDSU, UND) <input type="checkbox"/> Engineering Science (UM) <input type="checkbox"/> Geological Engineering (UND) <input type="checkbox"/> Industrial Engineering and Management (NDSU) <input type="checkbox"/> Industrial Technology (UND) <input type="checkbox"/> Manufacturing Engineering (NDSU) <input type="checkbox"/> Mechanical Engineering (NDSU, UJ, UND) <input type="checkbox"/> Petroleum Engineering (UND)	<input type="checkbox"/> Aerospace Sciences (UND) <input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Chemical Engineering (UND) <input type="checkbox"/> Civil Engineering (NDSU, UND) <input type="checkbox"/> Electrical/Computer Engineering (NDSU, UND) <input type="checkbox"/> Environmental Engineering (NDSU, UND) <input type="checkbox"/> Geological Engineering (UND) <input type="checkbox"/> Industrial Engineering & Management (NDSU) <input type="checkbox"/> Manufacturing Engineering (NDSU) <input type="checkbox"/> Mechanical Engineering (NDSU, UND) <input type="checkbox"/> Software Engineering (NDSU) <input type="checkbox"/> Sustainable Energy Engineering (UND) <input type="checkbox"/> Technology (UND)
	<input type="checkbox"/> Biology transfer (BSC, DCB, TMCC, WSC) <input type="checkbox"/> Biotechnology transfer (NDSCS) <input type="checkbox"/> Chemistry transfer (BSC, DCB, NDSCS, TMCC, WSC) <input type="checkbox"/> Environmental Science Transfer (CCCC, NHSC, TMCC, WSC) <input type="checkbox"/> Environmental Technology (DCB) <input type="checkbox"/> Mathematics transfer (BSC, DCB, NDSCS, NHSC, TMCC, WSC) <input type="checkbox"/> Natural Science transfer (NDSCS, TMCC) <input type="checkbox"/> Pharmacy transfer (WSC) <input type="checkbox"/> Physical Science transfer (NDSCS, WSC) <input type="checkbox"/> Physics transfer (BSC, WSC) <input type="checkbox"/> Science transfer (CCCC, NHSC) <input type="checkbox"/> Tribal Environmental Science (UTTC)	<input type="checkbox"/> Atmospheric Sciences (UND) <input type="checkbox"/> Biochemistry and Molecular Biology (NDSU) <input type="checkbox"/> Biology/Biological Science (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Biotechnology (NDSU) <input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Chemistry (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Computer Science (DSU, MiSU, RC, UM, UND) <input type="checkbox"/> Earth Science (MiSU) <input type="checkbox"/> Environmental Science (DSU, NHSC, SBC, UND) <input type="checkbox"/> Forensic Science (UND) <input type="checkbox"/> Geology (MiSU, NDSU, UND) <input type="checkbox"/> Horticulture (NDSU) <input type="checkbox"/> Mathematics (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Microbiology (NDSU) <input type="checkbox"/> Molecular and Integrative Biology (UND) <input type="checkbox"/> Physics (NDSU, UND) <input type="checkbox"/> Statistics (NDSU) <input type="checkbox"/> Unmanned Aircraft Systems Operations (UND) <input type="checkbox"/> Zoology (NDSU)	<input type="checkbox"/> Atmospheric Sciences (UND) <input type="checkbox"/> Biochemistry/Biomedical Sciences (NDSU) <input type="checkbox"/> Biology/Biological Science (NDSU, UND) <input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Cellular and Molecular Biology (NDSU) <input type="checkbox"/> Chemistry (NDSU, UND) <input type="checkbox"/> Coatings and Polymeric Materials (NDSU) <input type="checkbox"/> Entomology (NDSU) <input type="checkbox"/> Environmental & Conservation Science (NDSU, SBC) <input type="checkbox"/> Geology (UND) <input type="checkbox"/> Materials and Nanotechnology (NDSU) <input type="checkbox"/> Mathematics (NDSU, UND) <input type="checkbox"/> Microbiology (NDSU) <input type="checkbox"/> Physics/Astrophysics (NDSU, UND) <input type="checkbox"/> Plant Pathology (NDSU) <input type="checkbox"/> Plant Sciences (NDSU) <input type="checkbox"/> Space Studies (UND) <input type="checkbox"/> Statistics (NDSU) <input type="checkbox"/> Zoology (NDSU)



The Technology Student Association is a local, state, and national student organization created to develop skills in science, technology, engineering, and mathematics as well as business education. TSA aims to develop leadership, academic, and business management skills in the workplace among students and leaders within the community. Students currently or previously enrolled in Technology & Engineering courses join TSA and extend their learning and leadership through intracurricular activities, and competitions. Contact your school's TSA Advisor to get involved.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Facility & Mobile Equipment Maintenance	Automotive Service Technician • Collision Repair Technician • Diesel Engine Specialist • Marine Technician • Service Manager • Electrical/Electronic Technician • Industrial Electrician • Motorcycle & UTV Technician
Health, Safety & Environmental Management	Industrial Health & Safety Engineer • Safety Analyst • Environmental Scientist • First Responder • Environmental Compliance Specialist • Risk Manager
Logistics Planning & Management Services	Logistic Manager • Logistics Analyst • Logistician • Logistic Consultant • International Logistics Specialists • Logistic Engineer
Sales & Service	Marketing Manager • Sales Representative • Cargo and Freight Agent • Customer Service Representative • Customer Order and Billing Clerk • Sales Manager
Transportation Operations	Pilot • Flight Engineer • Truck Driver • Bus Driver • Dispatchers • Air Traffic Controller • Transportation Managers • Locomotive Engineer • Flight Attendant
Transportation Systems/Infrastructure Planning, Management & Regulation	Aviation Inspector • Logistics System Manager • Surveying and Mapping Technician • Motor Vehicle Inspector • Transportation Engineer • Freight Inspector
Warehousing & Distribution Center Operations	Warehouse Manager • Shipping & Receiving Clerk • Production/Planning/Expediting Clerk • Laborer & Material Handler • Industrial and Packaging Engineers



Transportation, Distribution & Logistics Career Cluster			
Transportation Operations		Facility and Mobile Equipment Maintenance	
Course Name	Cr	Course Name	Cr
Aviation Technology IA	.5	Automotive Technology I	1
Aviation Technology IB	.5	Automotive Technology II Bock	2
Aviation Technology II	1	Diesel Technology I	1
Unmanned Aerial Vehicle	.5	Diesel Technology II Bock	2
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship			

Is this Pathway for you?

- Are you someone who likes to work with your hands to solve problems?
- Do you like to interact with all kinds of people?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you like to follow directions and use precise detail to complete a task?
- Does travel and moving from one place to another interest you?
- Are you interest in designing or working with a system to make things faster or more efficient?
- Do you like to work with your hands?

Other Electives to Consider for Transportation, Distribution & Logistics Pathway Preparation
<p>CTE Electives</p> <ul style="list-style-type: none"> Exploring Business Software, Basics of Business Business and Personal Finance IT Essentials 1 & 2 Intro to Engineering Design, Principles of Engineering Construction Technology 1 & 2 Management/Entrepreneurship Manufacturing 1, 2, & 3 Welding I, II <p>Academic Electives</p> <ul style="list-style-type: none"> AFJROTC Chemistry, Physics Consumer Math, Advanced Math, Pre-Calculus, AP Calculus Communications, Public Speaking Psychology



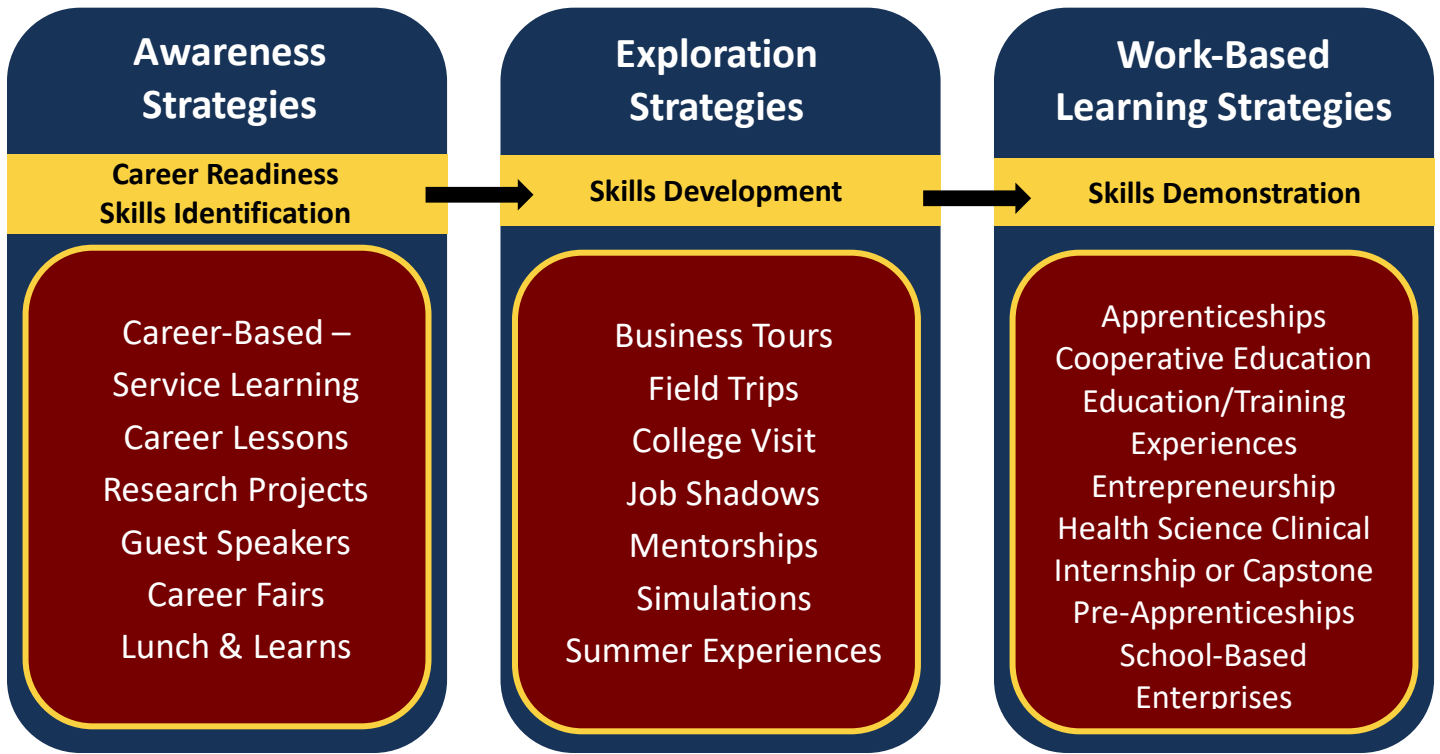
North Dakota Transportation, Distribution & Logistics Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Facility & Mobile Equipment Maintenance	<input type="checkbox"/> Auto Collision Technology (BSC, NDSCS) <input type="checkbox"/> Auto Technology (BSC, BJCC, CCCC, LRSC, NDSCS, UTTC) <input type="checkbox"/> Diesel Technology (NDSCS) <input type="checkbox"/> Electronics Technology (BSC) <input type="checkbox"/> Electronics & Telecommunications Technology (BSC) <input type="checkbox"/> Facilities Maintenance (BJCC) <input type="checkbox"/> Geographic Information Systems Technology (BSC) <input type="checkbox"/> Power Sport Technology (NDSCS) <input type="checkbox"/> Transportation Technician (WSC)		
Health, Safety & Environmental Management	<input type="checkbox"/> Environmental Public Health (TMCC)	<input type="checkbox"/> Environmental Design (NDSU) <input type="checkbox"/> Environmental Health (DSU)	
Logistics Planning & Management Services	<input type="checkbox"/> Information Management Systems (DCB, NHSC, RC) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Information Technology (DCB, LRSC, NDSCS, WSC) <input type="checkbox"/> Management Information Systems (NDSCS)	<input type="checkbox"/> Business Administration/Business Process Integration Management (VCSU) <input type="checkbox"/> Business Management (UM) <input type="checkbox"/> Information Technology Management (DSU, UM) <input type="checkbox"/> Management Information Systems (MiSU, NDSU, RC, UND) <input type="checkbox"/> Operations/Supply Chain & Logistics (RC, UND)	<input type="checkbox"/> Business Administration/Project Management (UM) <input type="checkbox"/> Transportation and Logistics (NDSU)
Sales & Service	<input type="checkbox"/> Business Management (WSC) <input type="checkbox"/> Marketing & Management transfer (DCB, LRSC, RC)	<input type="checkbox"/> Airport Management (UND) <input type="checkbox"/> Marketing (MiSU, NDSU, RC, UM, UND)	<input type="checkbox"/> Merchandising (NDSU)
Transportation Operations	<input type="checkbox"/> Airline Transport Pilot (FFS) <input type="checkbox"/> CDL/Heavy Equipment (CCCC, NHSC, SBC, TMCC, UTTC) <input type="checkbox"/> Commercial Pilot (EATC, FFS, GFKFS) <input type="checkbox"/> Heavy Equipment Operator (UTTC) <input type="checkbox"/> Instrumental/Multi-Engine Rating (EATC, FFS, GFKFS) <input type="checkbox"/> Private Pilot (EATC, FFS, GFKFS) <input type="checkbox"/> Recreational/Sport Pilot (EATC, FFS)	<input type="checkbox"/> Air Traffic Control (UND) <input type="checkbox"/> Commercial Aviation (UND) <input type="checkbox"/> Aviation Management (UND) <input type="checkbox"/> Aviation Technology Management (UND) <input type="checkbox"/> Flight Education (UND) <input type="checkbox"/> Unmanned Aircraft Systems Operations (UND)	<input type="checkbox"/> Aerospace Sciences (UND) <input type="checkbox"/> Aviation (UND)
Transportation Systems/ Infrastructure Planning, Management & Regulation		<input type="checkbox"/> Airport Management (UND) <input type="checkbox"/> Aviation Technology Management (UND) <input type="checkbox"/> Operations/Supply Chain & Logistics (RC, UND) <input type="checkbox"/> Public Policy ()	<input type="checkbox"/> Transportation and Urban Systems (NDSU)
Warehousing & Distribution Center Operations	<input type="checkbox"/> Management (BSC)	<input type="checkbox"/> Business Administration/Business Process Integration Management (VCSU)	



SkillsUSA is a local, state, and national co-curricular association serving high school, college and middle school students who are preparing for careers in trade, technical and skilled service occupations, including health occupations. SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens the SkillsUSA Framework of personal, workplace and technical skills. Contact your SkillsUSA Advisor to join.

Career-Ready Work Experiences



Fargo high school students are encouraged to participate in work related experiences to develop employability, leadership, and job-related skills.

Students completing over 75 hours of Work-based Learning or 25 hours of Community Service are Career Ready candidates toward North Dakota's Choice Ready Pathways.

Cooperative work-based learning experiences may be measured on Career Ready Practice categories for Responsible Employee, Technical Skills, Communication, Problem-solving and Teamwork.

Extended Learning Experience refers to the knowledge and skills that can be gained in a work setting. These glimpses into the real-world can help students make more informed education and career decisions.

It is important for students to identify some of the career fields that best fit their interest before beginning formal career work experience planning. The following are the extended learning experience options available for students in Fargo high schools

Job Shadow/Observation:

A Job Shadow or Observation is an opportunity to pair a student with a person who does the kind of work the student wants to explore. Job Shadow/Observations generally last 2-8 hours and are typically limited to observing the worker. Job Shadows or Observations offer the student:

- A first-hand look at the occupation
- An opportunity to observe and ask questions
- A possible “contact” in the field of work

Interested? Talk with your career advisor, school counselor, or with a career and technical education (CTE) instructor.

Job Application / Interview:

Creating a resume that catches an employer’s attention, correctly completing an application form, and knowing how to interview for a job are not inherent skills. Students may work with the Career Center staff to learn and practice these skills.

Cooperative Education:

Cooperative Education (co-op) is a job placement directly related to a student’s classroom instruction in career and technical education (CTE). This experience must be arranged through a CTE instructor and career advisor. As a co-op student you:

- Are monitored and evaluated by your instructor and your employer.
- Receive a grade for the co-op experience.
- May be paid by the employer.
- A student is able to obtain a maximum of 2 credits during their high school experience. Hours are calculated as 75 hours for ½ credit, and 150 for 1 credit.

Capstone Experience:

A Capstone Experience is a project-based activity culminating at the end of coursework requiring the application and demonstration of essential skills outlined for the project.

Junior Educators of Tomorrow (JET):

A service-learning program to experience a teaching career in the elementary or middle school setting.

- Students must be in 12th grade, have a GPA of at least 2.0, and be registered for at least five additional classes at the high school.

Service Learning: Community Leadership Impact

Service learning offers students an opportunity to do something significant for other people in their community while enhancing their educational experience and personal growth. Students may earn up to one credit toward graduation by serving as a volunteer in the school system or through a non-profit agency.

Volunteer Opportunities: Social Inclusion

Post-secondary institutions and future employers look positively upon those who have given back to their communities. In addition to opening the doors of opportunity, participation in volunteer activities allows students to gain experience in areas of interest while helping others.



Four Year Plan – Student Planning Template

Student Name: _____ School Year: _____ Current Career Goal: _____

School Counselor: _____ Career Advisor: _____ ACT Score: _____

Career Cluster #1: _____ Career Pathway: _____ Occupations: _____

Career Cluster #2: _____ Career Pathway: _____ Occupations: _____

Career Cluster #3: _____ Career Pathway: _____ Occupations: _____

	9 th Grade			10 th Grade			11 th Grade			12 th Grade		
COURSE	Course Name	Gr.	Cr.		Gr.	Cr.		Gr.	Cr.		Gr.	Cr.
ENGLISH	English or Honors English		1	English II or Honors English		1	English III or AP English III		1	English IV or AP English IV		1
MATH	Algebra I or Geometry		1	Geometry or Algebra II		1	Algebra II or Upper-level math course		1	Upper-level math (recommended)		.5 or 1
SOCIAL STUDIES	World Geography		.5	Western Civilization		1	US History or AP US History		1	Government or AP Government .5 and Economics or Microeconomics .5		1
SCIENCE	Physical Science or Biology		1	Biology or Chemistry		1	3 rd Science or Physics		1			
PE/HEALTH	PE and Health 9	.5	1	PE		.5	PE		.5	PE (Class of 2019 & 2020)		.5
	Total Required Credits		4.5	Total Required Credits		4.5	Total Required Credits		4.5	Total Required Credits ^(19&20)		2.5
ELECTIVE										Total Required Credits 2021+		2
ELECTIVE												
ELECTIVE												
ELECTIVE												
CREDITS/YEAR			6, 6.5 or 7			6, 6.5 or 7			6, 6.5 or 7			6, 6.5 or 7
WORK-BASED LEARNING HOURS			Hrs.			Hrs.			Hrs.			Hrs.



Career Pathways

Exploration & Planning Guide

Educating today's learners for tomorrow's world.



Career Planning Overview

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West Fargo

Career Cluster Programs

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- 14 Arts, AV Tech, & Communication
- 16 Business Management & Administration
- 18 Health Sciences
- 20 Human Services – FACS
- 22 Information Technology
- 24 Manufacturing
- 26 Marketing & Sales
- 28 STEM
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Dear Students, Parents, and Community members:

Students are often asked, “What do you want to be when you grow up?”

From kindergarten through elementary, middle school to high school, learners in West Fargo Public Schools are afforded access to academic, career-based, and extra-curricular activities to begin this journey. Academic foundations provide the knowledge and essential skills learners need to be successful across all disciplines. Extra-curricular experiences often promote teamwork, leadership and perseverance, while career-based curriculums open the door for career awareness, exploration and preparation related to specific career clusters.

Career and technical education and academic elective courses are designed to enrich learner education through a career lens including career awareness, real-world projects, industry aligned skills, technology integration, job shadowing, and post-secondary partnerships. Learner self-reflection compels students to discover interests and acknowledge aptitudes which can set the stage for beginning exploration of career pathways in high school.

The West Fargo Career Pathways booklet is a resource to inform learners and families on this quest to:

- provide awareness of the 16 Career Clusters for career discovery
- outline the coursework for West Fargo career pathways
- communicate essential information to students, parents, staff, and community stakeholders
- connect high school academic and career and technical education coursework with students to begin career exploration
- align student interests and aptitude with career pathways
- inform learners about future viable job opportunities related to each career pathway
- provide information about North Dakota post-secondary colleges and degree programs aligned to each career pathway
- provide parents and students with tools to plan and make informed decisions
- promote requirements to be eligible for the North Dakota Academic, CTE scholarship and Choice-Ready indicators
- outline West Fargo graduation requirements and Profile of a Graduate disposition
- communicate important assessments for self-reflection and college preparation
- connect essential career support resources with students and families

West Fargo Public School’s mission is “Educating today’s learners for tomorrow’s world!” The exploration of career pathways provides choice to engage students in their own learning and discovery in passion areas. Coursework exposes students to future career options and skills to prepare them for the next steps beyond high school. With so many career options to choose from, making the most of the high school experience is critical! The Career Pathway Guide is a resource to inform and begin intentional four-year planning to make sure all West Fargo learners graduate Choice-Ready, and ultimately, understand their options on their pathway as an adult!

NORTH DAKOTA CHOICE READY



ESSENTIAL SKILLS

Earn a *North Dakota high school diploma*

Complete a *9-week Career Education/Individual Counseling* (15.1-21-18), *Financial Literacy* (15.1-21-21), and pass *ND Civics Test* (15.1-21-27) and **four or more** additional indicators:

- 25 hours of Community Service
- 95% Attendance (not counting school related absences)
- Career Exploration Experience
- Two or more years in organized Co-Curricular Activities
- Two or more years in organized Extra-Curricular Activities
- Successfully complete a Capstone Project
- Successfully complete an on-line learning course
- Demonstrate competency in 21st Century Skills

Students shall then complete **two or more** of the **CHOICE READY** components below.



POST-SECONDARY READY

Complete a *Four-Year Rolling Career Plan*, earn a **2.8 GPA or greater**, and complete one academic indicator set below:

ACT / SAT minimum or subsection scores

- ACT English – 18
- SAT Reading/Writing – 480
- ACT Reading – 22
- SAT Math – 530
- ACT Math – 21
- ACT Science – 23

OR

Two or more additional indicators:

- Advanced Placement Course (A, B or C) (1, 2, or 3)
- Dual Credit Course (English or Math) (A, B or C) or (1, 2, or 3)
- Algebra II (A, B or C) or (1, 2, or 3)
- Advance Placement Exam (3+)
- International Baccalaureate Exam (4+)
- 3.0 GP in core course requirement for NDUS admission
- CLEM/CREAM (Eng./Math) Course (70% or greater)



WORKFORCE READY

Complete a *Four-Year Rolling Career Plan*, and complete two or more additional indicators:

- Complete three CTE courses or more (A, B or C) or (1, 2, or 3)
- Complete Career Ready Practices (3.0)
- Dual Credit Course (A, B or C) or (1, 2, or 3)
- WorkKeys (Gold or Silver)
- Technical Assessment / Industry Credential
- Workplace Learning Experience (40 hours)
- Work-based Learning Experience (Perkins V) (40 hrs.)
- CLEM/CREAM (Eng./Math) Course (70% or greater) NDSA (Reading/Math) Level 3 or greater or (ACT for Accountability: English 19/Mathematics 22)



MILITARY READY

- Complete a *Four-Year Rolling Career Plan*,
- **ASVAB score of 31 or greater** (as determined by branch),
- **Quality Citizenship** (No Expulsions/Suspensions), **Physically Fit**, and
- Complete **two or more** additional indicators from the **Post-Secondary** or **Workforce** options.

West Fargo Graduation Requirements



The proper selection of courses by students is an important matter. It is vital to the students that each course should be carefully selected as an integral part of the student's four-year educational plan. Course selections are equally important to the school district for upcoming staffing commitments. Therefore, changes in student course selections after July 1 will only be made in cases of extreme hardship. All changes must have the approval of the school assistant principals or principal.

Classes	Credits
English.....	4
Math.....	3
• At least 1 credit in Basic Math, Pre-Algebra, or Algebra I.	
• One unit of computer science approved by the DPI.	
Science.....	3
• Physical Science (or 1 year of Physics + 1 year of Chemistry), Biology, & 1 more	
Physical Education.....	1.5
• Approximately 0.5 credit per year	
Health.....	0.5
Social Studies (listed below)	
• World Geography.....	0.5
• Western Civilization.....	1
• US History.....	1
• US Government.....	0.5
• Economics.....	0.5
Required Credits.....	15.5
Elective Credits.....	7.5
• Out of 7.5 credits of electives, 3 must be a combination of Foreign Language, Fine Arts, or Career & Technical Education	
Credits Required for Graduation.....	23.0

To qualify for graduation, a senior must have enrolled in a high school during grades 9, 10, 11 and 12 for four separate school year terms. An exception to this policy may be made for students if they have the approval of their parents and the principal. In addition, according to school board policy, students must have completed all requirements for the high school diploma in order to participate in commencement exercises.

Students shall be enrolled each year in courses that will give them at least 6 credits unless the principal has granted permission to take a reduced load. Additional courses may be taken from the list of electives each year to meet the minimum requirements.

Students must make an effort to make up any course failures through summer school or correspondence before the next fall term starts. Courses failed and not made up by the beginning of the next school year must be scheduled for that school year. Special permission must be obtained to take further courses in the same field until failures have been removed.

North Dakota

Academic and CTE Scholarship

In planning your future, every dollar counts!



North Dakota resident students may apply for either the Academic Scholarship or Career and Technical Education Scholarship to attend any North Dakota institution of higher education. The amount of each scholarship is \$750 per semester or \$500 per quarter. Students may be eligible for up to \$6,000 within six academic school years (do not have to be consecutive years) after graduation from high school. Applications are submitted online and will be accepted from January 4 - June 4, 2021. (One Unit = One Full Credit)

Common Requirements for Both Scholarships

1. ND resident graduating from a ND high school, a public high school in a bordering state according to NDCC 15.1-29, **or** a nonpublic school in a bordering state while residing with a custodial parent in ND (NDCC 15.1-21-02.4), **or** (15.1-21-02.5) completes a program of home education supervised in accordance with NDCC chapter 15.1-23
2. Any 4 units of English
3. 3 units of Science: Biology (1 unit), and either Physics (1 unit) AND Chemistry (1 unit) **or** Physical Science (1 unit) AND any other science course (1 unit)
4. 3 units of Social Studies: US History (1 unit), Problems of Democracy (1 unit) **or** US Government (½ unit) AND Economics (½ unit), and any other social studies course (1 unit)
5. 3 units of Mathematics: Algebra II (1 unit) and any other math courses (2 units). This may include a computer science course (1 unit) approved by the Superintendent of Public Instruction.
6. Physical education (1 unit) **or** physical education (½ unit) AND Health (½ unit)
7. Earn no grade lower than a “C” on any unit required for the scholarship
8. Earn a cumulative GPA of a 3.0 or higher on a 4.0 scale

ND Academic Scholarship

1. Complete: 1 unit of math for which Algebra II is a prerequisite; 2 units of the same foreign language, the same Native American language, American Sign Language, **or** 2 units of CTE from a coordinated plan of study or the 3 credit educational pathway approved by NDDPI
2. Any 5 additional units
3. Complete 1 unit of an AP course AND exam, **or** ½ unit of a dual credit course, **or** 1 unit of an early entrance college course from a college which has a physical presence in North Dakota
4. Earn a composite score of 24 or higher on an ACT

ND Career and Technical Education Scholarship

1. Complete: 4 units of CTE in which two units must be in a coordinated plan of study **or** 2 units of CTE and the 3 credit educational pathway approved by NDDPI
2. Any 3 additional units
3. Earn a composite score of 24 or higher on an ACT **or** score of at least “5” on each of the 3 designated WorkKeys assessments

Student Name: _____

Year of Graduation: _____

The six items below are Common Eligibility requirements for both the Academic and CTE Scholarship Programs – the student must complete all of the six following requirements for either scholarship.

Check the boxes below as the six common eligibility requirements are met.

- 1. North Dakota resident.
- 2. Graduate from a high school in North Dakota, from a public high school in a bordering state (according to provisions set forth in ND Century Code 15.1-29), from a nonpublic high school in a bordering state while the student resides with a custodial parent in ND (NDCC 15.1-21-02.6), or completes a program of home education supervised in accordance with NDCC chapter 15.1-23.
- 3. Complete the diploma requirements from sections 1-7 listed on page 1 (NDCC 15.1-21-02.2)
- 4. Obtain a grade of at least "C" in each unit OR 1/25 unit required by each respective scholarship.
- 5. Obtain a cumulative grade point of at least a 3 on a 4.0 scale based on the 23 units required by ND for high school graduation, including specific scholarship course requirements. The GPA must be rounded to the nearest hundredth for eligibility purposes.
- 6. Complete 1 unit of Algebra II.

ND Career and Technical Education Scholarship Eligibility Requirements

Check the boxes below as the CTE Scholarship eligibility requirements are met. Transfer information to the first page.

In addition to the common eligibility requirements listed above, the student must also complete the following:

- Four units of career and technical education in which two units must be from a coordinated plan of study recommended by the ND Dept of Career and Technical Education. Coordinated Plans of Study may be viewed at: <http://www.nd.gov/cte/programs/career-dev/plans-of-study.html>
- List the Name of the Coordinated Plan of Study: _____
- One unit selected from foreign languages, Native American languages, American Sign Language, fine arts, or career and technical education
- Receive a composite score of at least 24 on an ACT, or a score of at least '5' on each of the three designated WorkKeys assessments listed below. (Deadline is the March ACT national test date from senior year. *)

List the ACT Composite Score OR

ACT Composite Score

List the 'Level Score' for each WorkKeys assessments

Applied Math score
 Graphic Literacy score
 Workplace Documents score

ND Academic Scholarship Eligibility Requirements

Check the boxes below as the Academic Scholarship eligibility requirements are met. Transfer information to the first page.

In addition to the common eligibility requirements listed above, the student must also complete the following:

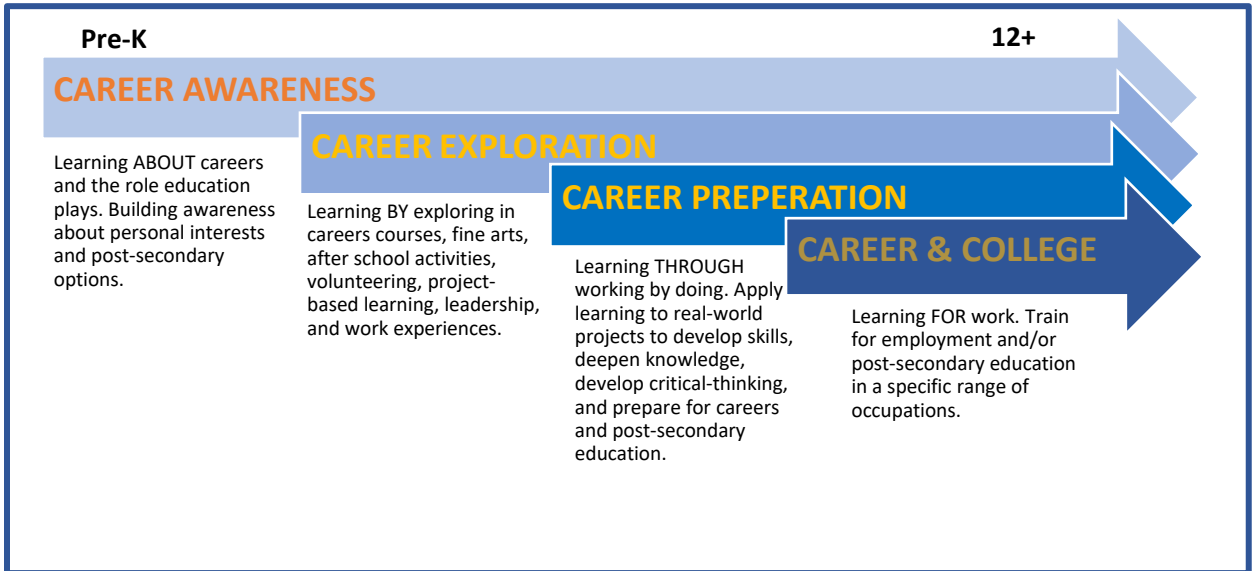
- One unit of mathematics for which Algebra II is a prerequisite
- Two units of the same foreign language; the same Native American language; American Sign Language; or career and technical education from a coordinated plan of study
- One unit selected from foreign languages; Native American languages; American Sign Language; fine arts; or career and technical education
- One unit of an advanced placement course and examination; or ½ unit of a dual credit course; or one unit of an early entrance college course from a college which has a physical presence in North Dakota
- Receive a composite score of at least 24 on an ACT (Deadline is the March ACT national test date from senior year. *)

*Any ACT tests taken later than the deadline have no guarantee that the results will be back by the June 1 deadline. Any official results for ACT tests taken after the March deadline must be sent to NDDPI by the student.

CAREER PATHWAYS

*What are your passions?
Can you identify your strengths and skills?
Where do you see yourself after high school?*

The Career Pathway process allows you to explore who you are, discover interests, and select courses to help you think critically, develop creativity, communicate, collaborate, and prepare a plan for high school and your future!



What are career pathways?

They are 16 clusters of careers sharing common interests, skills, and strengths. Each pathway outlines the courses that will help you explore content and develop skills necessary for each career cluster. Since there are many roads to success, you are not locked into one pathway. If you change your mind, you can explore another pathway.



How will you know which pathway is a good fit?

You'll take interest assessments and review your results with your School Counselor, Career Advisor, and parents. Your course selections will help you explore and prepare for your pathway. Part-time jobs, job shadowing, and volunteering in real world settings are a good way to help you gain valuable experience and insight into your future career choices.

← WEST FARGO K-12 STEPS TO YOUR CAREER PATHWAY →

Career Awareness		Career Exploration	Career Preparation
K Career Lessons – STEM & engineering	1st Junior Achievement	6th Career Cluster Interests & Passions Careers on Wheels	9th Career Lessons/Ramp Up R U Ready Interest Profiler Career Expo & Research Pre-ACT, College Fair
2nd Career Lessons – traditional and nontraditional occupations			
3rd Junior Achievement PAWS - personal skills, interests and abilities	4th Career Interest Inventory Select careers choices based on my personal skills, interests and abilities	7th RU Ready Work Multiple Intelligences and Career Exploration	10th Career Lessons/Ramp Up College Fair, Career Fair PSAT, ASVAB, Pre-ACT, SAT optional
5th Career Lessons – Develop skills to locate, evaluate and interpret careers Transition to Middle School			
		8th RU Ready Career Cluster Survey Goal Setting – POS & 4-Year Plans ND State Scholarships College Resources	11th Career Lessons/Ramp Up Personality Inventory PSAT, ACT, SAT optional Mock Interviews College Fair & Career Fair
			12th Career Lesson/Ramp Up Senior Meetings College Application WorkKeys optional

Four-Year Rolling Plan

1. Complete career interest assessments and view results at www.ruready.nd.gov.
2. Look up course descriptions in the [Program of Studies](#) and complete a 4-Year Plan to include required courses and career specific electives toward a Career Pathway.
3. Meet with School Counselor and/or Career Advisor to find the career pathway that most closely matches your interests and skills.
4. Follow 4-Year Plan with required courses and career specific electives to complete Career Pathway.
5. Consider exploring activities and courses, such as Career & Technical Education (CTE), Advanced Placement (AP), and Dual Credit (DC) college courses related to the career pathway of Choice.

Important Assessments for College and Career Planning

PreACT™ is a multiple-choice assessment that helps students prepare for the experience of taking the ACT® test and provides information regarding their future performance on the exam.

ASVAB is a multiple-aptitude battery that measures developed abilities and helps predict future academic and occupational success in the military and civilian careers.

ACT® college readiness assessment is a standardized test for high school achievement and college admissions in the United States.

SAT measures critical reading skills, math problem-solving skills and writing skills.

WorkKeys® Assessments measure foundational skills required for success in the workplace. The three WorkKeys exams are Workplace Documents, Graphic Literacy, and Applied Mathematics.

CAREER PLANNING

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Agribusiness Systems	Sales Manager • Ag Lender • Ag Economist • Ag Products Buyer/Distributor • Feed-Supply Store Manager • Farm Investment Manager • Ag Commodity Broker
Animal Systems	Wildlife Biologist • Animal Nutritionist • Livestock Buyer • Livestock Geneticist • Veterinarian • USDA Inspector • Aquaculturist • Equine Manager
Environmental Service Systems	Pollution Prevention Technician • Hazardous Materials Handler • Water Quality Manager • Health and Safety Sanitarian • Toxicologist
Food Products & Processing Systems	Food Scientist • Quality Control Specialist • Biochemist-Nutritionist • Dietician • Microbiologist • Bacteriologist • Food and Fiber Engineer • Produce Buyer
Natural Resources Systems	Park Manager • Range Technician • Ecologist • Fish & Game Officer • Forest Technician • Geology Technician • Mining Engineers • Hydrologist
Plant Systems	Soil/Water Specialist • Botanist • Tree Surgeon • Plant Pathologist • Commodity Marketing Specialist • Golf Course Superintendent • Custom Hay/Silage Operator
Power, Structural & Technical Systems	Remote Sensing Specialist • Equipment/Parts Manager • Welder • GPS Technician • Machinist • Heavy Equipment Maintenance Technician



Agriculture, Food & Natural Resources Career Cluster	
Environmental Services Systems or Plant Systems	
Course Name	Cr
Intro to Agriculture	.5
Plant Science I	.5
Plant Science II	.5
World & International Agriculture	.5
Cooperative Work Experience Education	.5
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Is this Pathway for you?

- Do you get satisfaction from helping people, animals and/or the environment?
- Are you interested in how things grow and make the best use of the earth's natural resources?
- Are you curious about how machines and systems work?
- Are you someone who likes to work with data to solve problems?
- Are you interested in science and enjoy spending time with nature?
- Do you like to be outdoors in all kind of weather?
- Are you comfortable with situations that are unpredictable and rapidly changing?
- Do you like to plan, work with budgets, and keep records?

Other Electives to Consider for Agriculture Pathway Preparation
<p>CTE Electives</p> <p>Computer Applications, Web Design Business and Personal Finance, Accounting I Marketing, Management/Entrepreneurship Discovering Foods, Culinary Academy Civil Engineering & Architecture Intro to Engineering Design, Principles of Engineering Automated Manufacturing Woods I, II Welding I, II</p> <p>Academic Electives</p> <p>Foreign Language AP Biology, Anatomy/Physiology Environmental Science Genetics, Earth Science, Field Biology</p>



North Dakota Agriculture, Food & Natural Resources Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Agribusiness Systems	<input type="checkbox"/> Agriculture (BSC, DCB, NDSCS) <input type="checkbox"/> Agricultural Sales and Service (DSU) <input type="checkbox"/> Agriculture transfer (BSC, DCB, NDSCS, WSC) <input type="checkbox"/> Farm/Ranch Management (BSC, DSU, NDSCS) <input type="checkbox"/> Precision Agriculture (LRSC)	<input type="checkbox"/> Agribusiness (NDSU, VCSU) <input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Agricultural Communication (NDSU) <input type="checkbox"/> Agricultural Economics (NDSU) <input type="checkbox"/> Agricultural Education (NDSU) <input type="checkbox"/> Agricultural Studies (DSU) <input type="checkbox"/> Agricultural Systems Management (NDSU) <input type="checkbox"/> General Agriculture (NDSU)	<input type="checkbox"/> Agribusiness and Applied Economics (NDSU) <input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Agricultural Education (NDSU) <input type="checkbox"/> International Agribusiness (NDSU)
Animal Systems	<input type="checkbox"/> Animal Science (NDSCS) <input type="checkbox"/> Pre-Veterinary Medicine transfer (BSC, DCB, TMCC) <input type="checkbox"/> Wildlife Management (DCB, NDSCS, TMCC)	<input type="checkbox"/> Animal Science (NDSU) <input type="checkbox"/> Equine Science (NDSU) <input type="checkbox"/> Fisheries and Wildlife Science (UND, VCSU) <input type="checkbox"/> Vet Technology (NDSU)	<input type="checkbox"/> Animal Science (NDSU)
Environmental Service Systems	<input type="checkbox"/> Energy Technician (SBC) <input type="checkbox"/> Environmental Science/Technology (CCCC, DCB, NHSC, SBC, TMCC, UTTC) <input type="checkbox"/> Water & Wastewater Treatment (BSC)	<input type="checkbox"/> Energy Management (BSC) <input type="checkbox"/> Environmental Design (NDSU) <input type="checkbox"/> Environmental Science (DSU, NHSC, SBC)	<input type="checkbox"/> Environmental and Conservation Science (NDSU) <input type="checkbox"/> Environmental Science (SBC) <input type="checkbox"/> Environmental Engineering (NDSU, UND)
Food Products & Processing Systems		<input type="checkbox"/> Food Safety (NDSU) <input type="checkbox"/> Food Science (NDSU)	<input type="checkbox"/> Cereal Science (NDSU) <input type="checkbox"/> Food Safety (NDSU)
Natural Resources Systems	<input type="checkbox"/> Land Management (DCB) <input type="checkbox"/> Natural Resources Management (CCCC)	<input type="checkbox"/> Natural Resources Management (NDSU)	<input type="checkbox"/> Natural Resources Management (NDSU) <input type="checkbox"/> Sustainable Energy Engineering (UND)
Plant Systems	<input type="checkbox"/> Agriculture Industry and Technology-Agronomy (BSC) <input type="checkbox"/> Crop Production Sales & Technology (NDSCS) <input type="checkbox"/> Forestry (DCB) <input type="checkbox"/> Horticulture (DCB) <input type="checkbox"/> Sustainable Vegetable Production (DCB)	<input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Crop and Weed Sciences (NDSU) <input type="checkbox"/> Horticulture (NDSU) <input type="checkbox"/> Range Science (NDSU) <input type="checkbox"/> Soil Science (NDSU) <input type="checkbox"/> Sports and Urban Turfgrass Management (NDSU)	<input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Horticulture (NDSU) <input type="checkbox"/> Plant Pathology (NDSU) <input type="checkbox"/> Plant Sciences (NDSU) <input type="checkbox"/> Range Science (NDSU) <input type="checkbox"/> Soil Science (NDSU)
Power, Structure, & Technical Systems	<input type="checkbox"/> Caterpillar Dealer Service Technician (NDSCS) <input type="checkbox"/> Diesel Technology: Case IH, Gen. Diesel, Komatsu (NDSCS) <input type="checkbox"/> John Deere Tech (NDSCS) <input type="checkbox"/> Nuclear Power Technology (BSC) <input type="checkbox"/> Oil Drilling/Operations (NHSC, SBC, TMCC) <input type="checkbox"/> Petroleum Engineering Technology (BSC) <input type="checkbox"/> Petroleum Production Technology (BSC, WSC) <input type="checkbox"/> Power Plant Technology (BSC) <input type="checkbox"/> Process Plant Technology (BSC, TMCC) <input type="checkbox"/> Renewable Generation Technology (BSC) <input type="checkbox"/> Wind Energy Technician (LRSC)	<input type="checkbox"/> Energy Management (BSC)	



The National FFA Organization is a local, state, and national co-curricular student association serving high school, college and middle school students enrolled in Agriculture Education courses. The National FFA is dedicated to making a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. Fargo students enrolled in agriculture courses in collaboration with Northern Cass or Central Cass Agriculture Education will have the opportunity to participate in the National FFA Chapter. Contact your FFA Advisor to join.



Architecture & Construction Career Cluster



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Construction	Carpenter • Drywall Installer • Painter • Equipment and Materials Manager • Electrician • Plumber • Specialty Contractor • Project Inspector • Construction Engineer
Design/Pre-Construction	Building Code Official • Interior Designer • Architect • Surveying and Mapping Technician • Specification Writer • Drafter • Regional and Urban Planner
Maintenance/Operations	Code Official • Construction Engineer • Estimator • System Installer • Subcontractor • Hazardous Material Remover • Security and Fire Alarm System Manager



Is this Pathway for you?

- Are you curious to read and follow instructions, and/or blueprints?
- Can you picture in your mind what a finished product could look like?
- Do you like to work with your hands?
- Are you attentive when completing work that requires patience and precise results?
- Are you interested in learning how to apply math to real projects?
- Do you work best with logical, step-by-step procedures to solve technical problems?
- Do you like to create or design projects that interest others?
- Does it interest you to use tools, technology, and/or operate machines?
- Can you see yourself working as a member of a team?

Trade & Industry – Coordinated Plan of Study	
Construction	
Course Name	Cr
Building Trades I	2
Building Trades II	2
Cooperative Work Experience	½ to 4
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Other Electives to Consider for Trade & Industry Pathway Preparation
<p>CTE Electives</p> <p>Woods I, II</p> <p>Construction Technology</p> <p>Intro to Engineering, Civil Engineering & Architecture</p> <p>Computer Applications, Business and Personal Finance</p> <p>Drafting & Design I, II</p> <p>Fundamentals of Business</p> <p>Marketing</p> <p>Interior Decorating & Design</p> <p>Living on Your Own</p> <p>Academic Electives</p> <p>Arts</p> <p>Consumer Math; Geometry</p> <p>Environmental Science, Earth Science</p> <p>Public Speaking</p>





North Dakota Architecture & Construction Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Construction	<input type="checkbox"/> Building Construction Technology (NDSCS, TMCC) <input type="checkbox"/> Building Trades (SBC) <input type="checkbox"/> Carpentry (BSC, BJCC, CCCC) <input type="checkbox"/> Concrete (SBC, TMCC) <input type="checkbox"/> Construction Management/Technology (CCCC, NDSCS, NHSC) <input type="checkbox"/> Electrical Technology (NDSCS, SBC, TMCC) <input type="checkbox"/> Framing (SBC) <input type="checkbox"/> Heating Ventilation & Air Conditioning (BSC, CCCC, NDSCS, TMCC) <input type="checkbox"/> Interior Construction (SBC) <input type="checkbox"/> Land Surveying and Civil Engineering Technology (NDSCS) <input type="checkbox"/> Plumbing (NDSCS) <input type="checkbox"/> Sustainable Construction Technology (BSC)	<input type="checkbox"/> Construction Engineering (NDSU) <input type="checkbox"/> Construction Management (NDSU)	<input type="checkbox"/> Construction Management (NDSU)
Design/Pre-Construction	<input type="checkbox"/> Architectural Drafting and Estimating Technology (NDSCS) <input type="checkbox"/> Land Surveying and Civil Engineering Technology (NDSCS)	<input type="checkbox"/> Architecture (NDSU) <input type="checkbox"/> Civil Engineering (NDSU) <input type="checkbox"/> Construction Engineering (NDSU) <input type="checkbox"/> Landscape Architecture (NDSU)	<input type="checkbox"/> Architecture (NDSU) <input type="checkbox"/> Civil Engineering (NDSU)
Maintenance/Operations	<input type="checkbox"/> Facilities Maintenance (BJCC) <input type="checkbox"/> Mechanical Systems (NDSCS) <input type="checkbox"/> Mechanical Maintenance Technology (BSC)		



SkillsUSA is a local, state, and national co-curricular association serving high school, college and middle school students who are preparing for careers in trade, technical and skilled service occupations, including health occupations. SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens the SkillsUSA Framework of personal, workplace and technical skills. Ask about your SkillsUSA Advisor and learn what it takes to become a member.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Audio and Video Technology and Film	Audio Systems Technician • Audio-Video Designer and Engineer • Technical Computer Support • Videographer • Special Effects and Animation Designer Technician
Journalism and Broadcasting	Control Room Technician • Design Director • Broadcast Technician • Editor • Producer • Station Manager • Audio-Video Operator
Performing Arts	Actor/Actress • Lighting Designer • Scenic Designer • Musician • Composer • Makeup Artist • Playwright • Digital, Video and State Production Manager
Printing Technology	Desktop Publishing Specialist • Computer Typography • Pre-production Technician • Plate Maker • Graphics Equipment Operator • Web Page Designer • Lithographer
Telecommunications	Network Designer • Telecommunications Technician • Telecommunication Equipment: Cable, Line Repair and Installation • Computer Programmer and Systems Analyst
Visual Arts	Fashion Designer • Commercial Artist • Commercial Photographer: Digital, Still, Video, Film • Illustrator • Textile Designer • Interior Designer • Computer Animator



Arts, AV Technology & Communication Coordinated Plan of Study	
Visual Arts (Graphics)	
Course Name	Cr
Photography I	.5
Photography II	.5
Graphic Communications I	.5
Graphic Communications II	.5
Cooperative Work Experience	1
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship	

Is this Pathway for you?

- Do ideas inspire you to create?
- Are you passionate to overcome obstacles?
- Do you find multiple ways to express your creativity?
- Do you like to communicate your ideas?
- Do you enjoy drawing, performing or writing stories?
- Do you seek opportunities to learn about and be engaged in history or culture?
- Does the idea of working in or being a part of a community that creates excite you?
- Do you enjoy exploring new technologies?
- Are you able to communicate your ideas to diverse audiences?

Other Electives to Consider for Arts, AV Technology, & Communication Pathway Preparation
CTE Electives Fundamentals of Business Marketing Management and Entrepreneurship Interior Decorating & Design Living on Your Own
Academic Electives Drama, Theatre Arts, Advanced Theatre Arts Art I, II, Art Appreciation, Art Trends Ceramics I, II, III Drawing, Painting, and Design Consumer Math; Geometry Environmental Science, Earth Science Public Speaking



North Dakota Arts, A/V Technology & Communications Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Audio and Video Technology and Film	<input type="checkbox"/> Digital Audio Production (BSC) <input type="checkbox"/> Web Page Development and Design (BSC, NDSCS)	<input type="checkbox"/> Multimedia Studies (MiSU) <input type="checkbox"/> New Media & Web Design (NDSU)	<input type="checkbox"/> Library/Information Technology (VCSU)
Journalism and Broadcasting	<input type="checkbox"/> English transfer (BSC, DCB, TMCC) <input type="checkbox"/> Mass Communications (BSC) <input type="checkbox"/> Speech Communication transfer (BSC)	<input type="checkbox"/> Broadcasting (MiSU) <input type="checkbox"/> Communication (DSU, MaSU, MiSU, UJ, UND, VCSU) <input type="checkbox"/> English (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> English Education (DSU, MaSU, MiSU, NDSU, UM, VCSU) <input type="checkbox"/> Journalism/Professional Writing (NDSU) <input type="checkbox"/> Mass Communications (UM)	<input type="checkbox"/> Communication (NDSU) <input type="checkbox"/> English (NDSU) <input type="checkbox"/> Mass Communications (NDSU) <input type="checkbox"/> Speech Communication (NDSU)
Performing Arts	<input type="checkbox"/> Music transfer (BSC, NDSCS, TMCC, WSC) <input type="checkbox"/> Theatre Arts - Performance (BSC) <input type="checkbox"/> Theatre Arts – Technical Theatre (BSC)	<input type="checkbox"/> Music (DSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Music Education (DSU, MiSU, UM, UND, VCSU) <input type="checkbox"/> Music Performance (UM, UND) <input type="checkbox"/> Musical Theatre (UND) <input type="checkbox"/> Theatre Arts (DSU, MiSU, NDSU, UND) <input type="checkbox"/> Theatre Education (MiSU)	<input type="checkbox"/> Music (NDSU, UND) <input type="checkbox"/> Theatre Arts (NDSU)
Printing Technology		<input type="checkbox"/> Print Communications Concentration (MiSU)	
Telecommunications	<input type="checkbox"/> Electronics Technology (BSC) <input type="checkbox"/> Electronics/Telecommunications Technology (BSC)	<input type="checkbox"/> Communication (DSU, MaSU, MiSU, UJ, UND, VCSU) <input type="checkbox"/> Strategic Communication (NDSU)	
Visual Arts	<input type="checkbox"/> Art transfer (DCB, TMCC) <input type="checkbox"/> Fine Art (CCCC) <input type="checkbox"/> Graphic Arts/Design (CCCC, RC, UTTC) <input type="checkbox"/> Graphic Design & Communications (BSC) <input type="checkbox"/> Photography (DCB) <input type="checkbox"/> Visual Art transfer (BSC)	<input type="checkbox"/> Apparel, Retail Merchandising, and Design (NDSU) <input type="checkbox"/> Art/Art Studies (DSU, MiSU, NDSU, UJ, VCSU) <input type="checkbox"/> Arts Administration (MiSU) <input type="checkbox"/> Art Education (DSU, MiSU, NDSU, VCSU) <input type="checkbox"/> Art Entrepreneurship (DSU) <input type="checkbox"/> Fine Arts (MiSU) <input type="checkbox"/> Graphic Design (RC) <input type="checkbox"/> Graphic Design & New Art Media (UND) <input type="checkbox"/> Graphic Design Technology (UND) <input type="checkbox"/> Interior Design (NDSU) <input type="checkbox"/> Visual Arts (UND)	<input type="checkbox"/> Visual Arts (UND)



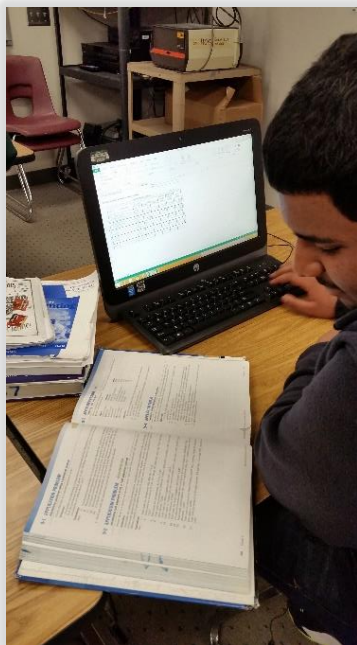
The Technology Student Association is a local, state, and national student organization created to develop skills in science, technology, engineering, and mathematics as well as business education. TSA aims to develop leadership, academic, and business management skills in the workplace among students and leaders within the community. Students currently or previously enrolled in Technology & Engineering courses join TSA and extend their learning and leadership through intra-curricular activities, and competitions. Contact your school's TSA Advisor to get involved.



Business Management & Administration Career Cluster



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Administrative Support	Administrative Assistant • Office Manager • Customer Service Assistant • Desktop Publisher • Data Entry Specialist • Receptionist • Medical Transcriptionist • Legal Secretary
Business Information Management	Information Systems Manager • Accounting Clerk or Supervisor • Adjuster • Chief Technology Officer • Budget Analyst • Auditor • Business Consultant
General Management	General Manager • Business & Development Manager • Risk Manager • Public Relations Manager • Chief Executive Officer • Entrepreneur
Human Resources Management	Human Resource Manager • Industrial Relations Director • Compensation & Benefits Manager • Corporate Trainer • Personnel Recruiter • Public Relations Manager
Operations Management	Training & Development Manager • Sales Representative or Manager • Budget Analyst • Research & Development Manager • E-Commerce Analyst



Business Education – Coordinated Plan of Study					
Business Management & Administration Career Cluster				Finance Career Cluster	
Administrative Support		General Management		Accounting	
Course Name	Cr	Course Name	Cr	Course Name	Cr
BCA Exploring Bus. Computer Apps	.5	BCA Exploring Bus. Computer Apps	.5	BCA Exploring Bus. Computer Apps	.5
Fundamentals of Business	.5	Business/Personal Finance (14095)	.5	Business/Personal Finance	.5
Accounting I	1	Accounting I	1	Accounting I	1
Accounting II	1	Accounting II	1	Accounting II	1
Web Design	.5	Fund of Business	.5	Fund of Business	.5
Adv. Web Design (14022)	.5	Business Law (14090)	.5	Business Law	.5

Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship

Is this Pathway for you?

- Are you someone who likes to work with data to solve problems?
- Do you like to interact with all kinds of people?
- Do you like to come up with new ideas?
- Do you like to follow directions to complete a task?
- Do you consider yourself a leader who could be part of a team?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you enjoy using math to solve problems?
- Are you able to communicate your ideas to diverse audiences?

Other Electives to Consider for Business Education Pathway Preparation

CTE Electives

IT Essentials I, II, Intro to Coding & Gaming
Family Living, Food Trends, Culinary Arts
Entertainment and Sports Marketing, Marketing, Store Manager, Management/Entrepreneurship
Photography I, II, Graphic Communication I & II

Academic Electives

Consumer Math
Communications; Creative Writing, Yearbook
Foreign Language
Microeconomics, Publications/Media
Psychology I, II
Public Speaking, Debate
Sociology
AP Math



North Dakota Business Management & Administration Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Administrative Support	<input type="checkbox"/> Administrative Assistant (BSC, DCB, LRSC, NHSC) <input type="checkbox"/> Bookkeeping (DCB) <input type="checkbox"/> Business/Office Technology (CCCC, NDSCS, SBC, UTTC) <input type="checkbox"/> Computer Applications (CCCC) <input type="checkbox"/> Computer Support Specialist (BSC, TMCC) <input type="checkbox"/> Office Administration (BJCC, DSU) <input type="checkbox"/> Reception Services (DCB)		
Business Information Management	<input type="checkbox"/> Business Management (MaSU, NDSCS, RC, UTTC, WSC) <input type="checkbox"/> Computer Information Systems (BSC, DCB, NDSCS) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Information Tech/Management (DCB, LRSC, NDSCS, NHSC, RC, SBC, WSC) <input type="checkbox"/> Management Information Systems (NDSCS) <input type="checkbox"/> Small Business Management (DCB)	<input type="checkbox"/> Applied Business Information Technology (MiSU) <input type="checkbox"/> Business Communication (UM) <input type="checkbox"/> Business Process Integration Management (VCSU) <input type="checkbox"/> Computer Information Systems (MaSU, UM, UND) <input type="checkbox"/> Information Technology Management (RC, UM) <input type="checkbox"/> Management Communication (NDSU) <input type="checkbox"/> Management Information Systems (MiSU, NDSU)	<input type="checkbox"/> Information Systems (MiSU)
General Management	<input type="checkbox"/> Business Administration transfer (BSC, CCCC, DCB, LRSC, NDSCS, NHSC, SBC, TBC, TMCC) <input type="checkbox"/> Business Education transfer (BSC, DCB) <input type="checkbox"/> Computer Support Specialist (BSC, TMCC) <input type="checkbox"/> Entrepreneurship (BSC, CCCC, NDSCS, SBC, TMCC) <input type="checkbox"/> Management (BSC)	<input type="checkbox"/> Applied Management (MiSU) <input type="checkbox"/> Business Administration (DSU, MaSU, NDSU, SBC, TBC, UTTC, UJ, UM, VCSU) <input type="checkbox"/> Business Education (DSU, MiSU, UM, VCSU) <input type="checkbox"/> Entrepreneurship (UND) <input type="checkbox"/> International Business (MiSU) <input type="checkbox"/> Management (MiSU, NDSU, RC, UND, VCSU) <input type="checkbox"/> Public Administration (UND)	<input type="checkbox"/> Business (UM) <input type="checkbox"/> Business Administration (NDSU, UM, UND) <input type="checkbox"/> Management (MiSU) <input type="checkbox"/> Project Management (UM) <input type="checkbox"/> Public Administration (UM, UND)
Human Resources Management	<input type="checkbox"/> HR and Organizational Leadership (RC)	<input type="checkbox"/> Human Resource Management (DSU, UND, VCSU) <input type="checkbox"/> Human Resources and Organizational Leadership (RC)	
Operations Management		<input type="checkbox"/> Business Economics (UND) <input type="checkbox"/> Business Management (RC, UM) <input type="checkbox"/> Business Systems Analysis (RC) <input type="checkbox"/> Management Communication (NDSU) <input type="checkbox"/> Operations & Supply Chain Management (UND)	



Future Business Leaders of America is a co-curricular student organization for students enrolled in Business Education courses. FBLA inspires and prepares students to become community-minded business leaders in a global society through relevant career preparation and leadership experiences. FBLA focuses on leadership development, academic competitions, high school programs, membership benefits, community services, and awards. Contact your high school FBLA Advisor to learn what it takes to become a member.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Biotechnology Research & Development	Research Scientist/Assistant • Microbiologist • Biostatistician • Cell Biologist • Biomedical Chemist • Geneticist • Genetics Lab Assistant • Quality Assurance Technician
Diagnostic Services	Clinical Lab Technician • Phlebotomist • Geneticist • Nutritionist • Magnetic Resonance (MR) Technologist • Radiologist • Pathologist • Exercise Physiologist
Health Informatics	Health Information Coder • Admitting Clerk • Transcriptionist • Medical Librarian • Public Health Educator • Ethicist • Medical Assistant • Epidemiologist
Support Services	Dietary Aide • Hospital Maintenance Engineer • Environmental Services Manager • Industrial Hygienist • Biomedical Engineer • Transport Technician
Therapeutic Services	Dental Assistant/Hygienist • Occupational Therapist • EMT/Paramedic • Physician • Nurse • Veterinarian • Social Worker • Massage Therapist • Physical Therapist • Pharmacist

Health Science Coordinated Plan of Study			
Therapeutic Services		Biotechnology Research	
Course Name	Cr	Course Name	Cr
Certified Nurse Assistant	.5	*PLTW Principles of Biomedical Science (21-22)	1
Health Science I	1	*PLTW Human Body Systems (22-23)	1
Health Science II	1	*PLTW Medical Interventions (23-24)	1
Prevention and Care of Athletic Injuries	.5	<i>Horace High School</i>	
Medical Terminology Online <i>(Dual Credit option)</i>	.5		
Supervised Occupational Experience			½ to 4



Is this Pathway for you?

- Do you get satisfaction from helping people, animals, and/or the environment?
- Do you enjoy dealing with a problem that isn't easily solved or doesn't have the correct answer?
- Are you comfortable with situations that are unpredictable and rapidly changing?
- Are you interested in math and science?
- Do you like listening and working with others who have differing viewpoints?
- Do you enjoy puzzles, exploring and solving problems?
- Can you respond quickly and calmly in unexpected situations?
- Do you like to volunteer and do service work that focuses on helping other people or the environment?

Other Electives to Consider for Health Science Pathway Preparation

- CTE Electives**
- Computer Applications I
 - Child Development
 - Food Trends
 - Intro to Engineering Design, Principles of Engineering
 - Marketing
 - Management/Entrepreneurship
- Academic Electives**
- Communications
 - Foreign Language
 - JET
 - Advanced Math, Pre-Calculus, AP Calculus
 - Anatomy/Physiology
 - AP Biology, AP Chemistry, AP Physics I
 - Psychology I, II
 - Public Speaking
 - Sociology
 - STEM



North Dakota Health Science Related Postsecondary Programs			
Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Biotechnology Research & Development	<input type="checkbox"/> Biotechnology transfer (NDSCS) <input type="checkbox"/> Pharmacy Technician (NDSCS, RC, TMCC)	<input type="checkbox"/> Bioinformatics (MiSU) <input type="checkbox"/> Biotechnology (NDSU) <input type="checkbox"/> Pharmaceutical Sciences (NDSU)	<input type="checkbox"/> Biomedical Sciences (UND) <input type="checkbox"/> Genomics and Bioinformatics (NDSU) <input type="checkbox"/> Pharmaceutical Sciences/Pharmacy (NDSU)
Diagnostic Services	<input type="checkbox"/> Clinical Laboratory Science transfer (NDSCS) <input type="checkbox"/> Dialysis Technician (NDSCS) <input type="checkbox"/> EMT – Paramedic Technician (BSC, DCB, NDSCS) <input type="checkbox"/> Medical Laboratory Technician (BSC, TMCC) <input type="checkbox"/> Medical Laboratory transfer (BSC) <input type="checkbox"/> Phlebotomy Technician (BSC, TMCC)	<input type="checkbox"/> Medical Lab Science (MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Communication Sciences and Disorders (UM, UND) <input type="checkbox"/> Radiologic Technology (MiSU, NDSU, UJ, UM)	<input type="checkbox"/> Medical Lab Science (UND)
Health Informatics	<input type="checkbox"/> Community Health Worker (SBC) <input type="checkbox"/> Health Information Technician/Management (DCB, NDSCS) <input type="checkbox"/> Medical Administrative Asst. (BJCC, DCB, RC) <input type="checkbox"/> Medical Coding/Billing (DCB, NDSCS, RC, UTTC, WSC)	<input type="checkbox"/> Community Nutrition (UND) <input type="checkbox"/> Forensic Science (UND) <input type="checkbox"/> Healthcare Management (RC) <input type="checkbox"/> Health Administration (UM) <input type="checkbox"/> Health Communication (NDSU)	<input type="checkbox"/> Health Care Administration (UM) <input type="checkbox"/> Nurse Administrator (UM) <input type="checkbox"/> Public Health (NDSU, UND)
Support Services	<input type="checkbox"/> Caregiver Services (DCB) <input type="checkbox"/> Environmental Public Health (TMCC) <input type="checkbox"/> Fitness Trainer Technician (LRSC) <input type="checkbox"/> Social Work transfer (BSC, CCCC, NDSCS, TMCC, WSC)	<input type="checkbox"/> Corporate Fitness/Wellness (MaSU, MiSU) <input type="checkbox"/> Exercise Science (DSU, NDSU, UJ, UM) <input type="checkbox"/> Kinesiology (UND) <input type="checkbox"/> Social Work (MiSU, UM, UND)	<input type="checkbox"/> Clinical Exercise Physiology (UM) <input type="checkbox"/> Exercise Science and Nutrition (NDSU) <input type="checkbox"/> Exercise Physiology/Kinesiology (UM, UND) <input type="checkbox"/> Social Work (UND)
Therapeutic Services	<input type="checkbox"/> Addictions Studies Transfer (NHSC) <input type="checkbox"/> Dental Assisting/Hygiene (NDSCS) <input type="checkbox"/> Health/Medical Assistant (CCCC, DCB) <input type="checkbox"/> Massage Therapy (JSHDF, JSHDGF, TSPA, WSC) <input type="checkbox"/> Mental Health/Addictions Technician (WSC) <input type="checkbox"/> Nursing transfer (BSC, CCCC, DCB, LRSC, NDSCS, SBC, WSC) <input type="checkbox"/> Occupational Therapy Assistant (NDSCS) <input type="checkbox"/> Practical Nursing (BSC, BJCC, DCB, DSU, NDSCS, NHSC, SBC, TMCC, UTTC, WSC) <input type="checkbox"/> Pre-Professional transfer (BSC, DCB, MaSU, NDSCS, TMCC, WSC) <input type="checkbox"/> Surgical Technology (BSC)	<input type="checkbox"/> Addiction Studies (MiSU) <input type="checkbox"/> Athletic Training (MiSU, UM, UND) <input type="checkbox"/> Dietetics (NDSU, UND) <input type="checkbox"/> Music Therapy (UND) <input type="checkbox"/> Nursing (DSU, MaSU, MiSU, NDSU, RC, UJ, UM, UND) <input type="checkbox"/> Pre-Professional Programs (MaSU, MiSU, UM) <input type="checkbox"/> Rehabilitation and Human Services (UND) <input type="checkbox"/> Respiratory Care/Therapy (NDSU, UM)	<input type="checkbox"/> Advanced Nursing Practice (NDSU) <input type="checkbox"/> Advanced Athletic Training (NDSU) <input type="checkbox"/> Dietetics (NDSU) <input type="checkbox"/> Health, Nutrition and Exercise Science (NDSU) <input type="checkbox"/> Gerontology (NDSU) <input type="checkbox"/> Nursing (NDSU, UM, UND) <input type="checkbox"/> Nutrition (UND) <input type="checkbox"/> Occupational Therapy (UM, UND) <input type="checkbox"/> Physical Therapy (UJ, UM, UND) <input type="checkbox"/> Physician Assistant (UND) <input type="checkbox"/> Psychological Clinical Science (NDSU) <input type="checkbox"/> Respiratory Therapy (UM)



HOSA is an international student organization recognized by the Health Science Education (HSE) Division of ACTE. HOSA's goal is to encourage all health science instructors and students to join and be actively involved in leadership and demonstrate these skills through local, state and national competitions. HOSA provides a unique program of leadership development, motivation, and recognition exclusively for secondary, postsecondary, adult, and collegiate students enrolled in health science education and biomedical science programs or have interests in pursuing careers in health professions. Contact your HOSA Advisor to learn more to become a member.



Human Services Career Cluster

Family & Consumer Science



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Consumer Services	Customer Service Representative • Financial Advisor • Market Researcher • Consumer Credit Counselor • Certified Financial Planner • Sales Consultant
Counseling & Mental Health Services	Career Counselor • Mental Health Counselor • Psychologist • Vocational Rehabilitation Counselor • School Counselor • Sociologist
Early Childhood Development & Services	Child Care Worker • Nanny • Preschool Teacher/Teacher Assistant • Child Care Center Director • Parent Educator
Family & Consumer Services	Human Services Worker • Religious Leader • Volunteer Coordinator • Social Worker • Day Care Worker • Emergency Relief Worker • Social Services Worker
Personal Care Services	Cosmetologist • Personal Trainer • Personal and Home Care Aide • Funeral Director • Massage Therapist • Exercise Physiologist • Nail Technician

Family and Consumer Science – Coordinated Plan of Study

Human Services Career Cluster				Hospitality & Tourism Career Cluster		Arts, AV Technology & Communications Career Cluster		Education & Training Career Cluster	
Family and Community Services		Early Childhood Development		Restaurant/Food Service		Visual Arts		Teaching/Training	
Course Name	Cr	Course Name	Cr	Course Name	Cr	Course Name	Cr	Course Name	Cr
Discovering Foods	.5	Child Development	.5	Discovering Foods	.5	Fashion and Clothing	.5	Child Development	.5
Child Development	.5	Family Living	.5	International Cuisine	.5	Contemporary Sewing	.5	Intro to Teaching <i>(optional dual credit)</i>	.5
Food Trends	.5	Living on Your Own	.5	Food Trends	.5	Interior Decorating/Design	.5	Teaching Field Experience <i>(optional dual credit)</i>	.5
Family Living	.5	Early Childhood Education Block	1	Culinary Arts I	1	Living on Your Own	.5	Educating the Exceptional Student <i>(optional dual credit)</i>	.5
Living on Your Own	.5	Early Childhood Special Education	1	Living on Your Own	.5			Cooperative Experience	.5-1

Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship

Is this Pathway for you?

- Are you open-minded when helping others solve problems?
- Are you self-motivated?
- Do you enjoy working as a team?
- Are you compassionate and empathetic?
- Do you have a desire for a career in public service?
- Do you have an interest in human development and behavior?
- Do you consider yourself a leader who could be a part of a team?

Other Electives to Consider for Family & Consumer Science Pathway Preparation

CTE Electives

Accounting I, II
 Computer Applications, Web Design
 Business & Personal Finance
 Fundamentals of Business
 Health Science I, CNA
 Marketing

Academic Electives

Arts
 Consumer Math
 Communications, Creative Writing, Public Speaking
 Foreign Language
 Junior Educator of Tomorrow
 Microeconomics
 Publications/Media
 Psychology I
 Sociology



North Dakota Human Services Related Postsecondary Programs			
Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Consumer Services	<input type="checkbox"/> Business Administration transfer (BSC, CCCC, DCB, NDSCS, NHSC, SBC, TBC, TMCC) <input type="checkbox"/> Management (BSC, DCB, RC, SBC, UTTC, WSC)	<input type="checkbox"/> Business Administration (NDSU, UJ, SBC, TBC, UTTC, VCSU) <input type="checkbox"/> Management (MiSU, NDSU, RC, UTTC, UM, UND, VCSU)	<input type="checkbox"/> Business Administration (NDSU)
Counseling & Mental Health Services	<input type="checkbox"/> Addiction Studies (NHSC) <input type="checkbox"/> Mental Health/Addictions Technician (WSC) <input type="checkbox"/> Psychology transfer (BSC, DCB, NDSCS, TMCC, WSC)	<input type="checkbox"/> Addiction Studies (MiSU) <input type="checkbox"/> Applied Psychology (MaSU) <input type="checkbox"/> Psychology (MiSU, NDSU, UJ, UM, UND, VCSU)	<input type="checkbox"/> Clinical Counseling (UJ) <input type="checkbox"/> Counseling (NDSU, UM, UND) <input type="checkbox"/> Counseling Education and Supervision (NDSU) <input type="checkbox"/> Counseling Psychology & Community Services (UND) <input type="checkbox"/> Couple and Family Therapy (NDSU) <input type="checkbox"/> Psychology (NDSU, UND)
Early Childhood Development & Services	<input type="checkbox"/> Child Development (DCB, NHSC) <input type="checkbox"/> Early Childhood (MaSU) <input type="checkbox"/> Early Childhood Education transfer (BSC, CCCC, DCB, LRSC, NDSCS, NHSC, SBC, RC)	<input type="checkbox"/> Early Childhood (MaSU) <input type="checkbox"/> Early Childhood Education (MaSU, MiSU, RC, SBC, UM, UND) <input type="checkbox"/> Human Development & Family Science (NDSU)	<input type="checkbox"/> Early Childhood Education (UND) <input type="checkbox"/> Developmental Science (NDSU) <input type="checkbox"/> Human Development & Family Science (NDSU)
Family & Community Services	<input type="checkbox"/> Biblical Studies (TBC) <input type="checkbox"/> Caregiver Services (DCB) <input type="checkbox"/> Community Health Worker (SBC) <input type="checkbox"/> Human Services/Eligibility Worker (BSC, NHSC, RC, SBC) <input type="checkbox"/> Religion transfer (BSC, WSC) <input type="checkbox"/> Social Work transfer (BSC, CCCC, DSU, NDSCS, TMCC, WSC)	<input type="checkbox"/> Catholic Studies (UM) <input type="checkbox"/> Human Development & Family Science (NDSU) <input type="checkbox"/> Human Services (RC, VCSU) <input type="checkbox"/> Pastoral/Youth/Children's Ministry (TBC, UM) <input type="checkbox"/> Rehabilitation and Human Services (UND) <input type="checkbox"/> Religious/Theology/Biblical Studies (UJ, UM, UND, TBC) <input type="checkbox"/> Social Work (MiSU, UM, UND)	<input type="checkbox"/> Gerontology (NDSU) <input type="checkbox"/> Human Development & Family Science (NDSU) <input type="checkbox"/> Missional Leadership (TBC) <input type="checkbox"/> Public Health (NDSU, UND) <input type="checkbox"/> Social Work (UND)
Personal Care Services	<input type="checkbox"/> Fitness Trainer Technician (LRSC) <input type="checkbox"/> Barbering and Cosmetology (MBC) <input type="checkbox"/> Cosmetology (HAHD, JSHDF, JSHDGF, JSHDW, JZT, THA, TSPA) <input type="checkbox"/> Esthetician/Skin Care (JSHDGF, JSHDW, THA, TSPA) <input type="checkbox"/> Massage Therapy (JSHDGF, JSHDW, TSPA, WSC) <input type="checkbox"/> Nail Technology (JSHDW, JZT, THA, TSPA)	<input type="checkbox"/> Athletic/Fitness Training (MiSU, UM, UND) <input type="checkbox"/> Exercise Science (DSU, NDSU, UJ, UM) <input type="checkbox"/> Sport Management (NDSU)	<input type="checkbox"/> Advanced Athletic Training (NDSU) <input type="checkbox"/> Clinical Exercise Physiology (UM) <input type="checkbox"/> Exercise Science and Nutrition (NDSU)



FCCLA is a national Career and Technical Student Organization that provides personal growth, leadership development, and career preparation opportunities for students in Family and Consumer Sciences education. Our Mission is to promote personal growth and leadership development through Family and Consumer Sciences education. Focusing on the multiple roles of family member, wage earner and community leader, members develop skills for life through: character development, creative and critical thinking, interpersonal communication, practical knowledge, and career preparation. Ask who your FCCLA advisor is to learn more about becoming a member.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Information Support & Services	Database Administrator • Account Manager • Help Desk Specialist • Information Systems Architect • Systems Analyst • Instructional Designer • Testing Engineer
Network Systems	User Support Specialist • Network Administrator • Network Engineer • Information Technology Engineer • Network Security Analyst • Telecommunications Network Technician
Programming & Software Development	Computer Engineer • Software Applications Specialist • Game Developer • Software Applications Tester • Project Lead • Software Design Engineer
Web & Digital Communications	Multimedia Specialist • Web Designer • Web Site Developer • Animator • Blog Developer • Streaming Media Specialist



Information Technology - Coordinated Plan of Study			
Information Technology Career Cluster			
Network Systems		Computer Programing	
Course Name	Cr	Course Name	Cr
IT Essentials I/II	1	Intro to Coding and Gaming	.5
*Intro to Networking & Cybersecurity	.5	Programming with Python	.5
		Computer Programming Java I	.5
CISCO I – South HS	.5	Mobile App Development & Security	.5
CISCO II, III, IV - NDSCS	.5	AP Computer Programming Java II	.5
*South High School		Help Desk Cooperative Work Experience	.5-4
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship			

Other Electives to Consider for Information Technology Pathway Preparation
<p>CTE Electives</p> <p>Accounting I, II Aviation I, II Business & Personal Finance, Business Law Computer Applications, Web Design Marketing, Management/Entrepreneurship Intro to Engineering Design, Principles of Engineering</p>
<p>Academic Electives</p> <p>Communications College Algebra, AP Calculus, Statistics Physics Publications/Broadcast STEM</p>

Is this Pathway for you?

- Do you enjoy working with computers?
- Are you curious to learn reasoning and logic to solve complex problems?
- Are you comfortable with situations that are unpredictable and rapidly changing?
- Are you interested in how procedures make machines work?
- Do you like to read technical materials and diagrams and solve technical problems?
- Are you patient when problem-solving to find a solution?
- Do you enjoy working as a team or independently?
- Play video games and figure out how they work.

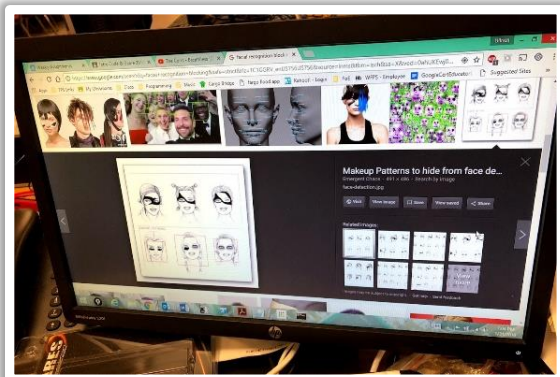
I Can Code

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North Dakota Information Technology Related Postsecondary Programs			
Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Information Support & Services	<input type="checkbox"/> Computer Applications (CCCC) <input type="checkbox"/> Computer Information Systems (BSC, DCB) <input type="checkbox"/> Computer Support Specialist (BSC, TMCC) <input type="checkbox"/> Computer Technology/Information Technology (DCB) <input type="checkbox"/> Geographic Information Systems Technician (BSC) <input type="checkbox"/> Information Systems Administrator (NDSCS) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Information Management (NHSC, RC) <input type="checkbox"/> Information Technology (LRSC, NDSCS, RC, SBC, WSC) <input type="checkbox"/> IT Forensics (NDSCS) <input type="checkbox"/> Management Information Systems transfer (NDSCS)	<input type="checkbox"/> Applied Business Information Technology (MiSU) <input type="checkbox"/> Computer Technology Management (DSU) <input type="checkbox"/> Information Security (RC) <input type="checkbox"/> Management Information Science (UJ) <input type="checkbox"/> Information Technology (UJ) <input type="checkbox"/> Information Technology Management (RC, UM) <input type="checkbox"/> Technology Education (DSU, VCSU)	<input type="checkbox"/> Information Systems (MiSU) <input type="checkbox"/> Library/Information Technology (VCSU) <input type="checkbox"/> Technology (UND)
Network Systems	<input type="checkbox"/> Information Management (NHSC, RC) <input type="checkbox"/> Information Technology (LRSC, NDSCS, RC, SBC, WSC)	<input type="checkbox"/> Computer Information Systems (MaSU, UM, VCSU) <input type="checkbox"/> Information Systems (UND) <input type="checkbox"/> Management Information Systems (NDSU)	<input type="checkbox"/> Computer Science (NDSU, UND) <input type="checkbox"/> Electrical and Computer Engineering (NDSU)
Programming & Software Development	<input type="checkbox"/> Computer Science transfer (BSC, NDSCS) <input type="checkbox"/> Mobile Application Developer (NDSCS) <input type="checkbox"/> Software Application Development (RC)	<input type="checkbox"/> Computer Engineering (NDSU) <input type="checkbox"/> Computer Science (DSU, MiSU, NDSU, RC, UJ, UM, UND) <input type="checkbox"/> Electrical and Computer Engineering (NDSU) <input type="checkbox"/> Software Engineering (VCSU)	<input type="checkbox"/> Electrical and Computer Engineering (NDSU) <input type="checkbox"/> Software Engineering (NDSU)
Web & Digital Communications	<input type="checkbox"/> Computer Technology/Webmaster and Web Design (DCB) <input type="checkbox"/> Web Design (NDSCS) <input type="checkbox"/> Web Developer (NDSCS) <input type="checkbox"/> Web Page Development and Design (BSC) <input type="checkbox"/> Web Programming (RC)	<input type="checkbox"/> New Media and Web Design (NDSU)	



Coding, Cyber Security Help Desk & e-Sports

Pathway OCCUPATIONS RELATING TO THIS CAREER CLUSTER

Health, Safety & Environmental Assurance	Environmental Engineer • Health and Safety Specialist • Safety Team Leader • Environmental Specialist • Safety Coordinator • Environmental Field Technician
Logistics & Inventory Control	Dispatcher • Freight/Stock/Material Mover • Industrial Truck & Tractor Operator • Materials Handler • Logistical Engineer • Quality Control Technician
Maintenance, Installation & Repair	Computer Repair Technician • Boilermaker • Communication Systems Installer • Laser Systems Technician • Industrial Machinery Mechanic • Instrument Calibration Technician
Manufacturing Production Process Development	Industrial Engineer • Manufacturing Technician • Purchasing Agent • Precision Inspector, Tester and Grader • Production Manager • Electronics Engineer
Production	Welder • Calibration Technician • Precision Layout Worker • Assembler • Tool & Die Maker • Sheet Metal Worker • Micro and Nano Fabrication Technicians
Quality Assurance	Process Control Technician • Inspector • Quality Control Technician • Calibration Technician • Lab Technician • Statistical Process Control (SPC) Coordinator



Trade & Industry – Coordinated Plan of Study

Production	
Course Name	Cr
Welding I (NDSCS) – dual credit option	1
Welding II (NDSCS) – dual credit option	1
Automated Manufacturing I, II or III (South High)	1 to 3
Cooperative Work Experience	.5 to 4
Technology & Engineering	
Manufacturing Production Process Development	
Course Name	Cr
Metals I	.5
Metals II	.5
Construction Technology	.5
Design & Drafting	.5
Energy in Motion Innovation	.5
VEX Robotics	.5
Woods I	.5
Woods II	.5

Other Electives to Consider for Manufacturing Pathway Preparation

CTE Electives

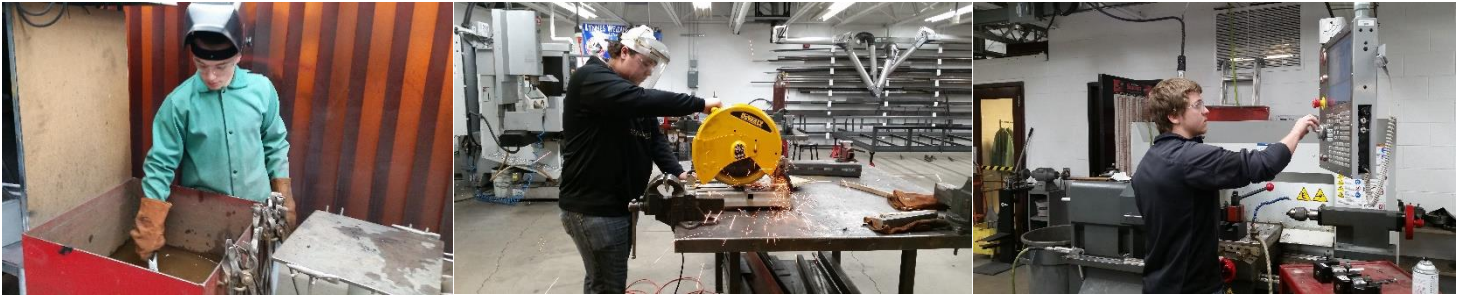
Intro to Engineering, Civil Engineering & Architecture
 Computer Applications, Business and Personal Finance
 Fundamentals of Business
 Marketing
 Living on Your Own

Academic Electives

Arts
 Consumer Math; Geometry
 Environmental Science, Earth Science
 Public Speaking

Is this Pathway for you?

- Are you curious about how things are made or how they work?
- Do you enjoy creating, inventing, or imagining new and different ways to do things?
- Do you consider yourself a leader who could be part of a team?
- Are you curious to work in a laboratory?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you like to follow directions and use precise detail to complete a task?
- Are you curious how math/science can be applied to build things or solve problems?



North Dakota Manufacturing Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Health, Safety & Environmental Assurance	<input type="checkbox"/> Emergency Management transfer (NDSCS) <input type="checkbox"/> Environmental Public Health (TMCC) <input type="checkbox"/> Environmental Technology/Science transfer (NHSC, SBC, TMCC, UTTC, WSC)	<input type="checkbox"/> Emergency Management (NDSU) <input type="checkbox"/> Environmental Design (NDSU) <input type="checkbox"/> Environmental Science (DSU, NHSC, SBC) <input type="checkbox"/> Health Communication (NDSU)	<input type="checkbox"/> Emergency Management (NDSU) <input type="checkbox"/> Environmental and Conservation Sciences (NDSU, SBC) <input type="checkbox"/> Environmental Engineering (NDSU, UND)
Logistics & Inventory Control	<input type="checkbox"/> Information Technology (DCB) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Management Information Systems (NDSCS)	<input type="checkbox"/> Business Process Integration Management (VCSU) <input type="checkbox"/> Computer Technology Management (DSU) <input type="checkbox"/> Energy Economics and Finance (MiSU) <input type="checkbox"/> Management Information Systems (MiSU, NDSU) <input type="checkbox"/> Operations and Supply Chain Management (UND)	<input type="checkbox"/> Transportation and Logistics (NDSU)
Maintenance, Installation & Repair	<input type="checkbox"/> Electrical Lineworker (BSC) <input type="checkbox"/> Electrical Power Technology (BSC) <input type="checkbox"/> Electrical Transmission Systems Technology (BSC) <input type="checkbox"/> Electronics Technology (BSC) <input type="checkbox"/> Electronics and Telecommunications Technology (BSC) <input type="checkbox"/> Mechanical Maintenance Technology (BSC) <input type="checkbox"/> Welding Technology (BSC, BJCC, LW, NDSCS, NHSC, SBC, TMCC, UTTC, WSC) <input type="checkbox"/> Wind Energy Technician (LRSC)	<input type="checkbox"/> Industrial Technology (UND)	
Manufacturing Process Production Development	<input type="checkbox"/> Engineering Technology (BSC) <input type="checkbox"/> Power Plant Technology (BSC) <input type="checkbox"/> Process Plant Technology (BSC, TMCC) <input type="checkbox"/> Energy Services & Renewable Technician (BSC)	<input type="checkbox"/> Engineering Science (UJ, UM) <input type="checkbox"/> Industrial Engineering and Management (NDSU) <input type="checkbox"/> Manufacturing Engineering (NDSU)	<input type="checkbox"/> Industrial Engineering and Management (NDSU) <input type="checkbox"/> Manufacturing Engineering (NDSU)
Production	<input type="checkbox"/> Heating, Ventilation, and Air Conditioning (BSC, CCCC, NDSCS, TMCC) <input type="checkbox"/> Precision Machining Technology (NDSCS) <input type="checkbox"/> Production Operations/Refinery Training (NHSC) <input type="checkbox"/> Robotics, Automation and Mechatronics Technology (NDSCS) <input type="checkbox"/> Welding Technology (BSC, BJCC, LW, NDSCS, NHSC, SBC, TMCC, UTTC, WSC)	<input type="checkbox"/> Energy Management (BSC)	<input type="checkbox"/> Materials and Nanotechnology (NDSU)
Quality Assurance	<input type="checkbox"/> Instrumentation and Control Technology (BSC)	<input type="checkbox"/> Industrial Engineering and Management (NDSU)	<input type="checkbox"/> Industrial Engineering and Management (NDSU)



SkillsUSA is a local, state, and national co-curricular association serving high school, college and middle school students who are preparing for careers in trade, technical and skilled service occupations, including health occupations. SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens the SkillsUSA Framework of personal, workplace and technical skills. Contact your SkillsUSA Advisor to learn more.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Marketing Communications	Account Executive • Advertising Manager • Creative Director • Media Buyer • Marketing Associate • Public Information Director • Interactive Media Specialist
Marketing Management	Database Manager • Customer Service Representative • Brand Manager • Director of Market Development • Marketing Services Manager • Planning Analyst
Marketing Research	Research Associate • Research Specialist • Market Research Manager • Strategic Planner • Research Analyst • Forecasting Manager • Marketing Strategist
Merchandising	Merchandise Buyer • Operations Manager • Retail Marketing Coordinator • Receiving Clerk • Visual Merchandise Manager • Department Manager • Sales Associate
Professional Selling	Account Executive • Broker • Manufacturer's Representative • Field Representative • Sales Executive • Solutions Advisory • Client Relationship Manager



Marketing Education - Coordinated Plan of Study			
Marketing Career Cluster			
Professional Sales, Merchandising, Marketing Communication		Marketing Management	
Course Name	Cr	Course Name	Cr
Entertainment/Events Marketing	.5	Marketing I	1
Marketing I	1	Management	1
Management	1	Retail Store Management	1
Retail Store Management	1		.5
Cooperative Work Experience			.5-1
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship			

Is this Pathway for you?

- Are you someone who likes to work with data to solve problems?
- Do you like to interact with all kinds of people?
- Do you like to come up with new ideas?
- Do you like to follow directions to complete a task?
- Do you consider yourself a leader who could be part of a team?
- Are you interested in being a team captain, officer, or having a role in an organization?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?

Other Electives to Consider for Marketing Pathway Preparation
<p>CTE Electives</p> <p>Computer Applications, Web Design Accounting I, II Business & Personal Finance, Business Law Culinary Academy, International Cuisine, Discovering Foods Housing and Interior Design</p> <p>Academic Electives</p> <p>Communications, Journalism I, II Creative Writing, Debate Foreign Language Microeconomics Publications/Media, Public Speaking Sociology Philosophy Worldview, & Ethics</p>



North Dakota Marketing Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Marketing Communications	<input type="checkbox"/> Advertising and Marketing (DCB) <input type="checkbox"/> Advertising transfer (WSC) <input type="checkbox"/> Information & Communications Technology (NDSCS) <input type="checkbox"/> Mass Communications (BSC)	<input type="checkbox"/> Business Communication (UM) <input type="checkbox"/> Communication (UND) <input type="checkbox"/> Mass Communication (UM) <input type="checkbox"/> Public Relations (UM)	
Marketing Management	<input type="checkbox"/> Advertising & Marketing (DCB) <input type="checkbox"/> Business Management (NDSCS, RC, UTTC, WSC) <input type="checkbox"/> Information Management (NHSC) <input type="checkbox"/> Management (BSC) <input type="checkbox"/> Management Entrepreneurship (BSC) <input type="checkbox"/> Marketing (LRSC, RC) <input type="checkbox"/> Marketing and Management transfer (DCB) <input type="checkbox"/> Small Business Management (DCB)	<input type="checkbox"/> Business Management (RC, UM, VCSU) <input type="checkbox"/> Management (MiSU, NDSU, UND) <input type="checkbox"/> Management Communication (NDSU) <input type="checkbox"/> Marketing (MiSU, NDSU, RC, UM, UND, VCSU) <input type="checkbox"/> Sport & Leisure Management (UM)	<input type="checkbox"/> Management (MiSU)
Marketing Research	<input type="checkbox"/> Business Systems Analysis (RC)	<input type="checkbox"/> Business Systems Analysis (RC)	
Merchandising	<input type="checkbox"/> Art Marketing (UTTC) <input type="checkbox"/> Marketing (LRSC, RC)	<input type="checkbox"/> Apparel, Retail Merchandising, & Design (NDSU) <input type="checkbox"/> Operations and Supply Chain Management (UND)	<input type="checkbox"/> Merchandising (NDSU)
Professional Selling	<input type="checkbox"/> Entrepreneurship (CCCC, NDSCS, SBC, TMCC)	<input type="checkbox"/> Art Entrepreneurship (DSU) <input type="checkbox"/> Computer Information Systems/ Customer Relationship Management (VCSU) <input type="checkbox"/> Entrepreneurship (UND)	



DECA is a co-curricular student organization that connects the Marketing Education classroom curricular to leadership experiences. DECA's mission is to prepare emerging leaders in marketing, finance, hospitality and management. North Dakota DECA was chartered in 1954 and continues to provide opportunities for its members today. DECA members are encouraged to be involved in local, state and national competitions, community services projects, and leadership. Contact your DECA advisor to learn more about what you can get involved.



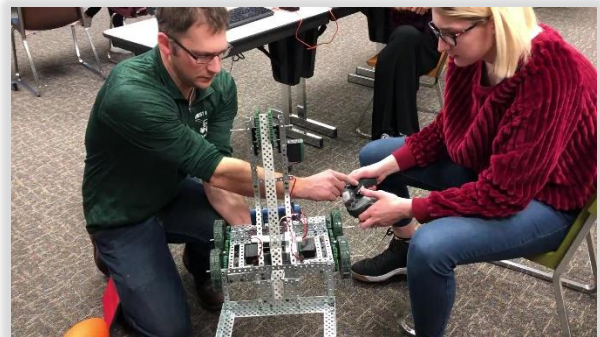
Marketing education students also can compete in Junior Achievement's Titan Competition where students apply their knowledge of business to compete in an interactive business simulation or the JA Company Program which challenges student entrepreneurial spirit to start, operate, and liquidate their own company brand. Individual and team scholarship awards are available.

Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Engineering & Technology	Aerospace Engineer • Architectural Engineer • Automotive Engineer • CAD Technician • Civil Engineer • Computer Programmer • Electrical Engineer • Mapping Technician • Mining Engineer • Metallurgist • Petroleum Engineer • Survey Technician • Biomedical Engineer • Agricultural Technician • Application Engineer
Science & Mathematics	Anthropologist • Astronomer • Chemist • Geneticist • Ecologist • Environmental Scientist • Geologist • Research Technician • Economist • Analytical Chemist • Meteorologist • Nuclear Chemist/Technician • Statistician • Atmospheric Scientist • Zoologist • Astrophysicist • Quality-Control Scientist

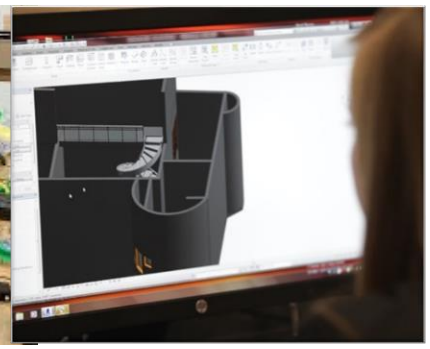
Technology & Engineering Coordinated Plan of Study					
STEM Cluster		Manufacturing Cluster		Health Science Career Cluster	
Engineering & Technology		Manufacturing Production Process Development		Biotechnology Research & Development	
Course Name	Cr	Course Name	Cr	Course Name (Horace)	Cr
Robotics	.5	Metals I and Metals II	.5	PLTW Principals of Biomedical Science (21-22)	1
Into to Engineering	1	Woods I and Woods II	.5	PLTW Human Body Systems (22-23)	1
Principle of Engineering	1	Construction Technology	.5	PLTW Medical Interventions (23-24)	1
Drafting & Architecture	.5	Energy in Motion Innovation	.5	Cooperative Work Experience (Internship)	.5 - 4
Cooperative Work Experience	.5 - 4	Robotics	.5 - 4		

Is this Pathway for you?

- Are you curious about how things are made or how they work?
- Do you like to interact with all kinds of people?
- Do you enjoy creating, inventing, or imagining new and different ways to do things?
- Do you consider yourself a leader who could be part of a team?
- Are you curious to work in a laboratory?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you like to follow directions and use precise detail to complete a task?
- Are you curious how math/science can be applied to build things or solve problems?



Other Electives to Consider for Marketing Pathway Preparation
<p>CTE Electives</p> <p>Aviation I, I, UAV Intro to Agriculture, Plant Science I, II Health Sciences I, II, CNA, Prevention & Care Intro to Coding, Python, Java, AP Java, Mobile Apps Web Design, Advanced Web Design</p> <p>Academic Electives</p> <p>Anatomy/Physiology I & II, AP Physics, Chemistry, Biology Environmental Science, Genetics, Field Biology Statistics, Calculus, AP Calculus, Trigonometry Foreign Language Microeconomics Philosophy & Ethics, Psychology, Sociology Fine Arts</p>



North Dakota STEM Related Postsecondary Programs

Pathway	Certificate or Associate's Degree	Bachelor's Degree	Master's Degree or More
Engineering & Technology	<input type="checkbox"/> Architectural Drafting & Estimating Technology (NDSCS) <input type="checkbox"/> Engineering Technology (BSC) <input type="checkbox"/> Land Surveying and Civil Engineering (NDSCS) <input type="checkbox"/> Nanoscience Technology (NDSCS) <input type="checkbox"/> Nuclear Power Technology (BSC) <input type="checkbox"/> Petroleum Engineering Technology (BSC) <input type="checkbox"/> Petroleum Production Technology (BSC, NHSC, WSC) <input type="checkbox"/> Engineering transfer (BSC, CCCC, DCB, NDSCS, NHSC, SBC, TMCC, WSC) <input type="checkbox"/> Robotics, Automation & Mechatronics Technology (NDSCS) <input type="checkbox"/> Simulator Maintenance Technology (LRSC) <input type="checkbox"/> Technical Studies (BSC, NDSCS)	<input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Chemical Engineering (UND) <input type="checkbox"/> Civil Engineering (NDSU, UND) <input type="checkbox"/> Computer Engineering (NDSU) <input type="checkbox"/> Construction Engineering (NDSU) <input type="checkbox"/> Electrical Engineering (NDSU, UND) <input type="checkbox"/> Engineering Science (UM) <input type="checkbox"/> Geological Engineering (UND) <input type="checkbox"/> Industrial Engineering and Management (NDSU) <input type="checkbox"/> Industrial Technology (UND) <input type="checkbox"/> Manufacturing Engineering (NDSU) <input type="checkbox"/> Mechanical Engineering (NDSU, UJ, UND) <input type="checkbox"/> Petroleum Engineering (UND)	<input type="checkbox"/> Aerospace Sciences (UND) <input type="checkbox"/> Agricultural and Biosystems Engineering (NDSU) <input type="checkbox"/> Chemical Engineering (UND) <input type="checkbox"/> Civil Engineering (NDSU, UND) <input type="checkbox"/> Electrical/Computer Engineering (NDSU, UND) <input type="checkbox"/> Environmental Engineering (NDSU, UND) <input type="checkbox"/> Geological Engineering (UND) <input type="checkbox"/> Industrial Engineering & Management (NDSU) <input type="checkbox"/> Manufacturing Engineering (NDSU) <input type="checkbox"/> Mechanical Engineering (NDSU, UND) <input type="checkbox"/> Software Engineering (NDSU) <input type="checkbox"/> Sustainable Energy Engineering (UND) <input type="checkbox"/> Technology (UND)
Science & Mathematics	<input type="checkbox"/> Biology transfer (BSC, DCB, TMCC, WSC) <input type="checkbox"/> Biotechnology transfer (NDSCS) <input type="checkbox"/> Chemistry transfer (BSC, DCB, NDSCS, TMCC, WSC) <input type="checkbox"/> Environmental Science Transfer (CCCC, NHSC, TMCC, WSC) <input type="checkbox"/> Environmental Technology (DCB) <input type="checkbox"/> Mathematics transfer (BSC, DCB, NDSCS, NHSC, TMCC, WSC) <input type="checkbox"/> Natural Science transfer (NDSCS, TMCC) <input type="checkbox"/> Pharmacy transfer (WSC) <input type="checkbox"/> Physical Science transfer (NDSCS, WSC) <input type="checkbox"/> Physics transfer (BSC, WSC) <input type="checkbox"/> Science transfer (CCCC, NHSC) <input type="checkbox"/> Tribal Environmental Science (UTTC)	<input type="checkbox"/> Atmospheric Sciences (UND) <input type="checkbox"/> Biochemistry and Molecular Biology (NDSU) <input type="checkbox"/> Biology/Biological Science (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Biotechnology (NDSU) <input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Chemistry (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Computer Science (DSU, MiSU, RC, UM, UND) <input type="checkbox"/> Earth Science (MiSU) <input type="checkbox"/> Environmental Science (DSU, NHSC, SBC, UND) <input type="checkbox"/> Forensic Science (UND) <input type="checkbox"/> Geology (MiSU, NDSU, UND) <input type="checkbox"/> Horticulture (NDSU) <input type="checkbox"/> Mathematics (DSU, MaSU, MiSU, NDSU, UJ, UM, UND, VCSU) <input type="checkbox"/> Microbiology (NDSU) <input type="checkbox"/> Molecular and Integrative Biology (UND) <input type="checkbox"/> Physics (NDSU, UND) <input type="checkbox"/> Statistics (NDSU) <input type="checkbox"/> Unmanned Aircraft Systems Operations (UND) <input type="checkbox"/> Zoology (NDSU)	<input type="checkbox"/> Atmospheric Sciences (UND) <input type="checkbox"/> Biochemistry/Biomedical Sciences (NDSU) <input type="checkbox"/> Biology/Biological Science (NDSU, UND) <input type="checkbox"/> Botany (NDSU) <input type="checkbox"/> Cellular and Molecular Biology (NDSU) <input type="checkbox"/> Chemistry (NDSU, UND) <input type="checkbox"/> Coatings and Polymeric Materials (NDSU) <input type="checkbox"/> Entomology (NDSU) <input type="checkbox"/> Environmental & Conservation Science (NDSU, SBC) <input type="checkbox"/> Geology (UND) <input type="checkbox"/> Materials and Nanotechnology (NDSU) <input type="checkbox"/> Mathematics (NDSU, UND) <input type="checkbox"/> Microbiology (NDSU) <input type="checkbox"/> Physics/Astrophysics (NDSU, UND) <input type="checkbox"/> Plant Pathology (NDSU) <input type="checkbox"/> Plant Sciences (NDSU) <input type="checkbox"/> Space Studies (UND) <input type="checkbox"/> Statistics (NDSU) <input type="checkbox"/> Zoology (NDSU)



The Technology Student Association is a local, state, and national student organization created to develop skills in science, technology, engineering, and mathematics as well as business education. TSA aims to develop leadership, academic, and business management skills in the workplace among students and leaders within the community. Students currently or previously enrolled in Technology & Engineering courses join TSA and extend their learning and leadership through intra-curricular activities, and competitions. Contact your school's TSA Advisor to get involved.



Transportation, Distribution & Logistics Career Cluster



Pathway	OCCUPATIONS RELATING TO THIS CAREER CLUSTER
Facility & Mobile Equipment Maintenance	Automotive Service Technician • Collision Repair Technician • Diesel Engine Specialist • Marine Technician • Service Manager • Electrical/Electronic Technician • Industrial Electrician • Motorcycle & UTV Technician
Health, Safety & Environmental Management	Industrial Health & Safety Engineer • Safety Analyst • Environmental Scientist • First Responder • Environmental Compliance Specialist • Risk Manager
Logistics Planning & Management Services	Logistic Manager • Logistics Analyst • Logistician • Logistic Consultant • International Logistics Specialists • Logistic Engineer
Sales & Service	Marketing Manager • Sales Representative • Cargo and Freight Agent • Customer Service Representative • Customer Order and Billing Clerk • Sales Manager
Transportation Operations	Pilot • Flight Engineer • Truck Driver • Bus Driver • Dispatchers • Air Traffic Controller • Transportation Managers • Locomotive Engineer • Flight Attendant
Transportation Systems/Infrastructure Planning, Management & Regulation	Aviation Inspector • Logistics System Manager • Surveying and Mapping Technician • Motor Vehicle Inspector • Transportation Engineer • Freight Inspector
Warehousing & Distribution Center Operations	Warehouse Manager • Shipping & Receiving Clerk • Production/Planning/Expediting Clerk • Laborer & Material Handler • Industrial and Packaging Engineers



Is this Pathway for you?

- Are you curious about how things are made or how they work?
- Do you enjoy creating, inventing, or imagining new and different ways to do things?
- Do you consider yourself a leader who could be part of a team?
- Are you curious to work in a laboratory?
- Are you interested in technology and its ongoing innovation?
- Have you ever dreamed of owning your own business?
- Do you like to follow directions and use precise detail to complete a task?

Transportation, Distribution & Logistics Career Cluster			
Transportation Operations		Facility and Mobile Equipment Maintenance	
Course Name	Cr	Course Name	Cr
Aviation Technology IA	.5	Diesel Technology I	1
Aviation Technology IB	.5	Diesel Technology II Block	2
Aviation Technology II	1	Recreation Engines I	2
Unmanned Aerial Vehicle	.5	Recreation Engines II	2
Cooperative Work Experience			.5 - 4
Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the CTE Scholarship			

Other Electives to Consider for Transportation, Distribution & Logistics Pathway Preparation
<p>CTE Electives</p> <ul style="list-style-type: none"> Computer Applications Business and Personal Finance IT Essentials I, II Intro to Engineering Design; Principles of Engineering Construction Technology I, II Automotive Technology I, II Management/Entrepreneurship Automated Manufacturing I, II, III Welding I, II <p>Academic Electives</p> <ul style="list-style-type: none"> AFJROTC Chemistry, Physics Consumer Math, Advanced Math, Pre-Calculus, AP Calculus Communications, Public Speaking Psychology



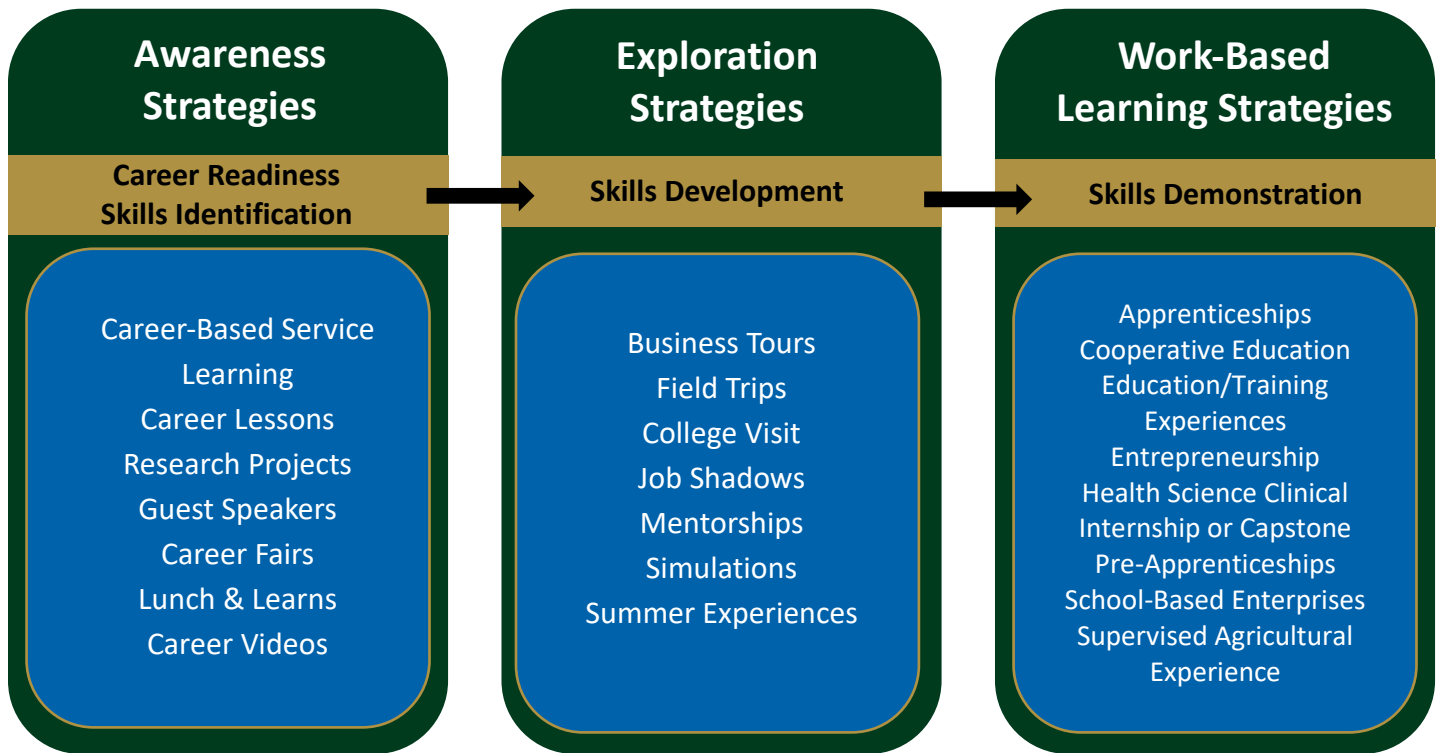
North Dakota Transportation, Distribution & Logistics Related Postsecondary Programs

Pathway	Associate's Degree or Less	Bachelor's Degree	Master's Degree or More
Facility & Mobile Equipment Maintenance	<input type="checkbox"/> Auto Collision Technology (BSC, NDSCS) <input type="checkbox"/> Auto Technology (BSC, BJCC, CCCC, LRSC, NDSCS, UTTC) <input type="checkbox"/> Diesel Technology (NDSCS) <input type="checkbox"/> Electronics Technology (BSC) <input type="checkbox"/> Electronics & Telecommunications Technology (BSC) <input type="checkbox"/> Facilities Maintenance (BJCC) <input type="checkbox"/> Geographic Information Systems Technology (BSC) <input type="checkbox"/> Power Sport Technology (NDSCS) <input type="checkbox"/> Transportation Technician (WSC)		
Health, Safety & Environmental Management	<input type="checkbox"/> Environmental Public Health (TMCC)	<input type="checkbox"/> Environmental Design (NDSU) <input type="checkbox"/> Environmental Health (DSU)	
Logistics Planning & Management Services	<input type="checkbox"/> Information Management Systems (DCB, NHSC, RC) <input type="checkbox"/> Information Processing Specialist (BSC) <input type="checkbox"/> Information Technology (DCB, LRSC, NDSCS, WSC) <input type="checkbox"/> Management Information Systems (NDSCS)	<input type="checkbox"/> Business Administration/Business Process Integration Management (VCSU) <input type="checkbox"/> Business Management (UM) <input type="checkbox"/> Information Technology Management (DSU, UM) <input type="checkbox"/> Management Information Systems (MiSU, NDSU, RC, UND) <input type="checkbox"/> Operations/Supply Chain & Logistics (RC, UND)	<input type="checkbox"/> Business Administration/Project Management (UM) <input type="checkbox"/> Transportation and Logistics (NDSU)
Sales & Service	<input type="checkbox"/> Business Management (WSC) <input type="checkbox"/> Marketing & Management transfer (DCB, LRSC, RC)	<input type="checkbox"/> Airport Management (UND) <input type="checkbox"/> Marketing (MiSU, NDSU, RC, UM, UND)	<input type="checkbox"/> Merchandising (NDSU)
Transportation Operations	<input type="checkbox"/> Airline Transport Pilot (FFS) <input type="checkbox"/> CDL/Heavy Equipment (CCCC, NHSC, SBC, TMCC, UTTC) <input type="checkbox"/> Commercial Pilot (EATC, FFS, GFKFS) <input type="checkbox"/> Heavy Equipment Operator (UTTC) <input type="checkbox"/> Instrumental/Multi-Engine Rating (EATC, FFS, GFKFS) <input type="checkbox"/> Private Pilot (EATC, FFS, GFKFS) <input type="checkbox"/> Recreational/Sport Pilot (EATC, FFS)	<input type="checkbox"/> Air Traffic Control (UND) <input type="checkbox"/> Commercial Aviation (UND) <input type="checkbox"/> Aviation Management (UND) <input type="checkbox"/> Aviation Technology Management (UND) <input type="checkbox"/> Flight Education (UND) <input type="checkbox"/> Unmanned Aircraft Systems Operations (UND)	<input type="checkbox"/> Aerospace Sciences (UND) <input type="checkbox"/> Aviation (UND)
Transportation Systems/ Infrastructure Planning, Management & Regulation		<input type="checkbox"/> Airport Management (UND) <input type="checkbox"/> Aviation Technology Management (UND) <input type="checkbox"/> Operations/Supply Chain & Logistics (RC, UND) <input type="checkbox"/> Public Policy ()	<input type="checkbox"/> Transportation and Urban Systems (NDSU)
Warehousing & Distribution Center Operations	<input type="checkbox"/> Management (BSC)	<input type="checkbox"/> Business Administration/Business Process Integration Management (VCSU)	



SkillsUSA is a local, state, and national co-curricular association serving high school, college and middle school students who are preparing for careers in trade, technical and skilled service occupations, including health occupations. SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens the SkillsUSA Framework of personal, workplace and technical skills. Contact your SkillsUSA Advisor to join.

Career Ready Work Experiences



West Fargo high school students are encouraged to participate in work related experiences to develop employability, leadership, and job-related skills.

Students completing over 75 hours of Work-based Learning or 25 hours of Community Service are Career Ready candidates toward North Dakota's Choice Ready Pathways.

Cooperative work-based learning experiences may be measured on Career Ready Practice categories for Responsible Employee, Technical Skills, Communication, Problem-solving and Teamwork.

Extended Learning Experience refers to the knowledge and skills that can be gained in a work setting. These glimpses into the real-world help students make more informed education and career decisions. Identify some of the career fields that fit your pathway before you begin your formal career work experience planning.

Job Shadow/Observation:

A Job Shadow or Observation is an opportunity to pair a student with a person who does the kind of work the student wants to explore. Job Shadow/Observations generally last 2-8 hours and are typically limited to observing the worker. Job Shadows or Observations offer the student:

- A first-hand look at the occupation
- An opportunity to observe and ask questions
- A possible “contact” in the field of work

Talk with your career advisor, school counselor, or with a career and technical education (CTE) instructor.

Cooperative Work Experience:

Cooperative Work Experience (cooperative education) is a job placement directly related to a student’s classroom instruction in career and technical education (CTE). This experience must be arranged through a CTE instructor and career advisor. As a co-op student you:

- Are monitored and evaluated by your instructor and your employer.
- Receive a grade for the co-op experience.
- May be paid by the employer.
- A student can obtain a maximum of 2 credits during their high school experience. Hours are calculated as 75 hours for ½ credit, and 150 for 1 credit.

Capstone Experience:

A Capstone Experience is course open to senior students for credit related to STEM pathways. Students must register for the course. Details about the course are in the Program of Studies under General Electives. Students are not required to be a member of the STEM Cohort but must be approved.

- A combination of coursework and work experience will be completed toward ½ credit.

Junior Educators of Tomorrow (JET):

A service-learning program to experience a teaching career in the elementary or middle school setting.

- Students must be in 12th grade, have a GPA of at least 2.0, and be registered for at least five additional classes at the high school.

Service Learning:

Service learning offers students an opportunity to do something significant for other people in their community while enhancing their educational experience and personal growth. Students may earn up to one credit toward graduation by serving as a volunteer in the school system or through a non-profit agency.

Special Services Job Experience:

Career Development Job Experiences are arranged by the special services program case manager. Students participate in a variety of activities to prepare for transition from high school to post-secondary training with emphasis on pre-vocational training. Students complete job contracts with quarterly evaluations by supervisor and case manager or career and technical resource educator (CTRE).

Diversified Work Experience:

Diversified Occupations I & II Work Experience are designed to provide students with indirect and direct education in career education related to their occupational interest. Students complete monthly journals, submit paystub to verify hours, provide supervisor evaluations, and write a final essay of their work experience to earn their Pass/Fail grade.

- Student can earn up to 1 credit if enrolled in Work Experience prior to December 31 (new students only can apply for one credit if they begin Community High in January).
- Students can earn ½ credit if enrolled in Work Experience on or before March 1 (new students only can apply for ½ credit if they begin Community High in March and enroll in March)
- CTE Course 25010 & 25120 - Grade(s): 11-12
Prerequisite: Principal approval
Credit: ½ or 1 (75 hours per ½ credit)

Work-based Learning Experience:

Option 1: A sustained interaction with industry or community professionals for a minimum of 40 hours, or Option 2: an approved educational setting simulating real-world experiences or projects based on the five Career Ready Practices categories of: Responsible Employee, Technical Skills, Communication, Problem-solving, and Teamwork.

Need Help? Ask your school counselor!

- Interest inventory results
- Assessment resources
- Career information and exploration
- Job shadowing experiences
- Service-learning experiences
- Post-secondary education options
- College catalogs, view books, & applications
- Letter of recommendation form
- Scholarships
- Financial aid information
- Job-find support
- Student career portfolios
- One-on-one career planning



Profile of a Graduate

Cheney Middle School



Jeffery Belin
(B's & L-Q)



Jessica McClafin
(A's & R-Z)



Kia Tompkins
(C-K)

Heritage Middle School & Horace High School



Amy Meier

Liberty Middle School



Veronica Markell
(8th Grade)



Tamara Selvig
(Lead Counselor)



Dana Strand
(6th Grade)



Shaina Winning
(7th Grade)

Community High School



Debora Egge

West Fargo High School



Lorraine Albrecht
(Do-H)



Kelsey Fehl
(S-Z)



Chasity Odden-Heide
(Mg-R)



Dana Rosendahl
(I-Mf)



Hannalee Shaw
(Career Advisor)



Jamie Zuel
(A-Dn)

Sheyenne High School



Penny Aipperspach
(Career Advisor)



Erin Beck
(Mf-Sc)



Mitchell Grunig
(D-H)



Krystal Haugen
(I-Me)



Jessica Raile
(A-C & AVID)



Jessica Steiner
(Sd-Z)

Profile of a Graduate – Convergence between academic & 21st Century Skills

Disposition	Vision	Levels of Implementation			
Collaborative	<i>Learners will work together, resolving controversy and conflict through respectful negotiations.</i>	<i>Cooperate and work flexibly in partnerships, small, or large groups</i>	<i>Share responsibility and interact respectfully to be productive both individually and as a team</i>	<i>Understand ideas, opinions and skills of others, accept and give constructive feedback</i>	<i>Show leadership and initiative as a contributing global citizen, act on constructive feedback</i>
Compassionate	<i>Learners will demonstrate their understandings of the complexities of cultures and global issues and see viewpoints beyond their own in order to positively impact the world around them.</i>	<i>Consider information from different viewpoints with respect</i>	<i>Recognize their own and others' perspectives and values</i>	<i>Explain the cultural impacts of their decisions the decisions of others, articulating perspectives and showing empathy</i>	<i>Exhibit character and take-action as a contributing global citizen to improve conditions in our world</i>
Creative	<i>Learners will take risks to develop and revise ideas.</i>	<i>Adapt existing ideas or products in a novel way</i>	<i>Use flexible thinking to generate multiple ideas</i>	<i>Apply critical thinking to explore and design original work</i>	<i>Act innovatively to impact the local, regional, or global community</i>
Resilient	<i>Learners will persist on the path toward physical and mental wellness despite impediments and challenges by defining and developing solutions to existing or future problems.</i>	<i>Demonstrate self-control and make realistic plan and take steps to enact them to solve an academic problem or emotional conflict</i>	<i>Manage strong feelings and impulses effectively, propose solutions to a simulated problem</i>	<i>Accept change, be hopeful, rely on others when needed, propose and develop solutions to real-world problems</i>	<i>Have a positive self-view and confidence in strengths and abilities Engage with real-world audiences as a contributing global citizen in an effort to solve an authentic problem</i>
Communicator	<i>Learners will connect and share ideas; and select an appropriate format to express thoughts and ideas with integrity and appropriate digital citizenship.</i>	<i>Engage in conversation and listen effectively; organize ideas and information to support learning</i>	<i>Engage in discussions; implement multiple communication formats to support learning</i>	<i>Examine and convey complex concepts; analyze content to produce coherent written or oral communication for a diverse audience</i>	<i>Analyze and synthesize to support claims; use digital media to produce and publish written and oral presentations for a diverse audience</i>
Critical Thinker	<i>Learners will systematically go beyond knowledge reproduction to reason, organize, summarize, interpret, analyze, and synthesize information in ways that generate a new understanding.</i>	<i>Read and comprehend information, discovering new ideas</i>	<i>Assess whether there is adequate reasoning and evidence to justify a claim or outcome</i>	<i>Rigorously interpret and analyze in order to summarize and problem solve</i>	<i>Use systems thinking to analyze and synthesize complete information; construct an argument</i>
Reflective	<i>Learners will take ownership in their learning by being empowered to take multiple pathways to demonstrate understanding and mastery.</i>	<i>Demonstrate understanding and goals from among teacher-provided feedback</i>	<i>Engage in peer feedback to enhance learning and provide a demonstration of an element of content understanding or mastery</i>	<i>Self-assess to enhance learning, access additional information, and provide a demonstration of content understanding and mastery</i>	<i>Reflect and create personal learning goals as a contributing global citizen, design and work plan to meet and demonstrate mastery and growth</i>
Responsible	<i>Learners will be actively engaged in their learning and demonstrate responsibility, organization, and perseverance.</i>	<i>Attentively comply with expectations for organization and participation</i>	<i>Engage curiosity and collaboration, taking pride in completing work well</i>	<i>Actively pursue achievement with a sense of importance and student agency</i>	<i>Find passion and value in a task; persist with resilience and stretch oneself despite difficulties</i>

Four Year Plan – Student Planning Template

Student Name: _____ School Year: _____ Current Career Goal: _____

School Counselor: _____ Career Advisor: _____ ACT Score: _____

Career Cluster #1: _____ Career Pathway: _____ Occupations: _____

Career Cluster #2: _____ Career Pathway: _____ Occupations: _____

Career Cluster #3: _____ Career Pathway: _____ Occupations: _____

		9 th Grade		10 th Grade		11 th Grade		12 th Grade				
COURSE	Course Name	Gr.	Cr.	Course Name	Gr.	Cr.	Course Name	Gr.	Cr.	Course Name	Gr.	Cr.
ENGLISH	English I or Honors English I		1	English II or Honors English II		1	English III or AP English III		1	English IV or AP English IV		1
MATH	Algebra I or Geometry		1	Geometry or Algebra II		1	Algebra II or Upper-level math course		1	Upper-level math (recommended)		0.5 or 1
SOCIAL STUDIES	World Geography or AP Human Geography		0.5	Western Civilization or AP Western Civilization		1	US History or AP US History		1	Government or AP Government 0.5 and Economics or Microeconomics 0.5		1
SCIENCE	Physical Science or Biology		1	Biology or Chemistry		1	3 rd Science or Physics		1			
PE/HEALTH	PE and Health 9	0.5	1	PE		0.5	PE		0.5			
	Total Required Credits		4.5	Total Required Credits		4.5	Total Required Credits		4.5	Total Required Credits (2021+)		2
ELECTIVE												
ELECTIVE												
ELECTIVE												
ELECTIVE												
CREDITS/YEAR			6, 6.5 or 7			6, 6.5 or 7			6, 6.5 or 7			6, 6.5 or 7
WORK-BASED LEARNING HOURS			Hrs			Hrs			Hrs			Hrs

205

Northern Cass



West Fargo High



Central Cass



Cass County CTE Center



Fargo North



West Fargo Sheyenne



Fargo South



West Fargo Horace



Fargo Davies

Cass County Career and Technical Education Center

*Program of Studies
2021-2022*

December 21, 2020 – Last Update

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15	• C ³ TEC Course Planning & Implementation Matrix

Mission

Education & experiences to grow tomorrow's workforce!



Cass County CTE Center

Vision

Partnering to share current Cass County career and technical education programming while seeking to expand opportunities for high school students, providing them career awareness and post-secondary preparation through rigorous coursework, business partnerships, and college connections.

Partnership Goals

- Expand and enhance CTE opportunities for member schools
- Prepare students for emerging careers
- Support workforce needs in the region and state
- Post-secondary program alignment and preparation
- Leverage state CTE funding and grant opportunities
- Strengthen business partnerships and work-based learning experiences
- Foster and coordinate enhanced activities and virtual experiences

The C³TEC Story

In 2014, the Cass County Career and Technical Education Center (C³TEC) was established as a collaborative effort between Fargo and West Fargo Public Schools and Northern Cass School District. As members of the C³TEC, district leaders are committed to working collaboratively to strengthen career and technical education options for all high schools in the region through the sharing of programs, curriculums, teachers, facilities, and equipment.

As a "Virtual Center," C³TEC's programs are housed in one or more of the member district's high schools versus a single site. Through the sharing of courses, students may travel to sites to attend classes; along with emerging options for students to share curriculum via video conferencing and/or online delivery. The virtual center model contributes to cost efficiencies for schools while creating opportunities for more students to enroll in CTE courses.

Through the C³TEC, leaders will work to build and expand upon current partnerships with business and college institutions to create relevant educational opportunities and alignment for students. The C³TEC will help to foster innovative education that contributes to building a skilled regional workforce to meet economic workforce demands to grow tomorrow's workforce.

Follow us at:

- www.casscte.com
- twitter.com/CassCTE

COURSE DELIVERY METHODS

On-site (OS):

Students will participate in classroom and lab activities at a designated school site. Students may be responsible for transportation dependent upon home school agreement.

Video Conferencing (VC):

The course will be delivered via video conferencing tools and online resources. Courses will be scheduled by period. Students will have the opportunity to learn through direct instruction, activities, and feedback from their instructor. Field trips may be scheduled by the instructor for extended learning and career experiences.

Online (OL):

The course will be delivered through an (asynchronous) online format using a classroom learning management tool such as (Google Classroom, Schoology, Edmodo, etc.). Instructors will have a scheduled office hour to provide feedback and answer student questions via e-mail, an online chatroom, or by phone. Schools will have the option to flexibly schedule students based open hours in their schedule.

**What's your interest?
What's your learning style?
What's your option?
Choose a course for you!**

Agriculture		
CC100	Intro to Agriculture	VC
CC101	Plant Science I	VC
CC102	Plant Science II	VC
CC103	World & International Agriculture	OL
Aviation		
CC201	Aviation Technology I (Session 1)	OS
CC202	Aviation Technology I (Session 2)	OS
CC205/206	Aviation Technology II	OS
CC207	Unmanned Aerial Vehicle	OS
Diesel		
CC305/306	Diesel Technology I	OS
CC307/308	Diesel Technology II	OS
Health Science		
CC510	Certified Nurse Assistant	OS
CC506/507	Health Science I	OS
CC505	Prevention & Care of Athletic Injuries	VC
CC501/502	Medical Terminology	OL
Information Technology		
CC601	Intro to Coding & Gaming	VC
CC602	Programming with Python	VC
CC603	Programming I – Java	VC
CC604	AP Programming – Java (AP)	VC
CC605	Mobile App Development & Security	VC
CC606	IT Essentials I	VC
CC607	IT Essentials II	VC
CC611	Intro to Networks & Cybersecurity	VC
CC608	Cisco I – Networking	VC
Welding & Manufacturing		
VE339	Welding I	OS
VE340	Welding II	OS
VE241/242	Manufacturing I	OS
VE341/342	Manufacturing II	OS

COORDINATED PLAN OF STUDY FOR AGRICULTURE EDUCATION

Environmental Service Systems or Plant Systems

CCCTEC	MIS03	Course Name	Cr
CC100	01011	Intro to Agriculture	.5
CC101	01053	Plant Science I (formerly Botany/Horticulture I)	.5
CC102	01054	Plant Science II (formerly Botany/Horticulture II)	.5
CC103	01069	World & International Agriculture (online)	.5
CC999	01999	Cooperative Work Experience	.5

***Must take at least 2 credits**

COORDINATED PLAN OF STUDY FOR AVIATION TECHNOLOGY

Transportation Operation

CCCTEC	MIS03	Course Name	Cr
CC201	17812	Aviation Technology IA (Session 1)	.5
CC202	17812	Aviation Technology IB (Session 2)	.5
CC205/206	17813	Aviation Technology II	1
CC207	17814	Unmanned Aerial Vehicle	.5
CC999	17999	Cooperative Work Experience	.5-1

***Must take at least 2 credits**

COORDINATED PLAN OF STUDY FOR DIESEL TECHNOLOGY

Facility and Mobile Equipment Maintenance

CCCTEC	MIS03	Course Name	Cr
CC305/306	17040	Diesel Technology I	1
CC307/308	17041	Diesel Technology II	2
CC999	17999	Cooperative Work Experience	.5-1

***Must take at least 2 credits**

COORDINATED PLAN OF STUDY FOR HEALTH SCIENCE

Therapeutic Services

CCCTEC	MIS03	Course Name	Cr
CC510	07032	Certified Nurse Assistant	.5
HEC201/202,	07033	Health Science I	1
CC506/507	07034	Prevention and Care of Athletic Injuries	.5
CC505	07036	Medical Terminology Online – Dual Credit	.5
CC501, CC502			

***Must take at least 2 credits**

COORDINATED PLAN OF STUDY FOR INFORMATION TECHNOLOGY

Programming and Software Development

CCCTEC	MIS03	Course Name	Cr
CC601	27120	Intro to Coding and Gaming	.5
CC602	27123	Programming Essentials with Python (NEW)	.5
CC603, VE289	27125	Programming I – Java	.5
CC604, VE290	27127	AP Programming – Java (AP)	.5
CC605	27128	Mobile App Development & Security	.5

Network Systems

VE285, TECH323, CC606	27219	IT Essentials I	.5
VE286, TECH324, CC607	27120	IT Essentials II	.5
CC611 or VE395	27265	Intro to Networks & Cybersecurity (NEW - Home & Small Business applications)	.5
CC608, VE391	27266	Cisco I – Introduction to Networks (Commercial Use)	.5
CC609, VE392	27999	Help Desk – Cooperative Work Experience	.5-1
CC999			

***Must take at least 2 credits from a pathway**

COORDINATED PLAN OF STUDY FOR WELDING & MANUFACTURING

Production

CCCTEC	MIS03	Course Name	Cr
VE241 & VE242	17113	Manufacturing I	1
VE341 & VE342	17113	Manufacturing II	1
VE339 or CC610	17236	Welding I	1
VE340 or CC611	17237	Welding II	1

***Must take at least 2 credits**

Students must earn at least 2 credits in a CTE pathway and 2 additional CTE credits to qualify for the ND CTE Scholarship.

Course Code Legend: CC=CCCTEC, HEC=West Fargo, TECH=West Fargo, VE=Fargo

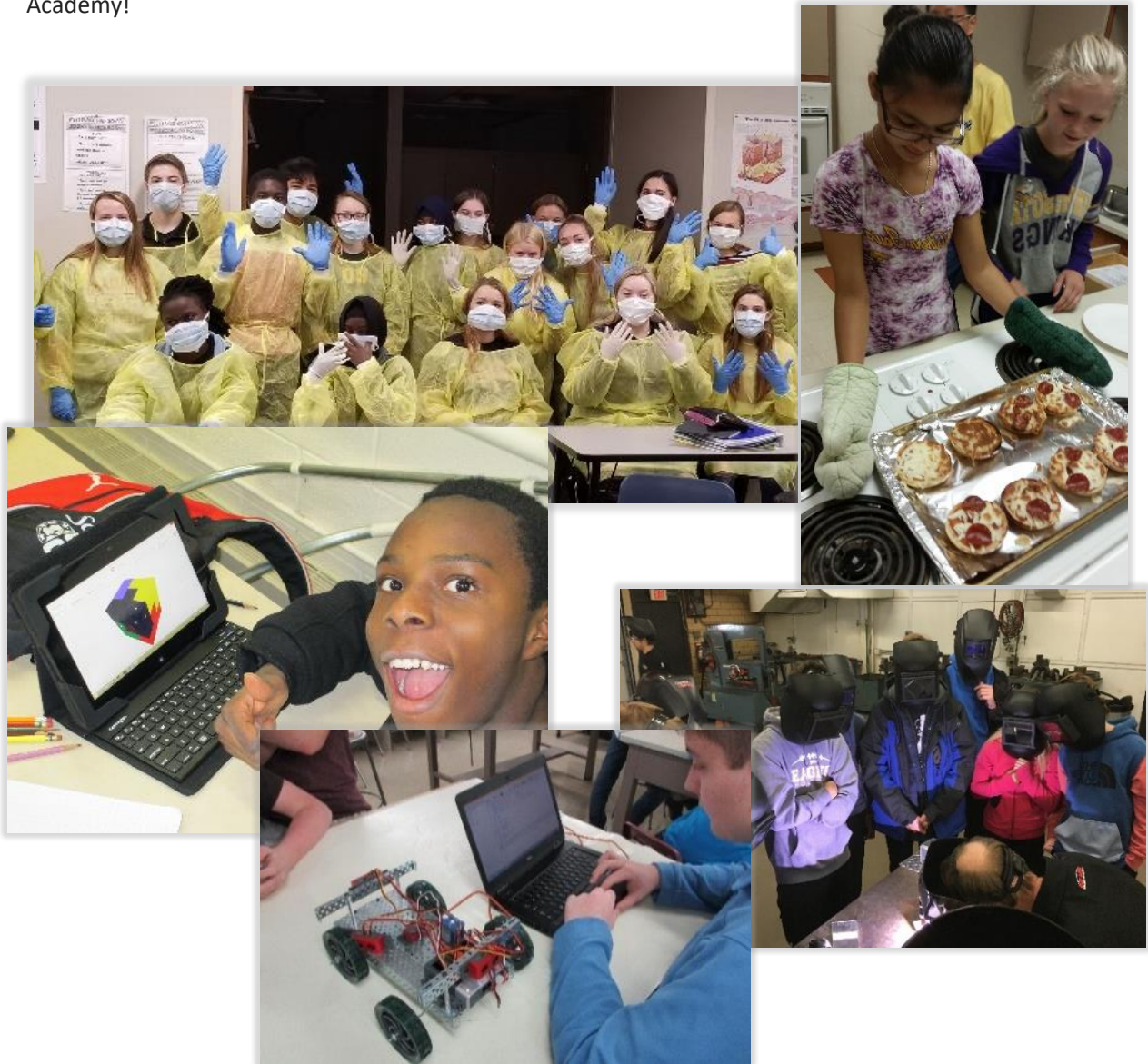
Summer Youth Career Academy

Save the Dates – June 15, 16 & 17, 2021

The Summer Youth Career Academy (SYCA) is an exciting new event designed to promote fun, hands-on learning sessions, along with career awareness opportunities for youth ages 10-14. SYCA is being planned for **June 15, 16 & 17, 2021**. Mark your calendars and get ready to spread the word! SYCA will be open to students in Central Cass, Fargo, Kindred, Northern Cass, Oak Grove, Shanley, and West Fargo.

Information on the upcoming SYCA sessions will be announced in March, with registration open from April 1 – May 15, 2021. Please check with your school's middle school counselors or principal for online registration and session details. Classes will be designed for AM, PM, and all-day sessions aligning to career pathways in agriculture, visual and digital arts, medical careers, food exploration, construction, automotive, coding, STEM, manufacturing, robotics, entrepreneurship and aviation.

Stay-tuned for session details, locations, lunch, and registration for the first Cass County Summer Youth Career Academy!





AGRICULTURE EDUCATION

The vision of Agricultural Education is to prepare students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber and natural resource systems.

INTRO TO AGRICULTURE

Course Code: (CC100)	Grade: 9-12	Credit: ½	Term: Fall	Prerequisite: None
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Location and delivery: Video – online class with labs and field trips

Instructor: Ms. Tamra Maddock

Description: This course is designed to enhance student’s perceptions of agriculture, its application to the world around them, and careers. This course serves as a foundation to the Agriculture Education. Individual units will familiarize the student with basic mechanical theory, food production, applied sciences, animals, and more. Topics may include soils, irrigation, land judging, plants, crop and weed identification, range management, horticulture, nursery, diseases, insects, and chemicals. As a hybrid course, students will learn through video conferencing and online tools. Students will be asked to complete activities, in and out of the classroom, so should possess skills to navigate independently. **(MIS03 Course Code #01012)**

WORLD & INTERNATIONAL AGRICULTURE

Course Code: (CC103)	Grades: 10-12	Credit: ½	Term: Spring	Prerequisite: None
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Location and delivery: Online

Instructor: Ms. Tamra Maddock

Transportation: Schools will provide bussing for field trips.

Description: A course designed to introduce students to global agriculture and careers that impact the world, the environment, society, and the economy. This course also includes agricultural innovation, career development, leadership, communications, and personal finance. As an online course, course content will be facilitated for students to independently complete activities through a flexible schedule. Students will be asked to complete activities, in and out of the classroom, so should possess skills to navigate independently. **(MIS03 Course Code 01069)**

PLANT SCIENCE I (formerly BOTANY/HORTICULTURE/LANDSCAPE DESIGN I)

Course Code: (CC101)	Grade: 9-12	Credit: ½	Term: Fall	Prerequisite: None
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Location and delivery: Video – online class with labs and field trips

Instructor: TBD

Description: This course focuses on the fundamental principles of horticulture. Students will be exposed to concepts in propagating plants in a greenhouse setting. Students will study Botany/plant science, growing plants, the business of raising and selling plants, and small business management. Hands-on experiences will include computer assisted landscape design, home and business landscaping, commercial greenhouse operation, plant nutrition, landscape beautification, and community involvement. As a hybrid course, this class will be delivered through video and on-line coursework. Students will be asked to complete activities, in and out of the classroom, so should possess skills to navigate independently. **(MIS03 Course Code 01053)**

PLANT SCIENCE II (formerly BOTANY/HORTICULTURE/LANDSCAPE DESIGN II)

Course Code: (CC102)	Grade: 10-12	Credit: ½	Term: Spring	Prerequisite: Plant Science I
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Location and delivery: Video – online class with labs and field trips

Instructor: TBD

Transportation: Schools will provide bussing for field trips.

Description: This course is a continuation of Plant Science to prepare students to produce greenhouse/nursery plants and to maintain plant growth and propagation structures. Topics to be covered include soils, plants, plant identification, and plant entomology, the importance of plant cell structures, functions of cells, plant processes, nonvascular plants, vascular plants, and plant reproduction. Students may be introduced to conservation and ecological concepts encountered in our environment. Landscape design units will prepare students to design and maintain planted areas. As a hybrid course, this class will be delivered through video and on-line coursework. Students will be asked to complete activities, in and out of the classroom, so should possess skills to navigate independently. **(MIS03 Course Code 01054)**



AVIATION TECHNOLOGY

The vision for Aviation Technology education is to expose and empower young learners with the knowledge and technical skills to pursue careers in the aerospace industry including flight, design and engineering, maintenance and unmanned aerial systems.

AVIATION TECHNOLOGY I (Session 1)

Course Code: (CC201)	Grade: 10-12	Credit: ½	Term: Fall or Spring	Prerequisite: None
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Location and delivery method: On-site Sheyenne HS – 7:25 am – 8:15 am

Instructor: Mr. David Gravidahl

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: Exposes students to careers in the field of aviation, such as air traffic control, flight dispatching and airport management, etc. The course covers fundamentals of flight, flight operations, aviation weather, performance and navigation. Units of instruction include flight history, safety, space, airport layout, aeronautical charts, radar, radio procedures, aerodynamics, weather patterns and hazards. Emphasis on applied academics in math and science are integrated, along with decision-making principles as it applies to flight-related factors. Lessons are enhanced by guest speakers and field trips to local airports and aviation sites. **(MIS03 Course Code 17812)**

AVIATION TECHNOLOGY I (Session 2)

Course Code: (CC202)	Grade: 10-12	Credit: ½	Term: Fall or Spring	Prerequisite: Aviation I-S1
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Location and delivery method: On-site Sheyenne HS – 7:25 am – 8:15 am

Instructor: Mr. David Gravidahl

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: This course is a continuation of concepts learned in Aviation I. This course will cover advanced flight topics from area Aviation experts. Students will be exposed to new concepts in UAS and drone technology as well as expanding topics covered in Aviation I to an advanced level. Students will be preparing to pass the Federal Aviation Administration (FAA) private pilot written exam. Successful completion of Aviation I Session 1A is a prerequisite. **(MIS03 Course Code 17812)**

AVIATION TECHNOLOGY II

Course Code: (CC205/206)	Grade: 10-12	Credit: 1	Term: Year	Prerequisite: Aviation I
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Location and delivery method: On-site Sheyenne HS – 8:20 am – 9:15 am

Instructor: Mr. David Gravidahl

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: This course is a continuation of concepts learned in Aviation I. This course will cover advanced flight topics from area Aviation experts. Students will be exposed to new concepts in UAS and drone technology as well as expanding topics covered in Aviation I to an advanced level. Students will be preparing to pass the Federal Aviation Administration (FAA) private pilot written exam. Successful completion of Aviation I (both session 1A & 1B) is a prerequisite. **(MIS03 Course Code 17813)**

UNMANNED AERIAL VEHICLE (NEW)

Course Code: (CC207)	Grade: 11-12	Credit: ½	Term: Fall	Prerequisite: Aviation I
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Location and delivery method: On-site Sheyenne HS – TBD

Instructor: Mr. David Gravidahl

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: The Unmanned Aerial Systems course will teach students a basic understanding of recreational and commercial unmanned aircraft operations. They will identify the responsibility and authority of the remote PIC, discuss rules of UAS operation, understand the significance of airspace Classes, special-use airspace, understand weather and how it affects flight of UAV, general loading and performance data, and airport operations. Students will be prepared to take the FAA Part 107 exam. **(MIS03 Course Code 17814)**



DIESEL TECHNOLOGY

The Diesel Technology program is designed to expose students to careers in the diesel industry and apply foundational knowledge and technical skills in the maintenance of heavy equipment and trucks.

DIESEL TECHNOLOGY I

Course Code: (CC305, CC306)	Grade: 10-12	Credit: 1	Term: Year	Prerequisite: None
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Location and delivery method: On-site Sheyenne HS – 7:25 am – 8:15 am

Instructor: Mr. Ralph Elletson

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: This course allows students to experience a variety of diesel and heavy equipment practices. Students will explore the field of diesel and heavy-duty equipment repair, and will learn the basics of safety, equipment identification, and the use of hand and power tools in lab setting. Students will learn a about careers within the diesel and heavy equipment repair industry. Lessons will be enhanced by industry partners such as: RDO, General Equipment, Butler, and Titan Machinery. Students will be introduced to diesel engine operation and components, hydraulics, brakes/suspension, and electrical. Technology-related mathematics, reading, writing, vocabulary, blueprint reading, and science are integrated throughout the curriculum. NATEF standards and guidelines are followed. This course is a prerequisite to Diesel Technology II. **(MIS03 Course Code 17040)**

DIESEL TECHNOLOGY II

Course Code: (CC307, CC308)	Grade: 11-12	Credit: 2	Term: Year Block	Prerequisite: Diesel I
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Location and delivery method: On-site Sheyenne HS Block – 8:20 am – 10:10 am

Instructor: Mr. Ralph Elletson – Sheyenne High School

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: This course will serve as a continuation from Diesel I. Students will be exposed to diesel careers and college options in construction, agriculture, aviation, and trucking vehicles. Students will be required to demonstrate sound safety practices, shop organization and management. Students will learn advanced diesel concepts in fuel systems, steering and suspension, tire and wheel diagnostics, service and repair of electrical and electronic controls and systems, engines, drive train, hydraulics and air brake systems. Training and practice of Preventive Maintenance Inspection (PMI) is accomplished. Lessons will be enhanced by industry collaboration, job shadows and internship experiences. Technology, mathematics, reading, writing, vocabulary, blueprint reading, and science are integrated throughout the curriculum. NATEF standards and guidelines are followed. **(MIS03 Course Code 17041)**

COOPERATIVE WORK EXPERIENCE

Course Code: (CC999)	Grade: 11-12	Credit: Maximum 2 credits in a student’s high school experience.
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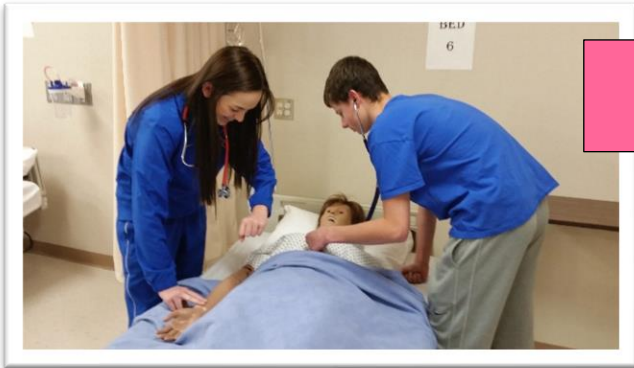
Prerequisite: The employment must be preceded by, or concurrent with, classroom instruction related to the work experience. Students must be at least 16 years old and may be paid a wage by the employer.

Location and delivery: a training agreement among all partners outlining the expectations of each party (school, employer, student, and parents/guardians) is required for the work experience.

Instructor: Registration only by arrangement with instructors from Agriculture, Aviation, Diesel, and Welding.

Transportation: Student will be responsible for transportation.

Description: Provides students with a regularly scheduled, supervised employment opportunity related to Trade and Industrial Occupations in order to develop and improve work skills. **(MIS03 Course Code 17999)**



HEALTH SCIENCE & MEDICAL CAREERS

Health Sciences within the North Dakota Department of Career and Technical Education are committed to provide career awareness, work readiness skills and occupational preparation to help to continue to fill the need for dedicated professionals that provide support, service and leadership in the many areas of healthcare.

MEDICAL TERMINOLOGY

Course Code: (CC501 or 502)	Grade: 10-12	Credit: ½	Term: Fall/Spring	Prerequisite: None
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Location and delivery method: Online

Instructor: TBD based on instructor schedules

Transportation: Not applicable

Description: This class is designed to introduce students to the health information (Medical Records) field. Students will learn prefixes, suffixes and root words for medical terms. This will include meanings, spellings and pronunciations. Emphasis is on building a working medical vocabulary based on body systems. Anatomy and physiology of major organs, pathological conditions, laboratory studies, clinical procedures and abbreviations are studied for each body system. The student will also learn medical terminology as it relates to pathology, diagnostic, surgical, clinical and laboratory procedures and common abbreviations and acronyms by body systems. Students choosing to participate have the option to complete the NDSCS application process and required \$35 fee. **(MIS03 Course Code 07036) (Dual Credit Option)**

PREVENTION AND CARE OF ATHLETIC INJURIES

Course Code: (CC505)	Grade: 10-12	Credit: ½	Term: Fall/Spring	Prerequisite: None
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Location and delivery method: Video conferencing or Online

Instructor: TBD based on instructor schedules

Transportation: Schools will provide bussing for field trips.

Description: Provides the student with a background in athletic training and basic health care. The course emphasizes injury prevention, nutrition, first responder management daily for athletic injuries and skills to fulfill the activities of daily living. Students will be able to complete requirements to become a student athletic trainer. **(MIS03 Course Code 07034)**

HEALTH SCIENCE I

Course Code: (CC506/507)	Grade: 10-12	Credit: 1	Term: Year	Prerequisite: None
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Location and delivery method: On-site or Online

Instructor: TBD based on instructor schedules

Transportation: Students may be responsible for transportation. Schools will provide bussing for field trips.

Description: This course explores the many career opportunities available in the medical, nursing and allied health professions. Students learn basic health-provider skills, including CPR and First Aid. Curriculum content includes ethics, legalities, safety, medical terminology, communication, infection control, professional attitudes, anatomy, physiology and basic clinical skills. Health professionals are utilized as speakers to enrich content. Students participate in spring observations of health professional. (Examples: Dentistry, Dental Hygienist, Nursing, Pharmacy, Radiology, Sports Medicine, Veterinary Technician.) **(MIS03 Course Code 07033)**

CERTIFIED NURSING ASSISTANT (CNA)

Course Code: (CC510)	Grade: 11-12	Credit: ½	Term: Summer/Spring	Prerequisite: None
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Location and delivery method: On-site

Instructor: TBD based on instructor schedules

Transportation: Students may be responsible for transportation. Schools will provide bussing for field trips.

Description: This class is designed for students who are interested in a medical career or interested in preparing for employment as a Certified Nursing Assistant. Basic nursing principles are taught in a classroom setting while communication techniques, basic physical assessment and basic nursing procedures are demonstrated in a clinical lab setting. Emphasis is placed on care of the client in the long-term care. Student will be responsible for completing 16 hours of clinical experience outside of the classroom scheduled by the instructor. Upon successful completion of the skills portion of the course the student will be eligible to take the certified nurse aid exam. Health Science I will provide supportive background knowledge for this course. **(MIS03 Course Code 07032)**



INFORMATION TECHNOLOGY & CODING, CYBERSECURITY

Information Technology Education prepares students for future employment and/or continuing education opportunities in the growing field of Information Technology, which include work in computer hardware, software, electronics, semiconductors, internet, telecom equipment, e-commerce, and computer services.

INTRO TO CODING AND GAMING (ICG)

Course Code: (CC601)	Grade: 9-12	Credit: ½	Term: Fall or Spring	Prerequisite: None
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Location and delivery method: Video Conferencing

Instructor: Mr. Ullrich Reichenbach – Fargo, Mr. Stephan Garaas or Mr. Ronald Thompson – West Fargo

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: The course will provide students with a foundation for understanding programming languages. Fundamentals of logic, design, coding, structures, and controls will be applied through a game-like environment, such as Scratch, GameSalad or emerging programs. Careers in coding and programming are explored. Students will experience project-based learning, teamwork, problem-solving, and increase communication. **(MIS03 IT Course Code 27120)**

PROGRAMMING WITH PYTHON

Course Code: (CC602 or VE395)	Grade: 10-12	Credit: ½	Term: Fall or Spring	Prerequisite:
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Location and delivery method: Video Conferencing and On-site

Instructor: Mr. Ullrich Reichenbach - Fargo or Mr. Stephan Garaas or Mr. Ronald Thompson – West Fargo

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: The world’s tech companies love Python. Google, Youtube, Facebook, IBM, NASA, Dropbox, Yahoo, Mozilla, Quora, Instagram, Uber and Reddit are just a few of the big names that use Python for a wide range of purposes and are continuously on the lookout for Python engineers. Python is a programming language, which is used to develop websites, web applications, GUI, network servers, back-end APIs, desktop apps, medial tools, and machine learning. You can also use Python to analyze data and “glue” other languages together. **(MIS03 IT Course Code 27123)**

COMPUTER PROGRAMMING I – Java

Course Code: (CC603 or VE289)	Grade: 10-12	Credit: ½	Term: Fall or Spring	Prerequisite: ICG
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Location and delivery method: Video Conferencing and On-site

Instructor: Mr. Ullrich Reichenbach - Fargo or Mr. Stephan Garaas or Mr. Ronald Thompson – West Fargo

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: This course introduces the field of Computer Science, including design and coding principles. By studying case studies and designing graphical user interfaces, students will learn the principles of object-oriented programming, define classes, instantiate objects, and write methods. Students will also work with algorithms which make logical decisions and iterate. Optional NDSCS Dual Credit **(MIS03 IT Course Code 27125)**

MOBILE APP DEVELOPMENT & SECURITY

Course Code: (CC605)	Grade: 10-12	Credit: ½	Term: Fall or Spring	Prerequisite: None
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Location and delivery method: Video Conferencing and On-site

Instructor: Mr. Stephen Garaas – West Fargo

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: Students use mobile technology to solve everyday problems for their community so why not task them to develop one? In this course students will learn the basics of the app system and software development cycle. They will also learn about code modification and additional basic app coding skills, including the topics of variables, simple data types, conditional programming constructs, and simple library classes. The course also provides a foundation for the design, implementation, and management of database systems. **(MIS03 IT Course Code 27128)**

AP COMPUTER PROGRAMMING – Java

Course Code: (CC604 or VE290)	Grade: 10-12	Credit: ½	Term: Spring	Prerequisite: Java
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Location and delivery method: Video Conferencing and On-site

Instructor: Mr. Ullrich Reichenbach – Fargo, Mr. Stephen Garaas – West Fargo

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: Students will study abstract classes, arrays, lists, and advanced concepts of graphical user interfaces. Main topics also include sequences, searches, input and output streams. This course, together with the first semester, will prepare students to take the AP exam in Computer Science if they wish. **(MIS03 IT Course Code 27127)**

IT ESSENTIALS I

Course Code: (CC606 or VE285)	Grade: 10-12	Credit: ½	Term: Fall	Prerequisite: None
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Location and delivery method: Video Conferencing and Online

Instructor: Mr. Ullrich Reichenbach – Fargo – Mr. Stephen Garaas – West Fargo

Transportation: Schools will provide district bussing in Fargo and West Fargo. Students responsibility in CC and NC.

Description: This is the first of two courses that prepare students to obtain their CompTIA A+ Essentials certification. This course focuses on computer hardware, operating systems, troubleshooting computer systems and customer service skills/professionalism required of entry-level IT professionals. Students will learn to identify internal components of the computer, disassemble and assemble a complete personal computer, install multiple operating systems, and create/configure multiple virtual computers using virtualization software. Students will also learn how to configure computers to access multiple types of networks. **(MIS03 IT Course Code 27219) (Dual Credit Option)**

IT ESSENTIALS II

Course Code: (CC607 or VE286)	Grade: 10-12	Credit: ½	Term: Spring	Prerequisite: IT Essentials I
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Location and delivery method: Video Conferencing and On-site

Instructor: Mr. Ullrich Reichenbach – Fargo - Mr. Stephen Garaas – West Fargo

Transportation: Schools will provide district bussing in Fargo and West Fargo. Students responsibility in CC and NC.

Description: This is the second of two courses that prepare students to obtain their CompTIA A+ Essentials certification. This course focuses on handheld mobile devices (Android and Apple IOS), laptop computers, printers, and customer service skills/professionalism required of entry-level IT professionals. Students will disassemble and reassemble a laptop computer, practice communication skills, troubleshoot hardware and software issues, and perform preventative maintenance activities. Students will have an opportunity to research areas of computing that they are interested and work with circuit boards to understand how electricity and data flow through a computer. Optional NDSCS Dual Credit **(MIS03 IT Course Code 27220)**

INTRO TO NETWORKS & CYBERSECURITY (Home & Small Business)

Course Code: (CC609 or VE395)	Grade: 10-12	Credit: ½	Term: Fall	Prerequisite:
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Location and delivery method: Video Conferencing and Online

Instructor: Mr. Ullrich Reichenbach - Fargo

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: Just like you, homes and business are becoming smart! Wifi, smart devices, TVs, WHDI, AppleTV, security systems, and wireless technologies are growing, along with the need to understand set ups, software applications, troubleshooting and security prevention. This course will introduce students to principles and practices of designing, home and small business networks, along with an introduction to cybersecurity concepts. Students will demonstrate evidence of learning through networking and lab activities. **(MIS03 IT Course Code 27265)**

CISCO I – INTRODUCTION TO NETWORKS

Course Code: (CC608 or VE391)	Grade: 10-12	Credit: ½	Term: Fall	Prerequisite: None
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Location and delivery method: Video Conferencing and Online

Instructor: Mr. Ullrich Reichenbach - Fargo

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: This is the first level of a series on computer networking. Participants will learn about current and emerging networking technology. The course will cover safety, networking terminology and protocols, network standards, LAN's, WAN's, the OSI model, cabling, router configuration, topologies, IP addressing, and other general networking information. Students will learn the principles of both wired and wireless networks Students will complete labs both using virtual software and physical hardware. Optional Certified Cisco Networking Associate (CCNA) exam. Optional NDSCS Dual Credit – 4 credits. **(MIS03 IT Course Code 27265)**

HELP DESK – COOPERATIVE WORK EXPERIENCE

Course Code: (CC610 or CC611) **Grade:** 10-12 **Credit:** ½ -1 **Term:** Fall or Spring

Prerequisite: Completion of IT Essentials I and IT Essentials II

Location and delivery: a training agreement among all partners outlining the expectations of each party (school, employer, student, and parents/guardians) is required for the work experience.

Instructor: Registration only by arrangement with counselor/principal, instructor, and IT Help Desk supervisor.
(MIS03 IT Course Code 27999)



WELDING & MANUFACTURING

The Welding & Manufacturing Technology program is designed to provide experiences pertaining to assembly, manufacturing, energy and construction while modeling industry standards in the lab and classroom for future training, job preparation and careers.

MANUFACTURING I

Course Code: Fargo (VE241/242) **Grade:** 9-12 **Credit:** 1 **Term:** Year **Prerequisite:** None

Location and delivery method: On-site South High School

Instructor: Mr. Andrew Henjum – South High School

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: This course offers students an introduction to the design and operation of a metals production system (machining, welding, and fabrication). Students will learn how to properly read and create layout drawings. Different aspects of quality control, production planning and procedures, and different types of product manufacturing will be emphasized. This is a hands-on, project-based class where students can design and develop various projects. Students use modern equipment such as a CNC plasma table, CNC machine tools and a variety of electric welding equipment. Students develop hard and soft employability skills and explore several occupations in the manufacturing sector. **The differentiated instructional approach used in this class provides interesting and challenging activities for students of all abilities. Dual Credit: Optional – MGFT 110. (MIS03 Course Code 17113)**

MANUFACTURING II

Course Code: Fargo (VE341/342) **Grade:** 10-12 **Credit:** 1 **Term:** Year **Prerequisite:** Manufacturing I

Location and delivery method: On-site South High School

Instructor: Mr. Andrew Henjum – South High School

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: This course provides students with a broad base of employability skills necessary for successful careers in manufacturing, construction, and service-based fields. Emphasis is placed on welding and machine tooling processes. Safe working procedures, work ethics, and cooperative work attitudes and techniques are taught. Curriculum includes skill development in Arc (stick and wire) and gas welding. Flame cutting, plasma arc cutting, brazing and soldering techniques are also covered. Curriculum activities designed to develop the student's machining skills on the metal lathe, vertical mill, drill press, grinders, and band saw are presented. Students are taught to use precision measuring equipment and to interpret technical drawings. Pattern transfer and layout procedures are introduced. Material identification, industrial math, blueprint reading, career awareness and much more will be learned as the students explore their way through this class. This is an enjoyable, hands-on, activity-based learning experience. **The differentiated instructional approach used in this class provides interesting and challenging activities for students of all abilities. (MIS03 Course Code 17113)**

WELDING I & II

Course Code: Fargo Code (VE339/340) Grade: 10-12 Credit: 2 Term: Fall-Spring Block Prerequisite: Welding I

Location and delivery method: On-site NDSCS – Fargo

Instructor: Mr. Lee Larson or Mr. Mitch VanVleet – NDSCS

Transportation: Students will be responsible for transportation. Schools will provide bussing for field trips.

Description: This course gives beginning instruction in laboratory safety and the use of personal protection equipment, with strong emphasis on the safe handling of welding and cutting equipment. It includes basic hands-on instruction on Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Oxy-Fuel Cutting (OFC) on various thicknesses of metal and techniques used. Also covered are welding supplies and equipment. Students choosing to participate must complete the NDSCS application process and required \$35 fee. **(MIS03 Course Code 17236) (Dual Credit Option: MGFT110 and/or MGFT 123)**

Cass County – Shared Course - Code List

Course Name	Course Code	CCCTEC Code & Fargo
INTRO TO AGRICULTURE	(01011)	(CC100)
PLANT SCIENCE I (formerly BOTANY/HORTICULTURE I)	(01053)	(CC101)
PLANT SCIENCE II (formerly BOTANY/HORTICULTURE II)	(01054)	(CC102)
WORLD & INTERNATIONAL AGRICULTURE	(01069)	(CC103)
AVIATION TECHNOLOGY IA (Session 1)	(17812)	(CC201)
AVIATION TECHNOLOGY IB (Session 2)	(17812)	(CC202)
AVIATION TECHNOLOGY II	(17813)	(CC205, CC206)
UNMANNED AERIAL VEHICLE (UAV)	(17814)	(CC207)
DIESEL TECHNOLOGY I	(17040)	(CC301, CC302)
DIESEL TECHNOLOGY II - BLOCK	(17040)	(CC305, CC306)
COOPERATIVE WORK EXPERIENCE	(17999)	(CC999)
MEDICAL TERMINOLOGY (online)	(07036)	(CC501 or CC502)
PREVENTION\CARE OF ATHLETIC INJURIES	(07034)	(CC505)
HEALTH SCIENCE I	(07033)	(CC506, CC507)
HEALTH SCIENCE II	(07033)	(CC508, CC509)
SUMMER SCHOOL – CERTIFIED NURSING ASSIST	(07032)	(CC510) OR (VE385)
INTRO TO CODING & GAMING	(27120)	(CC601)
PROGRAMMING WITH PYTHON	(27123)	(CC602)
COMPUTER PROGRAMMING I – Java (NEW)	(27125)	(CC603) OR (VE289)
AP COMPUTER PROGRAMMING – Java	(27127)	(CC604) OR (VE290)
MOBILE APP DEVELOPMENT & SECURITY	(27128)	(CC605)
IT ESSENTIALS I	(27219)	(CC606) OR (VE285)
IT ESSENTIALS II	(27220)	(CC607) OR (VE286)
INTRO TO NETWORKS & CYBERSECURITY (NEW)	(27265)	(CC611 OR (VE395)
CISCO I-INTRO TO NETOWORKING	(27266)	(CC608) OR (VE391)
HELP DESK – COOPERATIVE WORK EXPERIENCE	(27999)	(CC611 or CC612)
MANUFACTURING I	(17113)	(VE241, VE242)
MANUFACTURING II	(17113)	(VE241, VE242)
WELDING I & II	(17236)	(VE339, VE340)

Course Implementation and/or Rotation Schedule

Program\Course	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Agriculture Education							
Intro to Agriculture				Fall	Fall, Pd 8	Fall, Pd 8	Fall
Plant Sciences I (Botany I)	Spring, Pd 8	Fall	Spring	Spring	Fall, Pd 8, NT	Fall, Pd 8	Spring
Plant Sciences II (Botany II)		Spring	Off	TBD	Spring, Pd 8, NT	Spring, Pd 8	Both
World Agriculture		Fall	Off	Spring	Spring, Pd 8	Spring, Pd 8	TBD
Agriculture Sales			Off	Off	Off	Off	Off
Agriculture Business			Off	Off	Off	Off	Off
Small Animal Care			Off	Developing/NT	Developing/NT	Pilot – NT	Pilot - NT
Veterinary Science			Off	Developing/NT	Developing/NT	Pilot - NT	Pilot - NT
Aviation							
Aviation I (Session 1)	Year, Pd 1	Year	Year	Fall	Fall, Pd 1	Fall, Pd 1	Fall
Aviation I (Session 2)				Spring	Spring, Pd 1	Spring, Pd 1	Spring
Aviation II	Year, Pd 2	Year	Year	Year	Year	Year	Year
Unmanned Aerial Vehicle						NEW - Fall	Both
Diesel Technology							
Diesel Technology I	Year, Pd 1	Year	Year	Year	Year	Year	Year
Diesel Technology II		Year Block	Year Block	Year Block	Year Block	Year Block	Year
Health Science							
Medical Terminology	Sem-Online	Online	Online	Online - Both	Online - Both	Online - Both	Online - Both
Prevention\Care	Spring-video	Sem 1 or 2	Online	Spring Online	Online - Both	Online - Both	Online - Both
Certified Nursing Assist	Summer	Sem 1 or 2	Summer, Spring	Summer, Spring	Summer, Spring	Summer, Spring	Summer, Fall
Health Science I					Year, NS	Year, TBD	Year
Information Technology							
IT Essentials I			Off	Off	Offered	Fall	Fall
IT Essentials II			Off	Off	Offered	Spring	Spring
Intro Coding & Gaming		Fall	Fall or spring	Fall or spring			Both
Visual Basic – Dual Credit	Develop	Spring	C# - spring	NDSCS dropped	NA	NA	NA
Mobile App		Fall	Fall or spring	Spring	Both		Both
Programming w/Python						Develop	New - Both
Comp Program I – Java	Develop	Fall	Fall	Fall	Both		Fall
AP - Java	Develop	Spring	Spring	Spring	Spring		Spring
Intro to Networks & Cyber						Develop	Fall
Cisco I – South		Fall	Year	Year	Fall		Spring
Cisco II – NDSCS		Spring	Year	Year	Spring	Last year	NDSCS Online
Cisco III – NDSCS		Fall	Year	Year	Fall	NDSCS Online	NDSCS Online
Cisco IV - NDSCS		Spring	Year	Year	Spring	NDSCS Online	NDSCS Online
Welding - Manufacturing							
Welding I	Fall, Pd 1-2	Fall	Fall	Fall	Fall	Fall Block	Fall Block
Welding II	Spring, Pd 1-2	Spring	Spring	Spring	Spring	Spring Block	Spring Block
Manufacturing I, 2 & 3		Year	Year	Year	Year	Year	Year



Thank you to our industry sponsors and advisory committee members for their classroom participation, industry tours, program equipment, and on-going expertise to improve our curriculums and student experiences!

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West Side Steel

Cass County Career & Technical Education Center
 Director of Career & Technical Education: Dr. Denise Jonas
djonas@west-fargo.k12.nd.us
 207 Main Avenue W | West Fargo ND 58078 | Phone: 701-356-2000 | www.casscte.com



Fargo Public School
Northern Cass School

Central Cass School
West Fargo Public School

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WRITTEN TESTIMONY
DENISE. D. JONAS
DIRECTOR OF CAREER AND TECHNICAL EDUCATION
SENATE APPROPRIATES PUBLIC HEARING
SB 2019
JANUARY 7, 2021

Chairman Senator Holmberg and Members of the Senate Appropriations Committee, as Director of Career and Technical Education in Cass County, I thank you for your leadership and commitment to the State of North Dakota and our region as you embark on the 67th Legislative Assembly.

I appreciate the opportunity to provide written testimony in support of SB 2019 which will provide necessary funding to the Department of Career and Technical Education, to not only sustain, but to GROW career and technical education learning models for workforce development and student success.

As of 2019, North Dakota reported CTE concentrators graduating at higher rates, 95.87% compared to 88%. Engaged CTE learners stay in school as they participate in relevant, hands-on projects. CTE learners see the value of education through industry partnerships and classroom activities that provide authentic work experiences. Alignment to post-secondary technical programs increase rigor, contribute to dual credit opportunities, and establish meaningful transitions to college, careers, work, or the military.

Career and Technical Education (CTE) has been and will remain vital in providing career awareness and preparing learners for training and job market shifts. As North Dakota employers report a shortage of highly-skilled workers and industries morph due to changing dynamics; strengthening and expanding K-12 career education, secondary and postsecondary CTE programs will serve as a critical foundation for learner access to relevant career and technical education (CTE) curriculums and quality experiential learning.

As a member of the 67th Legislative Assembly, you will have the opportunity to strengthen, expand, and transform North Dakota by investing in CTE funding, area career and technology centers, and career academies. I request your support and approval of SB 2019, as a vote of “no” will restrict us to grow. We look forward to your consideration and stand ready to partner with you to grow a highly skilled North Dakota workforce that will lead the nation!

Respectfully,
Dr. Denise Jonas, CTE Director

January 6, 2021

Senate Appropriation Committee Members:

I am writing this letter to request and encourage your continued support and funding of the TrainND program.

I have been a member of the TrainND Southeast Advisory Board for the past 4 years and am currently the Chairperson for the group. During my time on the board, I have come to learn of the absolute importance of this program across North Dakota.

TrainND links people and companies to training programs and resources that will allow them to grow and develop, both personally and professionally. These programs are typically thought to be technical in nature, but TrainND also provides soft skills training and leadership development opportunities. A variety of programs are offered as open-enrollment opportunities to individuals while companies also have the ability to receive customized training for their workforce.

We all realize that the workforce shortages in North Dakota continue to be one of the top issues in the state. TrainND has been instrumental in providing the opportunity for our citizens to grow, be trained/re-trained, learn new skills and provide an avenue for placement into the workforce. These programs assist the unemployed and under-employed. Companies working with TrainND find that they can find quick access to resources and training, at reasonable costs, and from trained instructors that know the local and regional business atmosphere and culture.

One of the unique features of the program is that it partners with business and industry to focus on current workforce needs. I have witnessed the program shift over the past 4 years to adapt to industry changes and needs and provide programs and resources that are needed real time.

We also all realize that a program like this comes at a considerable expense. I believe and feel I can represent the advisory board in the thought that this program truly needs to be viewed as an investment. An investment to North Dakota citizens, North Dakota companies and the to well-being and successful growth of the State. Without this program, hundreds of companies (especially smaller companies) and thousands of citizens/employees will not have the opportunity to help move themselves, their companies, and the State forward.

I encourage you to understand the numbers of individuals and companies supported since TrainND began in 1999; to understand the large and positive impact the program has had and will continue to have across North Dakota; and to support the robust funding of the program.

Only with your understanding, support, and funding can this effective and economically beneficial program continue to support our workforce needs.

In addition to my letter, I am providing several TrainND Southeast customer quotes that were provided to the Advisory Board.

With appreciation and respect for your service to our State,

A handwritten signature in black ink, appearing to read "Scott Wirth". The signature is fluid and cursive, with a long horizontal stroke at the end.

Scott Wirth
TrainND Southeast Advisory Board Chair
Human Resources Manager – Roers

Attachment

- Development
- Construction
- Property Management
- Commercial & Residential Real Estate

TrainND Southeast – Customer Quotes:

“To facilitate the foundational development of all managers and supervisors at Noridian Healthcare Solutions, we searched for a high-quality local management development course. Partnering with Susie Richards Carlson and Mary Beth Burns at NDSCS, we launched a Noridian specific training experience with the Blanchard Management Essentials program. Mary Beth proficiently facilitated the training content, skills application, and coaching tools. The course was engaging and our managers were able to immediately apply their learning to employee situations. Not only did our managers engage in great learning content and interactive skills application, they now have a common reference of coaching tools to build upon.

As partners in training the rollout of our management development course, Susie and Mary Beth at NDSCS were very helpful, attentive, and responsive. We could not be happier with our training experience at NDSCS and the Blanchard Management Essentials program!” – Victoria Simonson, Director of Talent For Development at Noridian Healthcare Solutions

“We recently completed a Manager training facilitated by Mary Beth Burns with TrainND SE. The virtual experience was engaging and educational. Our Managers received a tremendous amount of value from the four-week virtual training.” – Matt Skoy, Learning and Development Manager, Aldevron

“Our management team at Superior, Inc. participated in the ‘Management Essentials’ course at NDSCS and the entire team was fully satisfied with their experience. The course delivered a structured and engaging message that provided our team with many tools and practices they are using on the job. I would highly recommend this course to any business, as it provides a value of teamwork and positivity within your company.” – Doreen K. Brandt, PHR, SHRM-CP, Human Resources Manager at Superior Grain Equipment

The class was really good, in spite of the major world-wide distractions last week. The presenter did a very good job and was very well qualified/versed in the subject. He had the class start/stop on time and was very efficient with his time. He also provided an impressive BOAT LOAD of extra reference materials in addition to the course materials. The online platform worked very well. I definitely would not hesitate taking another online class from the New Horizons. Thanks for setting it up and for checking-in! – Tim Sanden, VP of Information Technology/CIO, Cass County Electric Cooperative

“I really liked the training. It was a very good overview of what Microsoft Azure can do and how to start using it. I also especially enjoyed the format of the training. It was very convenient to be able to take the training without having to travel anywhere.” – Paul Kautz, Information Systems Manager, Cass County Electric Cooperative

“Brian Ware is an excellent instructor and has many years of over-the-road truck driving experience. He has also been an over-the-road trainer for a carrier so he knows what it takes to do this challenging yet very rewarding career as a professional truck driver. Brian teaches the basic information that the students need to succeed as a professional truck driver. They have behind-the-wheel training and classroom training for every student. We all know that this nation has a critical shortage of professional truck drivers and NDSCS is doing their part the help with this critical shortage.” – Mark Wolter, Director of Safety and Maintenance, Midnight Express Incorporated



*“Things are progressing well. Those that went to training are gaining more experience every day. The training did help accelerate this learning. We will definitely look to NDSCS for more training in the future.” – **Mike Rude, Tank Supervisor at TrueNorth Steel***

*NDSCS frequently provides WCCO Belting with a variety of rooms for classes, meetings or breakout sessions for large groups or small. The staff is professional to work with and attentive to all the details necessary to make it a successful event for us, including room configuration, IT needs, and catering! During the recent COVID-19 pandemic, we feel confident that this is a safe location for our employees to gather. – **Kay Braun, Executive Administrator, WCCO Belting Inc.***

*“Uncooperative weather, but very cooperative staff at NDSCS! The training we held at NDSCS included sessions out at a land lab. Unfortunately, the weekend before the training brought heavy rain to the area. This made the land lab a wet, muddy mess, so we had to move those sessions indoors. Thankfully the staff at NDSCS were very flexible in allowing us to rent more classrooms and increase our catering orders last minute. The staff at NDSCS were very easy to work with from start to finish and they responded to any questions I had in a timely manner. All caterers and maintenance staff were very friendly and respectful. The facilities and classrooms were clean and well-kept. Hopefully, we’ll get to work with them again next year!” – **Leah Dyrdaahl, Lead Sales Coordinator, RDO Equipment Co.***

*“Working with the staff at NDSCS in renting a room for teaching has been smooth and enjoyable. The staff is friendly, accommodating, and professional. The classroom is clean and spacious. We appreciated having tech support available during the day. Reserving a room, securing a contract, and getting confirmation were done efficiently. Working with the staff at NDSCS is ideal as it is evident that the staff members enjoy their work, co-workers, and workplace environment.” – **Barbara Benda Nagle, Professional Artist, and Workshop Instructor, and Beverly Benda, Workshop Assistant***

January 6th, 2021

Kenny Bahm
Assistant Vice-President
Farm Credit Services of Mandan
Mandan, North Dakota

Dear Mr. Chairman,

I am writing on behalf of the Adult Farm Management/Farm Management Education program which is part of the Department of Career and Technical Education bill being discussed. As an agricultural lender, I have, and continue to work with the financial and statistical data that this program provides. Not only have I seen it benefit individual farm and ranch operations firsthand, but also many other statewide business sectors.

The overview state statistics show year to year industry trends and comparative information for operations of different size and scale broken down by regions. As many born and raised in North Dakota know, our agriculture commodities produced are numerous, and the challenges of growing, harvesting, financing, and marketing them are just as diverse. As citizens and consumers of many of these products, we all should be concerned with ensuring the best and long-term success of agriculture in this state and across the nation. Agriculture is one of the largest and longest standing state and national economies and when agriculture does well, main street does well too.

I work most closely with the program based out of Bismarck State College and their instructor Kyle Olson. One of the greatest aspects of this program is that it is a financially disinterested third-party to each member it serves because of the grant funding it receives. This program is imperative to many producers and industry leaders in urban areas, but especially in smaller rural communities. I know and appreciate all the time and effort put in annually by program instructors for the mutual success of producers we serve. I truly believe that those in this program know their business better than their peers because of the honest feedback and real-life application brought to the table. They make better and more informed decisions because of this learning opportunity which continues to add to the prosperity of our state.

Both of my parents are involved in public and private state education. One piece of advice I received from them, and carry with me to this day, is that a good education never goes to waste and is something no one can ever take from you. These statements apply heavily to this program and why it is so important to support this bill. If we do not educate the future of our state agriculturalists, I ask who will?

Now, more than ever, this program is vital to help producers that are struggling financially, mentally, and emotionally. They have seen several back to back years of depressed market prices that have brought on operational losses and highly stressed financial positions. These program instructors are not just financial educators, but wear many hats to counsel, coach, and guide those we call friends, family, and neighbors through the toughest of times. Let's take the chance to support those supporting others.

I would like to close with the following quote by Nelson Mandela— "Education is the most powerful weapon which you can use to change the world".

Thank you for your consideration and support of the Senate Appropriation Committee—Bill 2019 during the 67th North Dakota Legislative Assembly.



WRITTEN TESTIMONY
KIM MURPHY
DIRECTOR OF CAREER AND TECHNICAL EDUCATION
SENATE APPROPRIATES PUBLIC HEARING
SB 2019
JANUARY 7, 2021

Chairman Senator Holmberg and Members of the Senate Appropriations Committee, as the Director of the Great Northwest Area Career and Technical Center, I want to express my support for SB 2019.

Our particular center is considered a virtual center as we offer most of our classes through the ITV system or online and we do not have a brick and mortar-type building. We offer classes all over the state of ND but concentrate in the NW corner of the state. As we work to help our area schools, I continue to keep career awareness at the top of our priorities in all we do.

Currently, we are implementing Golden Path Solutions (GPS), an online career tool for students, in our member schools to help increase student awareness of career exploration, as well as increase exposure to career opportunities and future job placements. We work with industries in our communities to create job shadowing opportunities, and also plan student and teacher field trips to connect area schools with local industry with the goal of increasing student employment opportunities. This benefits the industries in our communities and strengthens our communities as a whole.

Career awareness is key for students to determine their future paths and the earlier they can start planning and exploring the better chance they have at finding something they truly love. As a member of the 67th Legislative Assembly, you will have the opportunity to help us continue this work for our state's youth. Please consider a "yes" vote on SB 2019 to support adequate funding for the future of North Dakota.

Respectfully,
Kim Murphy, GNWACTC Director



North Dakota Small Organized Schools

234

Mr. Michael Heilman
Executive Director
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Bismarck, ND 58504
mheilmandsos@gmail.com
701-527-4621

Mr. Brandt Dick
President
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Underwood, ND 5857
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701-442-3274

Mr. Steven Heim
Vice-President
PO Box 256
Drake, ND 58736
Steve.heim@k12.nd.us
701-465-3732

Chairman Holmberg and members of the Senate Appropriations Committee, my name is Michael Heilman and I am the Executive Director of the North Dakota Small Organized Schools (NDSOS). NDSOS supports current levels of funding for Career and Technical Education programs that are vital to the students we serve. Any loss of funding for Career and Technical Education can force schools to make difficult decisions regarding course offerings in areas that are often related to the very careers many of our students will ultimately seek.

Many of the 154 member schools of NDSOS use the North Dakota Center for Distance Education (NDCDE) to support their curriculum. Especially in this year when distance learning and hybrid schedules were the norm for many schools. Schools use NDCDE not just to enhance their curriculum by adding electives or to resolve scheduling conflicts, but in some cases NDCDE is the choice of schools for required coursework when qualified staff are not available. NDSOS opposes any cut in funding to NDCDE that could result in an increase in the cost of coursework for the schools.

My career in education was directly influenced by my high school experiences in what was then called vocational agriculture classes. I chose to become an Ag-Ed teacher and ultimately moved into educational administration. There is little doubt that I would not have made those choices had it not been for my experience in high school. For me it was teaching, but for others it may be welding, food science, carpentry, health careers, automotive technology, electronics or one of the many other Career and Technical Education programs.

As a principal I knew that I had the ability to accommodate a student’s schedule when an unresolvable conflict existed by accessing coursework from the NDCDE. Yes, there are other options available to our schools, but why wouldn’t we make every effort to use the program funded by our state. Maintaining funding is critical to staying competitive with other options. Thank you for the generous funding and the opportunities offered our students by Career and Technical Education and the North Dakota Center for Distance Education.

Mr. Michael Heilman – Executive Director
North Dakota Small Organized Schools
mheilmandsos@gmail.com
701.527.4621

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Mr. John Gruenberg, Supt. Powers Lake

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Region 6
Mr. Mitch Carlson, Supt. LaMoure
Dr. Steven Johnson, Supt. Lisbon

The mission of NDSOS is to provide leadership for the small/rural schools in North Dakota and to support legislation favorable to their philosophy while opposing legislation that is harmful.

LaMoure Public School 219

HIGH SCHOOL PRINCIPAL

Lucas Isaacson

ELEMENTARY PRINCIPAL

Laura Shockman

Business Manager

Sheila Bierman

MITCH CARLSON – Superintendent

105 – 6th Avenue SE

P.O. Box 656

LAMOURE, NORTH DAKOTA 58458

Email: Mitch.Carlson@sendit.nodak.edu

Phone 701-883-5396; Fax: 701-883-5144

Board of Education

Holly Braun, President

Jodi Laney, Vice President

Alana Lacina

Katie Potts

Jessica Duffy

January 7th, 2021

To Whom It May Concern:

RE: SB 2019

This testimony is in opposition to sections of SB 2019. Although the LaMoure School is strongly in favor of funding that goes toward CDE (Center for Distance Education), LaMoure School is opposed to the proposed cut in funding for CDE that has been initially proposed.

LaMoure School, along with many small schools in the state, rely heavily on the services that CDE provides. The following services have been specifically provided to LaMoure School.

1. The implementation of Smart Labs with technical, academic, and curriculum support.
2. The ability for our students to take courses via distance learning that could otherwise not be provided in rural schools.
3. The ability for the LaMoure students to take credit recovery courses we are not able to offer.
4. The implementation of a full curriculum to our Colony School for students beyond the 6th grade.

Without those services that CDE provides, for the LaMoure School, the choices are very limited to where we can obtain those services and find an affordable price.

When we have unprecedented times as we are currently in and in the future years, we rely on CDE to help provide classes for our students. Teacher shortages in rural schools have been a challenge. When positions are not filled, the LaMoure School relies on the services of CDE.

Although with the proposed budget presented, CDE will still exist for schools, but to what extent and what service that is currently provided to small rural school districts have to be eliminated with CDE? The only other option would be to pass the extra costs onto schools or students with the proposed budget cut.

Respectfully submitted,

Mitch Carlson / Superintendent

AN EQUAL OPPORTUNITY EMPLOYER

The LaMoure School District does not discriminate on the basis of race, national origin, sex, or handicap in its educational program, activities, and employment practices.

BOARD OF EDUCATION

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Jared Hoff Middle School Principal
Benjamin Zahrbock Elementary School
Principal

Lisbon Public Schools**School District No. 19**

502 Ash Street - Box 593

Lisbon, North Dakota 58054-0593 Phone: (701) 683-4106

High School Fax: (701) 683-4414

Middle School Fax: (701) 683-4111

"Providing Equal Opportunities for Employees and Students"

January 7, 2021

Honorable Holmberg and members of Appropriations Committee:

The Lisbon Public Schools is in opposition to any cut in funding to the Center of Distance Education (CDE) as part of the Career and Technology Education budget. Any cut to the funding to CDE could result in increased costs for our school district. We have used and continue to use CDE for credit recovery, electives and support for our SmartLab®. I have worked with CDE for over 40 years in providing top quality courses for our students when we did not have qualified staff members who could teach those courses. Working together, NDCDE and LPS have moved students from possible dropouts to high school graduates. The support we have received from CDE for our SmartLab® and its STEM curriculum has been excellent. STEM curriculum helps move our students to become ready for many skilled positions and additional training after high school. When Governor Burgum closed our schools on March 15, 2020, the first call I made was to Dr. Matt Lonn of CDE and he helped our staff develop meaningful distance learning for our students. They continue to support our distance-learning students today. Our small rural school needs partners like CDE so that we can provide opportunities for our students. Please do not cut NDCDE budget by \$508,190 as proposed in the Governor's budget.

Respectfully,

Steven L. Johnson, Ph.D.

2021 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Roughrider Room, State Capitol

SB 2019
1/26/2021
Senate Appropriations Committee

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Vice-Chair Kresbach opened the meeting at 3:07 p.m.

Senators present: Holmberg, Krebsbach, Wanzek, Bekkedahl, Poolman, Erbele, Dever, Oehlke, Rust, Davison, Hogue, Sorvaag, Mathern, and Heckaman.

Discussion Topics:

- Upcoming sub-committee meeting
- Concerns about budget

Senator Poolman discussed the sub-committee on SB 2019.

Vice-Chair Kresbach closed the meeting at 3:10 p.m.

Rose Laning, Committee Clerk

2021 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Roughrider Room, State Capitol

SB 2019
1/28/2021
Senate Appropriations Sub-committee

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Senator Poolman opened the hearing at 11:00 AM. **Senators Poolman, Erbele and Heckaman** were present.

Discussion Topics:

- Base Level Funding and Changes
- Rent
- STEM Funding
- Cost of continuing

Wayde Sick, Director, Dept. of Career and Tech Ed – explained the proposed changes in the budget.

Craig Kleven, Supervisor of Agriculture Education, Career & Tech Ed answered budget questions.

Sara Vollmer, Director, Train ND SW - answered questions of the sub-committee.

Becky Deichert, OMB Analyst - answered questions of the sub-committee.

Additional written testimony - #4099

Senator Poolman closed the hearing at 11:34 am.

Rose Laning, Committee Clerk

Department of Career and Technical Education - Budget No. 270
Senate Bill No. 2019
Base Level Funding Changes

	Executive Budget Recommendation				Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2021-23 Biennium Base Level	52.30	\$40,064,988	\$14,703,121	\$54,768,109	52.30	\$40,064,988	\$14,703,121	\$54,768,109
2021-23 Ongoing Funding Changes								
Base payroll changes		(\$1)	\$23,018	\$23,017				\$0
Salary increase		256,821		256,821				0
Health insurance increase		2,442		2,442				0
Retirement contribution increase		32,132		32,132				0
Removes 1 FTE assistant program supervisor position	(1.00)	(174,335)		(174,335)				0
Removes 1 FTE administrative assistant II position	(1.00)	(118,279)		(118,279)				0
Reduces funding for temporary salaries		(17,688)	(8,712)	(26,400)				0
Reduces funding for operating expenses		(62,207)		(62,207)				0
Adds funding for state agency Capitol grounds rent proposal		169,313		169,313				0
Adds funding for Microsoft Office 365 license expenses		474	2,390	2,864				0
Transfers STEM funding from operating to secondary grants				0				0
Adds federal funding for an apprenticeship grant program			300,000	300,000				0
Adds funding for costs to continue school reimbursement rates		1,000,000		1,000,000				0
Reduces funding for Marketplace for Kids		(50,000)		(50,000)				0
Remove funding for postsecondary grants		(256,982)		(256,982)				0
Reduces funding for adult farm management		(138,111)		(138,111)				0
Reduces funding for workforce training		(100,000)		(100,000)				0
Reduces funding for Center for Distance Education rent			(152,500)	(152,500)				0
Adds funding for Center for Distance Education IT expenses			152,500	152,500				0
Removes temporary Center for Distance Education salaries		(630,119)		(630,119)				0
Total ongoing funding changes	(2.00)	(\$86,540)	\$316,696	\$230,156	0.00	\$0	\$0	\$0
One-time funding items								
Adds funding to bond for a career academy grant program			\$45,000,000	\$45,000,000				\$0
Total one-time funding changes	0.00	\$0	\$45,000,000	\$45,000,000	0.00	\$0	\$0	\$0
Total Changes to Base Level Funding	(2.00)	(\$86,540)	\$45,316,696	\$45,230,156	0.00	\$0	\$0	\$0
2021-23 Total Funding	50.30	\$39,978,448	\$60,019,817	\$99,998,265	52.30	\$40,064,988	\$14,703,121	\$54,768,109
<i>Total ongoing changes as a percentage of base level</i>	<i>(3.8%)</i>	<i>(0.2%)</i>	<i>2.2%</i>	<i>0.4%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>
<i>Total changes as a percentage of base level</i>	<i>(3.8%)</i>	<i>(0.2%)</i>	<i>308.2%</i>	<i>82.6%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>

Other Sections in Department of Career and Technical Education - Budget No. 270

Executive Budget Recommendation

Senate Version

Career academy competitive matching grant program

Section 3 would identify \$45 million of one-time funding from bonding proceeds to the Department of Career and Technical Education for the purpose of providing competitive workforce development grants to build career academies, with a maximum of \$15 million being allowed per project, for the 2021-23 biennium. A committee consisting of the leaders or designees of the Department of Career and Technical Education, Department of Commerce, Job Service North Dakota, and Department of Public Instruction would develop a competitive process in consultation with the Workforce Development Council, Economic Development Foundation, and the Career and Technical Education Board, to distribute the funds with a required 1-to-1 match from private sector or political subdivision funds.

Line item transfers

Section 4 would authorize the Office of Management and Budget to transfer funds between line items in Section 1 as requested by the Department of Career and Technical Education during the 2021-23 biennium.

REQUEST/RECOMMENDATION COMPARISON SUMMARY

270 Career and Technical Education

Biennium: 2021-2023

Description	Expenditures Prev Biennium 2017-2019	Legislative Base 2019-2021	2021-2023 Requested		Requested Budget 2021-2023	2021-2023 Recommended		Executive Recommendation 2021-2023
			Incr(Decr)	% Chg		Incr(Decr)	% Chg	
By Major Program								
Administration	5,341,133	7,170,561	(335,685)	(4.7%)	6,834,876	(116,561)	(1.6%)	7,054,000
Grants	35,187,004	38,246,360	(545,093)	(1.4%)	37,701,267	45,854,907	119.9%	84,101,267
CDE	0	9,351,188	(652,637)	(7.0%)	8,698,551	(508,190)	(5.4%)	8,842,998
Total Major Programs	40,528,137	54,768,109	(1,533,415)	(2.8%)	53,234,694	45,230,156	82.6%	99,998,265
By Line Item								
Salaries and Wages	4,446,703	4,812,765	(273,478)	(5.7%)	4,539,287	(126,531)	(2.6%)	4,686,234
Operating Expenses	894,430	2,357,796	(62,207)	(2.6%)	2,295,589	9,970	0.4%	2,367,766
Grants	32,327,581	9,207,349	0	0.0%	9,207,349	45,300,000	492.0%	54,507,349
Secondary Grants	0	24,587,780	0	0.0%	24,587,780	1,100,000	4.5%	25,687,780
Postsecondary Grants	279,601	256,982	(256,982)	(100.0%)	0	(256,982)	(100.0%)	0
Adult Farm Management	579,822	1,894,249	(138,111)	(7.3%)	1,756,138	(138,111)	(7.3%)	1,756,138
Workforce Training	2,000,000	2,000,000	(100,000)	(5.0%)	1,900,000	(100,000)	(5.0%)	1,900,000
Marketplace for Kids	0	300,000	(50,000)	(16.7%)	250,000	(50,000)	(16.7%)	250,000
Center for Distance Ed	0	9,351,188	(652,637)	(7.0%)	8,698,551	(508,190)	(5.4%)	8,842,998
Total Line Items	40,528,137	54,768,109	(1,533,415)	(2.8%)	53,234,694	45,230,156	82.6%	99,998,265
By Funding Source								
General Fund	29,145,923	40,064,988	(1,547,721)	(3.9%)	38,517,267	(86,540)	(0.2%)	39,978,448
Federal Funds	9,332,054	11,498,147	14,306	0.1%	11,512,453	316,696	2.8%	11,814,843
Special Funds	2,050,160	3,204,974	0	0.0%	3,204,974	45,000,000	1,404.1%	48,204,974
Total Funding Source	40,528,137	54,768,109	(1,533,415)	(2.8%)	53,234,694	45,230,156	82.6%	99,998,265
Total FTE	24.50	52.30	(2.00)	(3.8%)	50.30	(2.00)	(3.8%)	50.30

2021 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Roughrider Room, State Capitol

SB 2019
2/3/2021
CTE Sub-Committee

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Senator Poolman opened the meeting at 9:33 a.m.

Senators present: **Poolman, Erbele, and Heckaman**

Discussion Topics:

- Restoring Funds
- CTE Centers
- Adjustments to the Budget

Wayde Sick, State Director, North Dakota Department of Career and Technical Education, answered questions from the sub-committee.

Gwen Ferderer, answered questions from the sub-committee.

Sara Vollmer, TrainND, Bismarck State College, answered questions from the sub-committee.

Matthew Lonn, answered questions from the sub-committee.

Senator Poolman closed the meeting at 10:20 a.m.

Rose Laning, Committee Clerk

2021 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Roughrider Room, State Capitol

SB 2019
2/8/2021
Career & Technical Education Sub-committee

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Senator Poolman opened the hearing at 3:31 pm.

Senators present: **Poolman, Erbele, and Heckaman.**

Discussion Topics:

- Governor's recommendation

Wayde Sick, Director, Career and Technical Education – answered questions from the sub-committee.

Levi Kinnischtzke, Legislative Council presented #5969 and answered subcommittee questions.

Senator Erbele motioned to have Legislative Council draw up amendment.

Senator Heckaman seconded the motion.

Senator Poolman - Y

Senator Erbele -Y

Senator Heckaman -Y

Roll Call vote 3-0-0.

Motion passes.

Senator Poolman closed the hearing at 3:45 pm.

Rose Laning, Committee Clerk

Department of Career and Technical Education - Budget No. 270
 Senate Bill No. 2019
 Base Level Funding Changes

Updated for Discussion as of: 2/3/2021

	Executive Budget Recommendation				Senate Version				Senate Changes to Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2021-23 Biennium Base Level	52.30	\$40,064,988	\$14,703,121	\$54,768,109	52.30	\$40,064,988	\$14,703,121	\$54,768,109	0.00	\$0	\$0	\$0
2021-23 Ongoing Funding Changes												
Base payroll changes		(\$1)	\$23,018	\$23,017		(\$1)	\$23,018	\$23,017				\$0
Salary increase		256,821		256,821		256,821		256,821				0
Health insurance increase		2,442		2,442		2,442		2,442				0
Retirement contribution increase		32,132		32,132				0		(32,132)		(32,132)
Removes 1 FTE assistant program supervisor position	(1.00)	(174,335)		(174,335)	(1.00)	(174,335)		(174,335)				0
Removes 1 FTE administrative assistant II position	(1.00)	(118,279)		(118,279)	(1.00)	(118,279)		(118,279)				0
Reduces funding for temporary salaries		(17,688)	(8,712)	(26,400)		(17,688)	(8,712)	(26,400)				0
Reduces funding for operating expenses		(62,207)		(62,207)		(62,207)		(62,207)				0
Adds funding for state agency Capitol grounds rent proposal		169,313		169,313				0		(169,313)		(169,313)
Adds funding for Microsoft Office 365 license expenses		474	2,390	2,864		474	2,390	2,864				0
Transfers STEM funding from operating to secondary grants				0				0				0
Adds federal funding for an apprenticeship grant program			300,000	300,000			300,000	300,000				0
Adds funding for costs to continue school reimbursement rates		1,000,000		1,000,000		1,500,000		1,500,000		500,000		500,000
Adds funding for new and expanding CTE programs				0				0				0
Reduces funding for Marketplace for Kids		(50,000)		(50,000)		(50,000)		(50,000)				0
Remove funding for postsecondary grants		(256,982)		(256,982)		(256,982)		(256,982)				0
Reduces funding for adult farm management		(138,111)		(138,111)		(138,111)		(138,111)				0
Reduces funding for workforce training		(100,000)		(100,000)		(100,000)		(100,000)				0
Reduces funding for Center for Distance Education rent			(152,500)	(152,500)			(152,500)	(152,500)				0
Adds funding for Center for Distance Education IT expenses			152,500	152,500			152,500	152,500				0
Removes temporary Center for Distance Education salaries		(630,119)		(630,119)				0		630,119		630,119
Total ongoing funding changes	(2.00)	(\$86,540)	\$316,696	\$230,156	(2.00)	\$842,134	\$316,696	\$1,158,830	0.00	\$928,674	\$0	\$928,674
One-time funding items												
Adds funding to bond for a career academy grant program			\$45,000,000	\$45,000,000			\$45,000,000	\$45,000,000			\$0	\$0
Total one-time funding changes	0.00	\$0	\$45,000,000	\$45,000,000	0.00	\$0	\$45,000,000	\$45,000,000	0.00	\$0	\$0	\$0
Total Changes to Base Level Funding	(2.00)	(\$86,540)	\$45,316,696	\$45,230,156	(2.00)	\$842,134	\$45,316,696	\$46,158,830	0.00	\$928,674	\$0	\$928,674
2021-23 Total Funding	50.30	\$39,978,448	\$60,019,817	\$99,998,265	50.30	\$40,907,122	\$60,019,817	\$100,926,939	0.00	\$928,674	\$0	\$928,674
<i>Total ongoing changes as a percentage of base level</i>	(3.8%)	(0.2%)	2.2%	0.4%	(3.8%)	2.1%	2.2%	2.1%				
<i>Total changes as a percentage of base level</i>	(3.8%)	(0.2%)	308.2%	82.6%	(3.8%)	2.1%	308.2%	84.3%				

Other Sections in Department of Career and Technical Education - Budget No. 270

Executive Budget Recommendation

Senate Version

Career academy competitive matching grant program

Section 3 would identify \$45 million of one-time funding from bonding proceeds to the Department of Career and Technical Education for the purpose of providing competitive workforce development grants to build career academies, with a maximum of \$15 million being allowed per project, for the 2021-23 biennium. A committee consisting of the leaders or designees of the Department of Career and Technical Education, Department of Commerce, Job Service North Dakota, and Department of Public Instruction would develop a competitive process in consultation with the Workforce Development Council, Economic Development Foundation, and the Career and Technical Education Board, to distribute the funds with a required 1-to-1 match from private sector or political subdivision funds.

Line item transfers

Section 4 would authorize the Office of Management and Budget to transfer funds between line items in Section 1 as requested by the Department of Career and Technical Education during the 2021-23 biennium.

2021 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee Roughrider Room, State Capitol

SB 2019
2/9/2021

Senate Appropriations Committee

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Committee work started at 2:10 pm.

Senators present: **Holmberg, Krebsbach, Wanzek, Bekkedahl, Poolman, Erbele, Dever, Oehlke, Rust, Davison, Hogue, Sorvaag, Mathern, and Heckaman.** Senator **Bekkedahl** absent.

Discussion Topics:

- Amendment details

Senator Poolman presented amendment LC 21.0301.01001 (#6137) and moved adoption of the amendment.

Senator Davison second.

<i>Senators</i>		<i>Senators</i>	
<i>Senator Holmberg</i>	Y	<i>Senator Hogue</i>	Y
<i>Senator Krebsbach</i>	Y	<i>Senator Oehlke</i>	Y
<i>Senator Wanzek</i>	Y	<i>Senator Poolman</i>	Y
<i>Senator Bekkedahl</i>	A	<i>Senator Rust</i>	Y
<i>Senator Davison</i>	Y	<i>Senator Sorvaag</i>	Y
<i>Senator Dever</i>	Y	<i>Senator Heckaman</i>	Y
<i>Senator Erbele</i>	Y	<i>Senator Mathern</i>	Y

Roll Call vote - 13-0-1
Amendment adopted.

Senator Poolman moved DO PASS As Amended on SB 2019.

Senator Davison second.

<i>Senators</i>		<i>Senators</i>	
<i>Senator Holmberg</i>	Y	<i>Senator Hogue</i>	Y
<i>Senator Krebsbach</i>	Y	<i>Senator Oehlke</i>	Y
<i>Senator Wanzek</i>	Y	<i>Senator Poolman</i>	Y
<i>Senator Bekkedahl</i>	A	<i>Senator Rust</i>	Y
<i>Senator Davison</i>	Y	<i>Senator Sorvaag</i>	Y
<i>Senator Dever</i>	Y	<i>Senator Heckaman</i>	Y
<i>Senator Erbele</i>	Y	<i>Senator Mathern</i>	Y

Roll Call vote – 13-0-1. Motion carries.

Senator Poolman will carry the bill on the floor.

Senator Holmberg closed the committee work at 2:17 pm.

Rose Laning, Committee Clerk

CS
 2/9
 1 of 4

PROPOSED AMENDMENTS TO SENATE BILL NO. 2019

Page 1, line 2, after "education" insert "; and to provide a report"

Page 1, replace lines 10 through 24 with:

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Salaries and wages	\$4,812,765	(\$158,124)	\$4,654,641
Operating expenses	2,357,796	(159,343)	2,198,453
Grants	9,207,349	45,300,000	54,507,349
Grants - secondary	24,587,780	2,600,000	27,187,780
Marketplace for kids	300,000	(50,000)	250,000
Grants - postsecondary	256,982	(256,982)	0
Adult farm management	1,894,249	(138,111)	1,756,138
Workforce training	2,000,000	(100,000)	1,900,000
Center for distance education	<u>9,351,188</u>	<u>113,465</u>	<u>9,464,653</u>
Total all funds	\$54,768,109	\$47,150,905	\$101,919,014
Less estimated income	<u>14,703,121</u>	<u>45,316,696</u>	<u>60,019,817</u>
Total general fund	\$40,064,988	\$1,834,209	\$41,899,197
Full-time equivalent positions	52.30	(2.00)	50.30

SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO SIXTY-EIGHTH LEGISLATIVE ASSEMBLY. The following amounts reflect the one-time funding items approved by the sixty-sixth legislative assembly for the 2019-21 biennium and the one-time funding items included in the appropriation in section 1 of this Act:

<u>One-Time Funding Description</u>	<u>2019-21</u>	<u>2021-23</u>
Career academy grants	\$0	\$45,000,000
Total all funds	\$0	\$45,000,000
Less estimated income	0	45,000,000
Total general fund	\$0	\$0

The 2021-23 biennium one-time funding amounts are not a part of the entity's base budget for the 2023-25 biennium. The department of career and technical education shall report to the appropriations committees of the sixty-eighth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2021, and ending June 30, 2023."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2019 - Dept. of Career and Technical Education - Senate Action

	<u>Base Budget</u>	<u>Senate Changes</u>	<u>Senate Version</u>
Salaries and wages	\$4,812,765	(\$158,124)	\$4,654,641
Operating expenses	2,357,796	(159,343)	2,198,453
Grants	9,207,349	45,300,000	54,507,349
Grants - Secondary	24,587,780	2,600,000	27,187,780
Marketplace for kids	300,000	(50,000)	250,000
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Adult farm management	1,894,249	(138,111)	1,756,138

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Less estimated income	14,703,121	45,316,696	60,019,817
General fund	\$40,064,988	\$1,834,209	\$41,899,197
FTE	52.30	(2.00)	50.30

Department 270 - Dept. of Career and Technical Education - Detail of Senate Changes

	Adjusts Funding for Base Payroll Changes ¹	Adds Funding for Salary and Benefit Increases ²	Removes Positions ³	Adjusts Base Level Funding ⁴	Transfers STEM Funding ⁵	Adds Funding for an Apprenticeship Grant Program ⁶
Salaries and wages	\$45,536	\$115,354	(\$292,614)	(\$26,400)		
Operating expenses				(59,343)	(\$100,000)	
Grants						\$300,000
Grants - Secondary Marketplace for kids					100,000	
Grants - Postsecondary Adult farm management						
Workforce training						
Center for distance education	(22,519)	135,984				
Total all funds	\$23,017	\$251,338	(\$292,614)	(\$85,743)	\$0	\$300,000
Less estimated income	23,018	0	0	(6,322)	0	300,000
General fund	(\$1)	\$251,338	(\$292,614)	(\$79,421)	\$0	\$0
FTE	0.00	0.00	(2.00)	0.00	0.00	0.00

	Adds Funding for Cost to Continue Reimbursement Rates ⁷	Adds Funding for New and Expanding Programs ⁸	Reduces Funding for Marketplace for Kids ⁹	Removes Funding for Postsecondary Grants ¹⁰	Reduces Funding for Adult Farm Management ¹¹	Reduces Funding for Workforce Training ¹²
Salaries and wages						
Operating expenses						
Grants						
Grants - Secondary Marketplace for kids	\$1,500,000	\$1,000,000	(\$50,000)			
Grants - Postsecondary Adult farm management				(\$256,982)	(\$138,111)	
Workforce training						(\$100,000)
Center for distance education						
Total all funds	\$1,500,000	\$1,000,000	(\$50,000)	(\$256,982)	(\$138,111)	(\$100,000)
Less estimated income	0	0	0	0	0	0
General fund	\$1,500,000	\$1,000,000	(\$50,000)	(\$256,982)	(\$138,111)	(\$100,000)
FTE	0.00	0.00	0.00	0.00	0.00	0.00

3 of 4

	Adds One-Time Funding for Career Academies ¹²	Total Senate Changes
Salaries and wages		(\$158,124)
Operating expenses		(159,343)
Grants	\$45,000,000	45,300,000
Grants - Secondary		2,600,000
Marketplace for kids		(50,000)
Grants - Postsecondary		(256,982)
Adult farm management		(138,111)
Workforce training		(100,000)
Center for distance education		113,465
Total all funds	\$45,000,000	\$47,150,905
Less estimated income	45,000,000	45,316,696
General fund	\$0	\$1,834,209
FTE	0.00	(2.00)

¹ Funding is adjusted for base payroll changes.

² The following funding is added for 2021-23 biennium salary adjustments of 2 percent on July 1, 2021, with a minimum monthly increase of \$80 and a maximum monthly increase of \$300 and 2 percent on July 1, 2022, and increases in health insurance premiums from \$1,427 to \$1,429 per month:

	<u>General Fund</u>
Salary increase	\$248,896
Health insurance increase	<u>2,442</u>
Total	\$251,338

³ Funding is removed from the general fund for 1 FTE assistant program supervisor position (\$174,335) and 1 FTE administrative assistant II position (\$118,279).

⁴ Base level funding is adjusted as follows:

	<u>General Fund</u>	<u>Other Funds</u>	<u>Total</u>
Reduces funding for temporary salaries	(\$17,688)	(\$8,712)	(\$26,400)
Reduces funding for operating expenses	(62,207)	0	(62,207)
Adds funding for Microsoft Office 365 license expenses	474	2,390	2,864
Reduces funding for Center for Distance Education rent	0	(152,500)	(152,500)
Adds funding for Center for Distance Education information technology expenses	<u>0</u>	<u>152,500</u>	<u>152,500</u>
Total	(\$79,421)	(\$6,322)	(\$85,743)

⁵ Science, technology, engineering, and mathematics (STEM) funding of \$100,000 from the general fund is transferred from the operating expenses line item to the secondary grants line item.

⁶ Federal funding of \$300,000 is added for an apprenticeship grant program. The funding will be transferred to Lake Region State College for the administration of the program. In August 2020, the Emergency Commission and Budget Section approved a request to accept and spend \$122,695 of federal funds for this program for the remainder of the 2019-21 biennium.

⁷ Funding of \$1.5 million is added from the general fund for the cost to continue career and technical education course cost reimbursement rates at schools (27 percent) and area career and technical centers (40 percent).

⁸ Funding of \$1 million is added from the general fund to reimburse schools and area career and technical centers for the cost of new and expanding career and technical education program course expenses.

⁹ Funding for the Marketplace for Kids program is reduced by \$50,000 to provide a total of \$250,000 from the general fund.

¹⁰ Funding of \$256,982 from the general fund is removed for postsecondary grants to eliminate the program.

¹¹ Funding for the adult farm management program is reduced by \$138,111 to provide a total of \$1,756,138 from the general fund.

¹² Funding is reduced for workforce training to provide a total of \$1.9 million from the general fund.

¹³ Funding is added from bond proceeds for competitive workforce development grants to build career academies.

REPORT OF STANDING COMMITTEE

SB 2019: Appropriations Committee (Sen. Holmberg, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (13 YEAS, 0 NAYS, 1 ABSENT AND NOT VOTING). SB 2019 was placed on the Sixth order on the calendar.

Page 1, line 2, after "education" insert "; and to provide a report"

Page 1, replace lines 10 through 24 with:

"	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
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Center for distance education	<u>9,351,188</u>	<u>113,465</u>	<u>9,464,653</u>
Total all funds	\$54,768,109	\$47,150,905	\$101,919,014
Less estimated income	<u>14,703,121</u>	<u>45,316,696</u>	<u>60,019,817</u>
Total general fund	\$40,064,988	\$1,834,209	\$41,899,197
Full-time equivalent positions	52.30	(2.00)	50.30

SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO SIXTY-EIGHTH LEGISLATIVE ASSEMBLY. The following amounts reflect the one-time funding items approved by the sixty-sixth legislative assembly for the 2019-21 biennium and the one-time funding items included in the appropriation in section 1 of this Act:

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Total all funds	\$0	\$45,000,000
Less estimated income	0	45,000,000
Total general fund	\$0	\$0

The 2021-23 biennium one-time funding amounts are not a part of the entity's base budget for the 2023-25 biennium. The department of career and technical education shall report to the appropriations committees of the sixty-eighth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2021, and ending June 30, 2023."

Re-number accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2019 - Dept. of Career and Technical Education - Senate Action

	<u>Base Budget</u>	<u>Senate Changes</u>	<u>Senate Version</u>
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General fund	\$40,064,988	\$1,834,209	\$41,899,197

FTE 52.30 (2.00) 50.30

Department 270 - Dept. of Career and Technical Education - Detail of Senate Changes

	Adjusts Funding for Base Payroll Changes ¹	Adds Funding for Salary and Benefit Increases ²	Removes Positions ³	Adjusts Base Level Funding ⁴	Transfers STEM Funding ⁵	Adds Funding for an Apprenticeship Grant Program ⁶
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Operating expenses				(59,343)	(\$100,000)	
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General fund	(\$1)	\$251,338	(\$292,614)	(\$79,421)	\$0	\$0
FTE	0.00	0.00	(2.00)	0.00	0.00	0.00

	Adds Funding for Cost to Continue Reimbursement Rates ⁷	Adds Funding for New and Expanding Programs ⁸	Reduces Funding for Marketplace for Kids ⁹	Removes Funding for Postsecondary Grants ¹⁰	Reduces Funding for Adult Farm Management ¹¹	Reduces Funding for Workforce Training ¹²
Salaries and wages						
Operating expenses						
Grants						
Grants - Secondary Marketplace for kids	\$1,500,000	\$1,000,000	(\$50,000)			
Grants - Postsecondary				(\$256,982)		
Adult farm management					(\$138,111)	
Workforce training						(\$100,000)
Center for distance education						
Total all funds	\$1,500,000	\$1,000,000	(\$50,000)	(\$256,982)	(\$138,111)	(\$100,000)
Less estimated income	0	0	0	0	0	0
General fund	\$1,500,000	\$1,000,000	(\$50,000)	(\$256,982)	(\$138,111)	(\$100,000)
FTE	0.00	0.00	0.00	0.00	0.00	0.00

	Adds One-Time Funding for Career Academies ¹³	Total Senate Changes
Salaries and wages		(\$158,124)
Operating expenses		(159,343)
Grants	\$45,000,000	45,300,000
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² The following funding is added for 2021-23 biennium salary adjustments of 2 percent on July 1, 2021, with a minimum monthly increase of \$80 and a maximum monthly increase of \$300 and 2 percent on July 1, 2022, and increases in health insurance premiums from \$1,427 to \$1,429 per month:

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Salary increase	\$248,896
Health insurance increase	<u>2,442</u>
Total	\$251,338

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Total	(\$79,421)	(\$6,322)	(\$85,743)

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⁷ Funding of \$1.5 million is added from the general fund for the cost to continue career and technical education course cost reimbursement rates at schools (27 percent) and area career and technical centers (40 percent).

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21.0301.01001
 Title.
 Fiscal No. 1

Prepared by the Legislative Council staff for
 Senator Poolman
 February 9, 2021

PROPOSED AMENDMENTS TO SENATE BILL NO. 2019

Page 1, line 2, after "education" insert "; and to provide a report"

Page 1, replace lines 10 through 24 with:

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Salaries and wages	\$4,812,765	(\$158,124)	\$4,654,641
Operating expenses	2,357,796	(159,343)	2,198,453
Grants	9,207,349	45,300,000	54,507,349
Grants - secondary	24,587,780	2,600,000	27,187,780
Marketplace for kids	300,000	(50,000)	250,000
Grants - postsecondary	256,982	(256,982)	0
Adult farm management	1,894,249	(138,111)	1,756,138
Workforce training	2,000,000	(100,000)	1,900,000
Center for distance education	<u>9,351,188</u>	<u>113,465</u>	<u>9,464,653</u>
Total all funds	\$54,768,109	\$47,150,905	\$101,919,014
Less estimated income	<u>14,703,121</u>	<u>45,316,696</u>	<u>60,019,817</u>
Total general fund	\$40,064,988	\$1,834,209	\$41,899,197
Full-time equivalent positions	52.30	(2.00)	50.30

SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO SIXTY-EIGHTH LEGISLATIVE ASSEMBLY. The following amounts reflect the one-time funding items approved by the sixty-sixth legislative assembly for the 2019-21 biennium and the one-time funding items included in the appropriation in section 1 of this Act:

<u>One-Time Funding Description</u>	<u>2019-21</u>	<u>2021-23</u>
Career academy grants	\$0	<u>\$45,000,000</u>
Total all funds	\$0	<u>\$45,000,000</u>
Less estimated income	0	<u>45,000,000</u>
Total general fund	\$0	\$0

The 2021-23 biennium one-time funding amounts are not a part of the entity's base budget for the 2023-25 biennium. The department of career and technical education shall report to the appropriations committees of the sixty-eighth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2021, and ending June 30, 2023."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2019 - Dept. of Career and Technical Education - Senate Action

	Base Budget	Senate Changes	Senate Version
Salaries and wages	\$4,812,765	(\$158,124)	\$4,654,641
Operating expenses	2,357,796	(159,343)	2,198,453
Grants	9,207,349	45,300,000	54,507,349
Grants - Secondary	24,587,780	2,600,000	27,187,780
Marketplace for kids	300,000	(50,000)	250,000
Grants - Postsecondary	256,982	(256,982)	
Adult farm management	1,894,249	(138,111)	1,756,138

Workforce training	2,000,000	(100,000)	1,900,000
Center for distance education	9,351,188	113,465	9,464,653
Total all funds	\$54,768,109	\$47,150,905	\$101,919,014
Less estimated income	14,703,121	45,316,696	60,019,817
General fund	\$40,064,988	\$1,834,209	\$41,899,197
FTE	52.30	(2.00)	50.30

Department 270 - Dept. of Career and Technical Education - Detail of Senate Changes

	Adjusts Funding for Base Payroll Changes ¹	Adds Funding for Salary and Benefit Increases ²	Removes Positions ³	Adjusts Base Level Funding ⁴	Transfers STEM Funding ⁵	Adds Funding for an Apprenticeship Grant Program ⁶
Salaries and wages	\$45,536	\$115,354				
Operating expenses				(\$26,400)		
Grants				(59,343)	(\$100,000)	\$300,000
Grants - Secondary Marketplace for kids					100,000	
Grants - Postsecondary						
Adult farm management						
Workforce training						
Center for distance education	(22,519)	135,984				
Total all funds	\$23,017	\$251,338	(\$292,614)	(\$85,743)	\$0	\$300,000
Less estimated income	23,018	0	0	(6,322)	0	300,000
General fund	(\$1)	\$251,338	(\$292,614)	(\$79,421)	\$0	\$0
FTE	0.00	0.00	(2.00)	0.00	0.00	0.00

	Adds Funding for Cost to Continue Reimbursement Rates ⁷	Adds Funding for New and Expanding Programs ⁸	Reduces Funding for Marketplace for Kids ⁹	Removes Funding for Postsecondary Grants ¹⁰	Reduces Funding for Adult Farm Management ¹¹	Reduces Funding for Workforce Training ¹²
Salaries and wages						
Operating expenses						
Grants						
Grants - Secondary	\$1,500,000	\$1,000,000				
Marketplace for kids			(\$50,000)			
Grants - Postsecondary				(\$256,982)		
Adult farm management					(\$138,111)	
Workforce training						(\$100,000)
Center for distance education						
Total all funds	\$1,500,000	\$1,000,000	(\$50,000)	(\$256,982)	(\$138,111)	(\$100,000)
Less estimated income	0	0	0	0	0	0
General fund	\$1,500,000	\$1,000,000	(\$50,000)	(\$256,982)	(\$138,111)	(\$100,000)
FTE	0.00	0.00	0.00	0.00	0.00	0.00

	Adds One-Time Funding for Career Academies ¹³	Total Senate Changes
Salaries and wages		(\$158,124)
Operating expenses		(159,343)
Grants	\$45,000,000	45,300,000
Grants - Secondary		2,600,000
Marketplace for kids		(50,000)
Grants - Postsecondary		(256,982)
Adult farm management		(138,111)
Workforce training		(100,000)
Center for distance education		113,465
Total all funds	\$45,000,000	\$47,150,905
Less estimated income	45,000,000	45,316,696
General fund	\$0	\$1,834,209
FTE	0.00	(2.00)

¹ Funding is adjusted for base payroll changes.

² The following funding is added for 2021-23 biennium salary adjustments of 2 percent on July 1, 2021, with a minimum monthly increase of \$80 and a maximum monthly increase of \$300 and 2 percent on July 1, 2022, and increases in health insurance premiums from \$1,427 to \$1,429 per month:

	<u>General Fund</u>
Salary increase	\$248,896
Health insurance increase	<u>2,442</u>
Total	\$251,338

³ Funding is removed from the general fund for 1 FTE assistant program supervisor position (\$174,335) and 1 FTE administrative assistant II position (\$118,279).

⁴ Base level funding is adjusted as follows:

	<u>General Fund</u>	<u>Other Funds</u>	<u>Total</u>
Reduces funding for temporary salaries	(\$17,688)	(\$8,712)	(\$26,400)
Reduces funding for operating expenses	(62,207)	0	(62,207)
Adds funding for Microsoft Office 365 license expenses	474	2,390	2,864
Reduces funding for Center for Distance Education rent	0	(152,500)	(152,500)
Adds funding for Center for Distance Education information technology expenses	<u>0</u>	<u>152,500</u>	<u>152,500</u>
Total	(\$79,421)	(\$6,322)	(\$85,743)

⁵ Science, technology, engineering, and mathematics (STEM) funding of \$100,000 from the general fund is transferred from the operating expenses line item to the secondary grants line item.

⁶ Federal funding of \$300,000 is added for an apprenticeship grant program. The funding will be transferred to Lake Region State College for the administration of the program. In August 2020, the Emergency Commission and Budget Section approved a request to accept and spend \$122,695 of federal funds for this program for the remainder of the 2019-21 biennium.

⁷ Funding of \$1.5 million is added from the general fund for the cost to continue career and technical education course cost reimbursement rates at schools (27 percent) and area career and technical centers (40 percent).

⁸ Funding of \$1 million is added from the general fund to reimburse schools and area career and technical centers for the cost of new and expanding career and technical education program course expenses.

⁹ Funding for the Marketplace for Kids program is reduced by \$50,000 to provide a total of \$250,000 from the general fund.

¹⁰ Funding of \$256,982 from the general fund is removed for postsecondary grants to eliminate the program.

¹¹ Funding for the adult farm management program is reduced by \$138,111 to provide a total of \$1,756,138 from the general fund.

¹² Funding is reduced for workforce training to provide a total of \$1.9 million from the general fund.

¹³ Funding is added from bond proceeds for competitive workforce development grants to build career academies.

2021 HOUSE APPROPRIATIONS

SB 2019

**Department 270 - Department of Career and Technical Education
Senate Bill No. 2019**

Executive Budget Comparison to Prior Biennium Appropriations

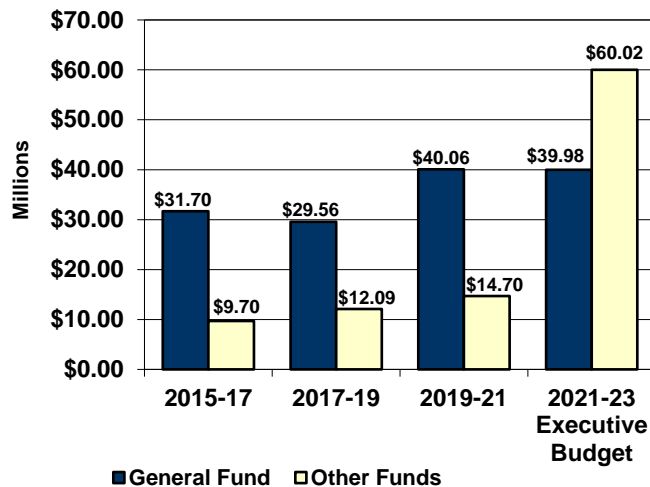
	FTE Positions	General Fund	Other Funds	Total
2021-23 Executive Budget	50.30	\$39,978,448	\$60,019,817	\$99,998,265
2019-21 Legislative Appropriations ¹	52.30	40,064,988	14,703,121	54,768,109
Increase (Decrease)	(2.00)	(\$86,540)	\$45,316,696	\$45,230,156

¹The 2019-21 biennium agency appropriation amounts have not been adjusted for additional federal funds authority of \$593,675, of which \$470,980 is related to Coronavirus (COVID-19) costs, resulting from Emergency Commission action during the 2019-21 biennium.

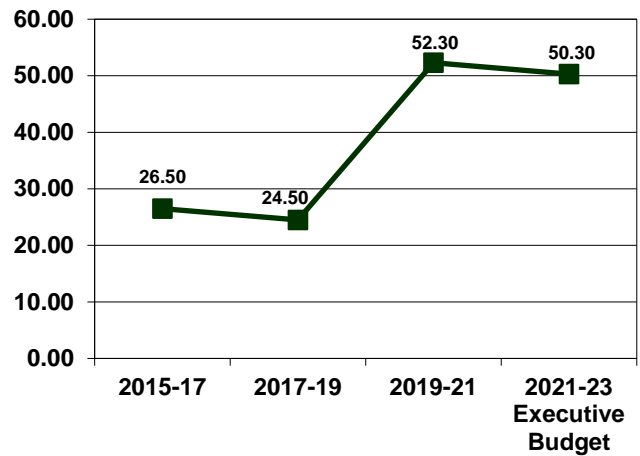
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2021-23 Executive Budget	\$39,978,448	\$0	\$39,978,448
2019-21 Legislative Appropriations	40,064,988	0	40,064,988
Increase (Decrease)	(\$86,540)	\$0	(\$86,540)

Agency Funding



FTE Positions



Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2021-23 Executive Budget	\$39,978,448	\$60,019,817	\$99,998,265
2021-23 Base Level	40,064,988	14,703,121	54,768,109
Increase (Decrease)	(\$86,540)	\$45,316,696	\$45,230,156

First House Action

Attached is a comparison worksheet detailing first house changes to base level funding and the executive budget.

**Executive Budget Highlights
(With First House Changes in Bold)**

- | | General Fund | Other Funds | Total |
|--|--------------|-------------|-----------|
| 1. Provides funding for state employee salary and benefit increases, of which \$256,821 is for salary increases, \$2,442 is for health insurance increases, and \$32,132 is for retirement contribution increases. The Senate added funding for salary adjustments of 2 percent on July 1, 2021, with a minimum monthly increase of \$80 and a maximum monthly increase of \$300 and 2 percent on July 1, 2022, and increases in health insurance premiums from \$1,427 to \$1,429 per month. The Senate did not add funding for retirement contribution increases. | \$291,395 | \$0 | \$291,395 |

2. Removes funding for 1 FTE assistant program supervisor position (\$174,335) and 1 FTE administrative assistant II position (\$118,279)	(\$292,614)	\$0	(\$292,614)
3. Adds funding for the state agency Capitol grounds rent proposal. The Senate did not add funding for this purpose.	\$169,313	\$0	\$169,313
4. Adds federal funding for an apprenticeship grant program. The funding will be transferred to Lake Region State College for the administration of the program. In August 2020, the Emergency Commission and Budget Section approved a request to accept and spend \$122,695 of federal funds for this program for the remainder of the 2019-21 biennium.	\$0	\$300,000	\$300,000
5. Adds funding for the cost to continue career and technical education course cost reimbursement rates at schools (27 percent) and area career and technical centers (40 percent). Secondary grants from the general fund totals \$25,687,780. The Senate added \$1.5 million from the general fund for the cost to continue reimbursement rates.	\$1,000,000	\$0	\$1,000,000
6. Removes funding for postsecondary grants	(\$256,982)	\$0	(\$256,982)
7. Reduces funding for the adult farm management program, to provide a total of \$1,756,138 from the general fund	(\$138,111)	\$0	(\$138,111)
8. Reduces funding for workforce training, to provide a total of \$1,900,000 from the general fund	(\$100,000)	\$0	(\$100,000)
9. Reduces funding for temporary Center for Distance Education salaries. Center for Distance Education funding totals \$8,842,998, of which \$5,792,998 is from the general fund and \$3,050,000 is from the independent studies operating fund. The Senate did not reduce funding for temporary Center for Distance Education salaries.	(\$630,119)	\$0	(\$630,119)
10. Adds one-time funding from bond proceeds for a career academy grant program	\$0	\$45,000,000	\$45,000,000

Other Sections in Senate Bill No. 2019

There are no other sections related to this agency.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

The operational audit for the Department of Career and Technical Education conducted by the State Auditor's office for the period ending June 30, 2019, identified no significant audit findings.

Major Related Legislation

House Bill No. 1083 - This bill provides an exemption to the requirement that high school students obtain a grade of at least a "C" for credit units earned during a semester, quarter, or term that includes, March, April, or May 2020 for consideration of career and technical education scholarships.

House Bill No. 1135 - This bill relates to career and technical education scholarships.

House Bill No. 1395 - This bill provides a 2019-21 biennium appropriation of \$470,980 of federal funding to the Department of Career and Technical Education, as approved by the Emergency Commission and Budget Section during the 2019-20 interim, from the state's allocation from the federal Coronavirus Relief Fund for various programs in response to the COVID-19 pandemic.

House Bill No. 1430 - This bill relates to career and technical education scholarships.

Senate Bill No. 2136 - This bill relates to career and technical education scholarships.

Senate Bill No. 2196 - This bill requires the Superintendent of Public Instruction to collaborate with the Department of Career and Technical Education to develop and implement a North Dakota learning continuum upon the recommendation of the Kindergarten Through Grade Twelve Education Coordination Council.

Senate Bill No. 2289 - This bill relates to career and technical education scholarships.

House Concurrent Resolution No. 3035 - This resolution requires the Legislative Management to consider studying statutes governing career and technical education, including the power and duties of the State Board of Higher Education, reciprocity with other states, cooperation with federal agencies, funding, reimbursement to institutions, gifts, reporting requirements, grants for innovation, elementary school entrepreneurship programs, career development certifications, career advisers, accessibility, impacts on students, and programs of study.

Department of Career and Technical Education - Budget No. 270
Senate Bill No. 2019
Base Level Funding Changes

	Executive Budget Recommendation				Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2021-23 Biennium Base Level	52.30	\$40,064,988	\$14,703,121	\$54,768,109	52.30	\$40,064,988	\$14,703,121	\$54,768,109
2021-23 Ongoing Funding Changes								
Base payroll changes		(\$1)	\$23,018	\$23,017		(\$1)	\$23,018	\$23,017
Salary increase		256,821		256,821		248,896		248,896
Health insurance increase		2,442		2,442		2,442		2,442
Retirement contribution increase		32,132		32,132				0
Removes 1 FTE assistant program supervisor position	(1.00)	(174,335)		(174,335)	(1.00)	(174,335)		(174,335)
Removes 1 FTE administrative assistant II position	(1.00)	(118,279)		(118,279)	(1.00)	(118,279)		(118,279)
Reduces funding for temporary salaries		(17,688)	(8,712)	(26,400)		(17,688)	(8,712)	(26,400)
Reduces funding for operating expenses		(62,207)		(62,207)		(62,207)		(62,207)
Adds funding for state agency Capitol grounds rent proposal		169,313		169,313				0
Adds funding for Microsoft Office 365 license expenses		474	2,390	2,864		474	2,390	2,864
Transfers STEM funding from operating to secondary grants				0				0
Adds federal funding for an apprenticeship grant program			300,000	300,000			300,000	300,000
Adds funding for costs to continue school reimbursement rates		1,000,000		1,000,000		1,500,000		1,500,000
Adds funding for new and expanding CTE programs				0		1,000,000		1,000,000
Reduces funding for Marketplace for Kids		(50,000)		(50,000)		(50,000)		(50,000)
Remove funding for postsecondary grants		(256,982)		(256,982)		(256,982)		(256,982)
Reduces funding for adult farm management		(138,111)		(138,111)		(138,111)		(138,111)
Reduces funding for workforce training		(100,000)		(100,000)		(100,000)		(100,000)
Reduces funding for Center for Distance Education rent			(152,500)	(152,500)			(152,500)	(152,500)
Adds funding for Center for Distance Education IT expenses			152,500	152,500			152,500	152,500
Removes temporary Center for Distance Education salaries		(630,119)		(630,119)				0
Total ongoing funding changes	(2.00)	(\$86,540)	\$316,696	\$230,156	(2.00)	\$1,834,209	\$316,696	\$2,150,905
One-time funding items								
Adds funding to bond for a career academy grant program			\$45,000,000	\$45,000,000			\$45,000,000	\$45,000,000
Total one-time funding changes	0.00	\$0	\$45,000,000	\$45,000,000	0.00	\$0	\$45,000,000	\$45,000,000
Total Changes to Base Level Funding	(2.00)	(\$86,540)	\$45,316,696	\$45,230,156	(2.00)	\$1,834,209	\$45,316,696	\$47,150,905
2021-23 Total Funding	50.30	\$39,978,448	\$60,019,817	\$99,998,265	50.30	\$41,899,197	\$60,019,817	\$101,919,014
<i>Total ongoing changes as a percentage of base level</i>	(3.8%)	(0.2%)	2.2%	0.4%	(3.8%)	4.6%	2.2%	3.9%
<i>Total changes as a percentage of base level</i>	(3.8%)	(0.2%)	308.2%	82.6%	(3.8%)	4.6%	308.2%	86.1%

Other Sections in Department of Career and Technical Education - Budget No. 270

Executive Budget Recommendation

Senate Version

Career academy competitive matching grant program

Section 3 would identify \$45 million of one-time funding from bonding proceeds to the Department of Career and Technical Education for the purpose of providing competitive workforce development grants to build career academies, with a maximum of \$15 million being allowed per project, for the 2021-23 biennium. A committee consisting of the leaders or designees of the Department of Career and Technical Education, Department of Commerce, Job Service North Dakota, and Department of Public Instruction would develop a competitive process in consultation with the Workforce Development Council, Economic Development Foundation, and the Career and Technical Education Board, to distribute the funds with a required 1-to-1 match from private sector or political subdivision funds.

Line item transfers

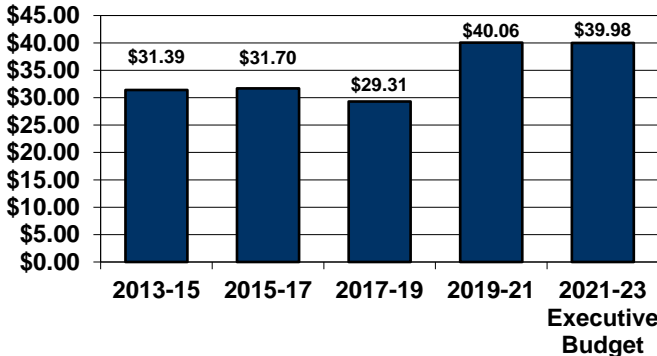
Section 4 would authorize the Office of Management and Budget to transfer funds between line items in Section 1 as requested by the Department of Career and Technical Education during the 2021-23 biennium.

Department 270 - Department of Career and Technical Education

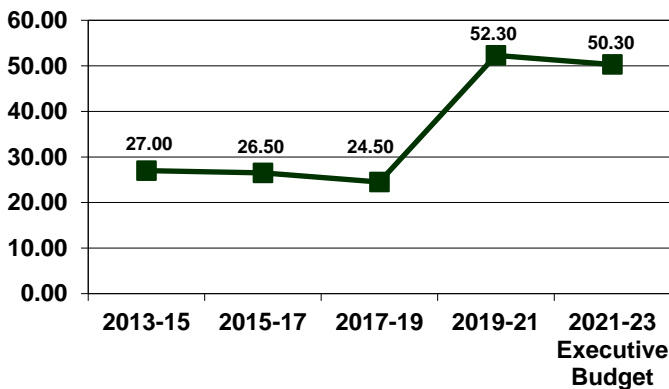
Historical Appropriations Information

Ongoing General Fund Appropriations Since 2013-15

Ongoing General Fund Appropriations (in Millions)



FTE Positions



Ongoing General Fund Appropriations					
	2013-15	2015-17	2017-19	2019-21	2021-23 Executive Budget
Ongoing general fund appropriations	\$31,392,916	\$31,698,298	\$29,306,283	\$40,064,988	\$39,978,448
Increase (decrease) from previous biennium	N/A	\$305,382	(\$2,392,015)	\$10,758,705	(\$86,540)
Percentage increase (decrease) from previous biennium	N/A	1.0%	(7.5%)	36.7%	(0.2%)
Cumulative percentage increase (decrease) from 2013-15 biennium	N/A	1.0%	(6.6%)	27.6%	27.3%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2015-17 Biennium

- 1. Added funding to continue Cass County Area Technology Center \$500,000
- 2. Added funding to increase reimbursement rates and for secondary and postsecondary career and technical education programs \$700,000
- 3. Added funding for new and expanding programs to increase course offerings \$700,000
- 4. Reduced funding for grants, including STEM program grants (\$160,000), STEM network (\$140,000), and other grant adjustments (\$10,436) (\$310,436)
- 5. Added funding for a STEM advancement initiative \$93,450

2017-19 Biennium

- 1. Removed 1 FTE assistant program supervisor position and related funding of \$157,200 and 1 FTE program coordinator position (funding of \$171,382 from the general fund for this position was removed as part of the August 2016 budget reductions) (\$157,200)
- 2. Restored salaries and wages funding from the general fund removed as part of the August 2016 budget reductions \$168,618
- 3. Adjusted funding for postsecondary grants, including a \$290,500 transfer from the postsecondary grants line item to the grants line item for STEM grants related to K-12 education (\$364,906)
- 4. Adjusted funding for adult farm management grants (\$80,616)
- 5. Adjusted funding for workforce training grants to provide total funding of \$2 million from the general fund (\$803,500)
- 6. Adjusted funding for state-funded grants, including a \$290,500 transfer from the postsecondary grants line item to the grants line item for STEM grants related to K-12 education (\$883,934)
- 7. Removed ongoing funding for the Marketplace for Kids program. (Funding of \$300,000 was added as a one-time appropriation, of which \$250,000 was from the general fund and \$50,000 was from the foundation aid stabilization fund.) (\$250,000)

2019-21 Biennium

1. Removed 1 FTE assistant program supervisor position	(\$159,737)
2. Added 28.80 FTE and related operating expenses for the Center for Distance Education transferred from the Information Technology Department, including \$102,759 from the general fund for new Center for Distance Education enrollments. The total amount added was \$9,068,816, of which \$3,050,000 was from the independent study operating fund.	\$6,018,816
3. Added funding for grants to school districts and area centers to provide total ongoing funding from the general fund of \$23,246,580	\$2,427,000
4. Reduced funding for part-time adult postsecondary grants (\$40,000) and STEM infusion grants (\$180,000)	(\$220,000)
5. Reduced funding for postsecondary grants to provide a total of \$256,982	(\$25,818)
6. Reduced funding for adult farm management grants to provide a total of \$1,894,249	(\$250,000)
7. Added funding for the Marketplace for Kids program	\$300,000
8. Added funding for new and expanding secondary programs	\$1,150,000
9. Added funding for cost to continue to maintain current reimbursement rates for the department's center expenditures, including instructor salaries and supplies	\$1,000,000

2021-23 Biennium (Executive Budget Recommendation)

1. Removes funding for 1 FTE assistant program supervisor position (\$174,335) and 1 FTE administrative assistant II position (\$118,279)	(\$292,614)
2. Adds funding for the state agency Capitol grounds rent proposal. The Senate did not add funding for this purpose.	\$169,313
3. Adds funding for the cost to continue career and technical education course cost reimbursement rates at schools (27 percent) and area career and technical centers (40 percent). Secondary grants from the general fund totals \$25,687,780. The Senate added \$1.5 million from the general fund for the cost to continue reimbursement rates.	\$1,000,000
4. Removes funding for postsecondary grants	(\$256,982)
5. Reduces funding for the adult farm management program, to provide a total of \$1,756,138 from the general fund	(\$138,111)
6. Reduces funding for workforce training, to provide a total of \$1,900,000 from the general fund	(\$100,000)
7. Reduces funding for temporary Center for Distance Education salaries. Center for Distance Education funding totals \$8,842,998, of which \$5,792,998 is from the general fund. The Senate did not reduce funding for temporary Center for Distance Education salaries.	(\$630,119)

**GOVERNOR'S RECOMMENDATION FOR THE
DEPARTMENT OF CAREER AND TECHNICAL
EDUCATION AS SUBMITTED BY THE
OFFICE OF MANAGEMENT AND BUDGET**

SECTION 1. APPROPRIATION. The funds provided in this section, or so much of the funds as may be necessary, are appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, and from special funds derived from federal funds and other income, to the state board for career and technical education for the purpose of defraying the expenses of the state board for career and technical education, for the biennium beginning July 1, 2021 and ending June 30, 2023, as follows:

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Salaries and Wages	\$ 4,812,765	(\$126,531)	\$ 4,686,234
Operating Expenses	2,357,796	9,970	2,367,766
Grants	9,207,349	45,300,000	54,507,349
Grants-Secondary	24,587,780	1,100,000	25,687,780
Grants-Postsecondary	256,982	(256,982)	0
Adult Farm Management	1,894,249	(138,111)	1,756,138
Workforce Training	2,000,000	(100,000)	1,900,000
Marketplace for Kids	300,000	(50,000)	250,000
Center for Distance Ed	<u>9,351,188</u>	<u>(508,190)</u>	<u>8,842,998</u>
Total All Funds	\$54,768,109	\$45,230,156	\$99,998,265
Less Estimated Income	<u>14,703,121</u>	<u>45,316,696</u>	<u>60,019,817</u>
Total General Fund	\$40,064,988	(\$86,540)	\$39,978,448
Full-Time Equivalent Positions	52.30	(2.00)	50.30

SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO SIXTY-EIGHTH LEGISLATIVE ASSEMBLY. The following amounts reflect the 2021-23 one-time funding items included in the appropriation in section 1 of this Act:

<u>One-Time Funding Description</u>	<u>2019-21</u>	<u>2021-23</u>
Career Academies	\$ 0	\$45,000,000
Total All Funds	\$ 0	\$45,000,000
Total Special Funds	<u>0</u>	<u>45,000,000</u>
Total General Fund	\$ 0	\$ 0

The 2021-23 one-time funding amounts are not a part of the entity's base budget for the 2023-25 biennium. The department of career and technical education shall report to the appropriations committees of the sixty-eighth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2021 and ending June 30, 2023.

SECTION 3. CAREER ACADEMY COMPETITIVE MATCHING GRANT PROGRAM. The appropriation contained in section 1 of this Act includes the sum of \$45,000,000 for the purpose of providing competitive grants, with a maximum of \$15,000,000 per project, to build career academies throughout the state, for the biennium beginning July 1, 2021 and ending June 30, 2023. A committee comprised of the leaders or their designees of career and technical education, the department of commerce, job service North Dakota and the department of public instruction will develop a competitive process in consultation with the workforce development council, and the career and technical education board, to distribute the funds with a required one to one match from the private sector or political subdivision.

SECTION 4. TRANSFERS. Notwithstanding section 54-16-04, the director of the office of management and budget shall make transfers of funds between line items in section 1 of this act for the department of career and technical education as may be requested by the state director as determined necessary for activities that are proper and consistent with the provisions of this act.

2021 HOUSE STANDING COMMITTEE MINUTES

Appropriations - Education and Environment Division Prairie Room, State Capitol

SB 2019
3/5/2021

House Appropriations Committee - Education and Environment

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Chairman David Monson called the meeting to order at 10:00 a.m.

Representative	Present	Absent
Chairman Monson	P	
Vice Chairman Schmidt	P	
Representative Martinson	P	
Representative Nathe	P	
Representative Sanford	P	
Representative Schatz		A
Representative Boe	P	

Discussion Topics:

- ND Department of Career and Technical Education (NDCTE) overview
- Base budget comparisons
- Change package requests
- Covid funding
- Train ND summary
- Workforce Development Council
- ND Farm Management Education
- Marketplace for Kids Inc. (MFK) summary

Wayde Sick (10:00 a.m.) testified in favor. Testimony #7279, #7466, #7278, #7280, #7281, #7282

Dr. Matthew Lonn (11:05 a.m.) testified in favor. Testimony #7232

Sara Vollmer (11:19 a.m.) testified in favor. Testimony #7060, #7061

Kyle Olson (11:38 a.m.) testified neutrally. Testimony #7066

Robert Heitkamp (11:48 a.m.) testified in favor. Testimony #7207

Additional written testimony: #7418, #7417, #7524, #7136, #7434, #7488, #7415, #7480, #7456, #7455, #7454, #7453, #7529, #7523, #7448, #7497, #7404, #7458, #7509, #7493, #7583

Chairman David Monson adjourned the meeting at 11:54 a.m.
Klarissa Pudwill, Committee Clerk

North Dakota Department of Career and Technical Education

2021-23 Biennium Budget
House Appropriations
March 5, 2021



North Dakota Century Code- NDCTE

NDCC 15-20.1 – Career and Technical Education

- Administer State and Federal Funds to support CTE programs
- Facilitate Career Development Program
- Provide a ND Elementary Student Entrepreneurship Program

NDCC 15-20.2 – Area Career and Technology Centers

- Provides authority to operate and governance structure

NDCC 15-20.4 – Postsecondary Educational Institutions

- Provides authority to CTE to approve postsecondary career schools



North Dakota Century Code - NDCDE

15-19-01: The state, through the Center for Distance Education, shall provide:

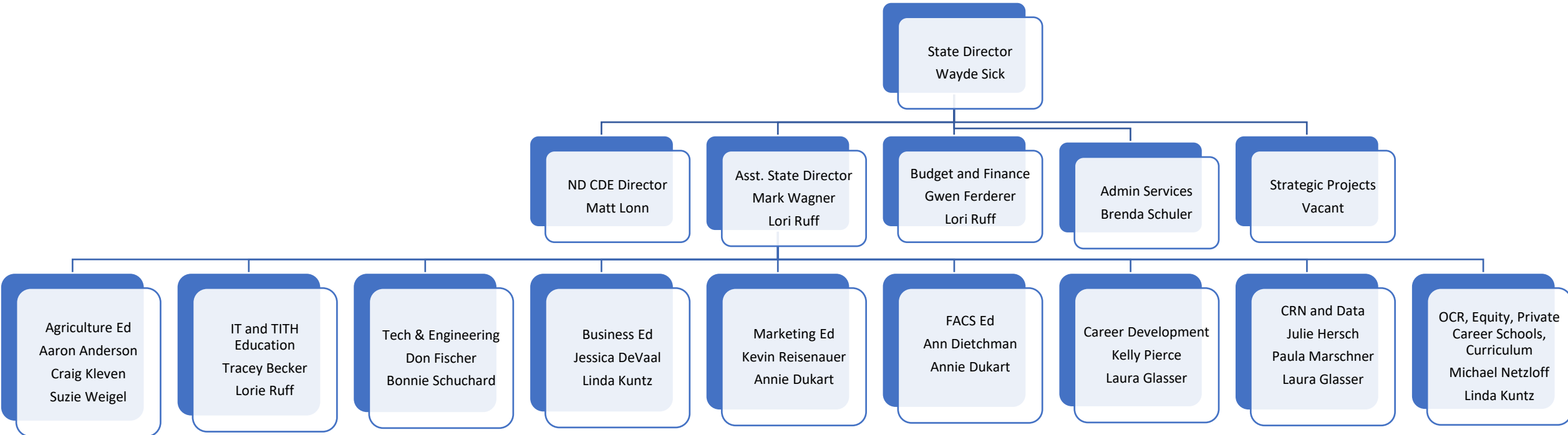
- Kindergarten through grade twelve courses,
- Comprehensive educational support,
- High school diplomas.

Mission of ND Career and Technical Education

The mission of the State Board for Career and Technical Education is to work with others to provide all North Dakota citizens with the technical skills, knowledge, and attitudes necessary for successful performance in a globally competitive workplace.



ND CTE Org Chart



NDCTE Audit Findings

Department of Career and Technical Education Audit

Completed March 2, 2020

- Audit included reviewing financial transactions, expenditures, blanket bond coverage and appropriation requirements for the 2017-19 Biennium.
- No areas of concern were identified.



2019-21 NDCTE Accomplishments

Perkins V

- Development of Perkins V State Plan
 - Extensive Stakeholder Feedback
- Development of the Comprehensive Local Needs Assessment
 - Use of funds determined on:
 - Student performance and enrollment
 - Alignment with in-demand, high wage, high skill jobs
- Selection of Work-based Learning as HS Performance Indicator
- Innovation Grant Program funded by Federal Perkins



2019-21 NDCTE Accomplishments

Agency Accomplishments

- Automating Processes
- Evaluating Staff Positions
 - Development of a Strategic Projects Manager position
- COVID-19 Response
 - Virtual CTSO Events
 - Virtual Professional Development Conference
 - Virtual School Visits
 - Collection of Distance Learning Resources
 - Re-evaluating office needs in the Capital



2019-21 NDCTE Accomplishments

Growth of Programs

	2017		x	2018		x	2019		x	2020		x	2021	
	Number of Programs	Increase/ (Decrease)		Number of Programs	Increase/ (Decrease)		Number of Programs	Increase/ (Decrease)		Number of Programs	Increase/ (Decrease)		Number of Programs	Increase/ (Decrease)
Agriculture	85	7		86	1		93	7		91	(2)		90	(1)
Business Education	87	(1)		89	2		87	(2)		89	2		92	3
Career Development	70	3		75	5		79	4		93	14		95	2
Family & Consumer Sciences	96	1		95	(1)		98	3		96	(2)		98	2
Family & Consumer Occupational	17	0		16	(1)		14	(2)		12	(2)		14	2
Health Sciences	25	0		25	0		26	1		25	(1)		26	1
Information Technology	13	0		13	0		13	0		12	(1)		14	2
Local Administration/Operating	15	0		15	0		14	(1)		14	0		15	1
Marketing Education	24	1		23	(1)		25	2		26	1		25	(1)
Technology & Engineering	51	(5)		48	(3)		47	(1)		47	0		47	0
Trade & Industry	68	(4)		70	2		77	7		75	(2)		77	2
	551	2		555	4		573	18		580	7		593	13
New Programs		12			5			17			27			11



2019-21 NDCTE Accomplishments

Secondary (9-12)

- 23,007 Enrolled
- 8,129 Concentrators
 - 72% of all 9-12 Grade Students Enroll in a CTE course
 - 25% of all 9-12 Grade Students are CTE Concentrators

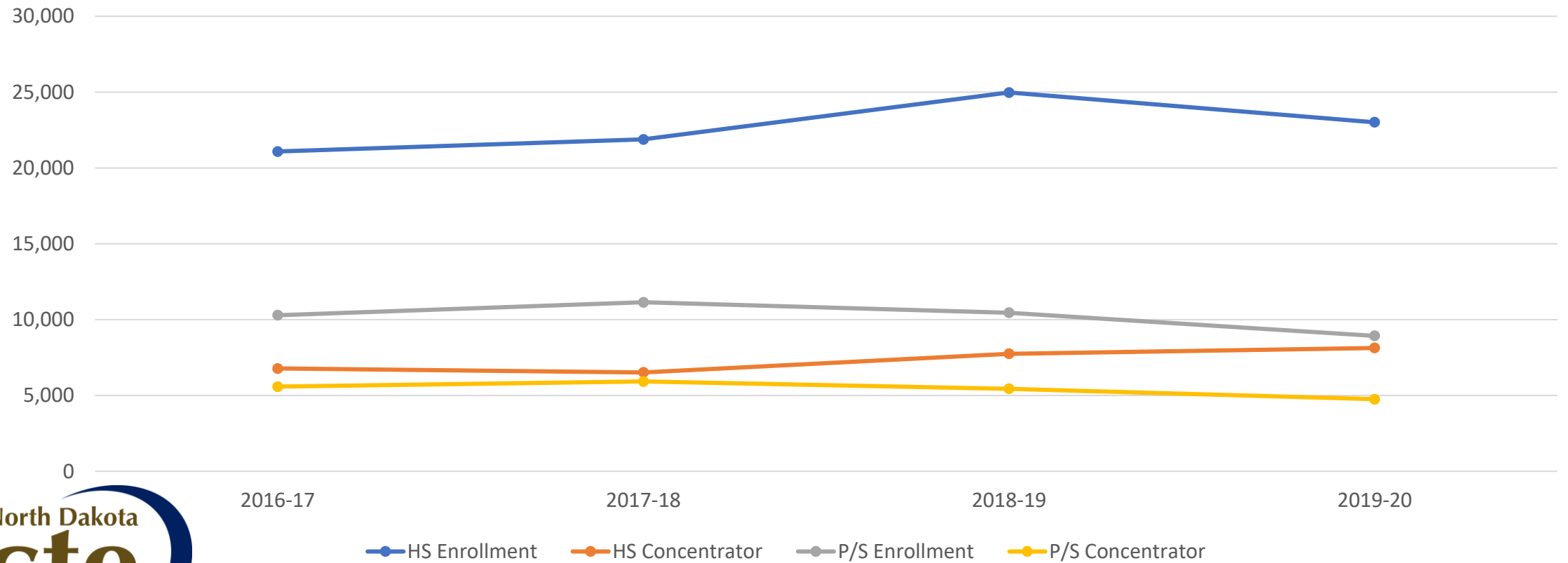
Postsecondary

- 8929 Enrolled
- 4752 Concentrators



2019-21 NDCTE Accomplishments

CTE Enrollment and Concentrator Trends



2019-21 NDCTE Accomplishments

95.87%

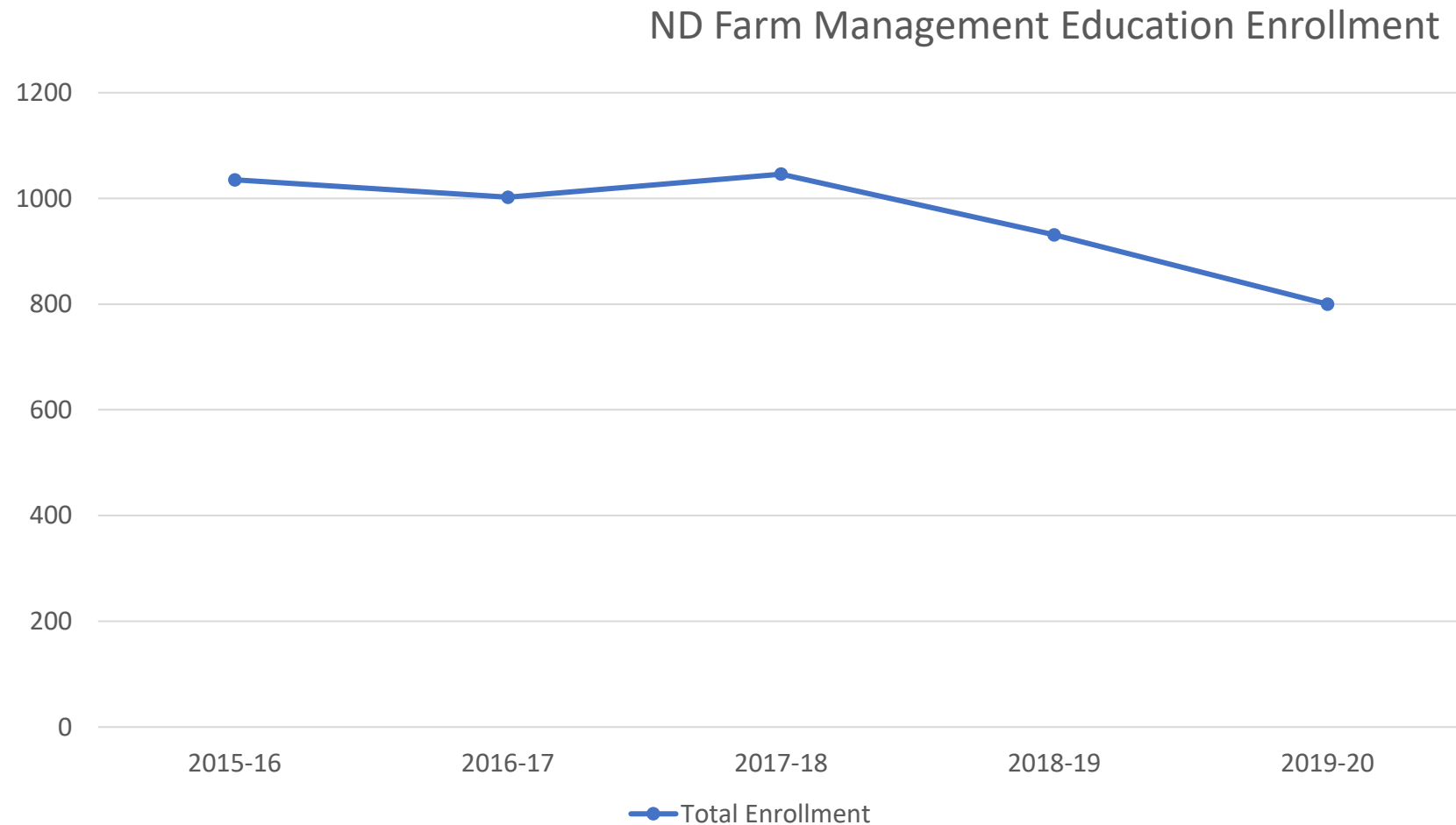
In 2019, 95.87% of CTE Concentrators in North Dakota graduated on time compared to 88% of all high school students.

	2016-17 Statewide	2016-17 CTE Concentrators	2017-18 Statewide	2017-18 CTE Concentrators	2018-19 Statewide	2018-19 CTE Concentrators
Four Year Graduation Rate	87%	95.6%	88%	94.9%	88%	95.87%
Demographics						
Asian American	78%	92%	89%	89.29%	86%	97.06%
Black	75%	94.59%	76%	96.83%	81%	92.75%
Hispanic	76%	87.32%	75%	90.91%	74%	88.89%
Native American	67%	90.55%	72%	91.1%	72%	91.26%
Native Hawaiian or Pacific Islander	95%	83.33%	90%	100%	84%	100%
White	91%	96.23%	91%	95.47%	92%	96.61%



2019-21 NDCTE Accomplishments

North Dakota Farm Management Education



2021-23 CTE Goals and Opportunities

- Development and expansion of programs at our High Schools and Existing Centers
 - Reviewing current and upcoming requests
 - Reviewing CLNA results
- Increase enrollee and concentrator numbers
- Assist in the development of three additional area career and technology centers
 - Development of at least three new programs at each center, serving multiple districts
- Study and potentially restructure CTE funding model
- Coordinate distance education
- Secondary/Post-Secondary alignment
 - Expand Dual Credit CTE Options
- Expand Work-based Learning Opportunities
- Increase ND Farm Management Education Enrollment



Base Budget Comparisons

Budget Line Items	2019-21	2021-23	Variance
Salaries	\$4,812,765	\$4,539,287	(\$273,478)
Operating Expenses	\$2,357,796	\$2,295,589	(\$62,207)
Grants - Secondary	\$24,587,780	\$24,587,780	\$0
Grants - Federal	\$9,207,349	\$9,207,349	\$0
Postsecondary Grants	\$256,982	\$0	(\$256,982)
ND Farm Management Education	\$1,894,249	\$1,756,138	(\$138,111)
Workforce Training	\$2,000,000	\$1,900,000	(\$100,000)
Marketplace for Kids	\$300,000	\$250,000	(\$50,000)
Center for Distance Education	\$9,351,188	\$8,698,551	(\$652,637)
Total Funds	\$54,768,109	\$53,234,694	(\$1,533,415)
General Funds	\$40,064,988	\$38,517,267	(\$1,547,721)
Federal Funds	\$11,498,147	\$11,512,453	\$14,306
Special Funds	\$3,204,974	\$3,204,974	\$0
Total Funding	\$54,768,109	\$53,234,694	(\$1,533,415)
FTE Count	52.3	50.3	(2)



Agency vs. Executive vs Senate Budget

Budget Line Items	Agency Request	Executive Budget	Senate Budget
Salaries	\$4,539,287	\$4,686,234	\$4,646,177
Operating Expenses	\$2,195,589	\$2,367,766	\$2,198,453
Grants - Secondary	\$72,687,780	\$25,687,780	27,187,780
Grants	\$9,507,349	\$54,507,349	\$54,507,349
ND Farm Management Education	\$1,756,138	\$1,756,138	\$1,756,138
Workforce Training	\$1,900,000	\$1,900,000	\$1,900,000
Marketplace for Kids	\$250,000	\$250,000	\$250,000
Center for Distance Education	\$9,750,000	\$8,842,998	\$9,473,117
Total Funds	\$102,586,143	\$99,998,265	\$101,919,014
General Funds	\$47,568,716	\$39,978,448	\$41,899,197
Federal Funds	\$11,812,453	\$11,814,843	\$11,814,843
Special Funds	\$43,204,974	\$48,204,974	\$48,204,974
Total Funding	\$102,586,143	\$99,998,265	\$101,919,014
FTE Count	50.30	50.30	50.30

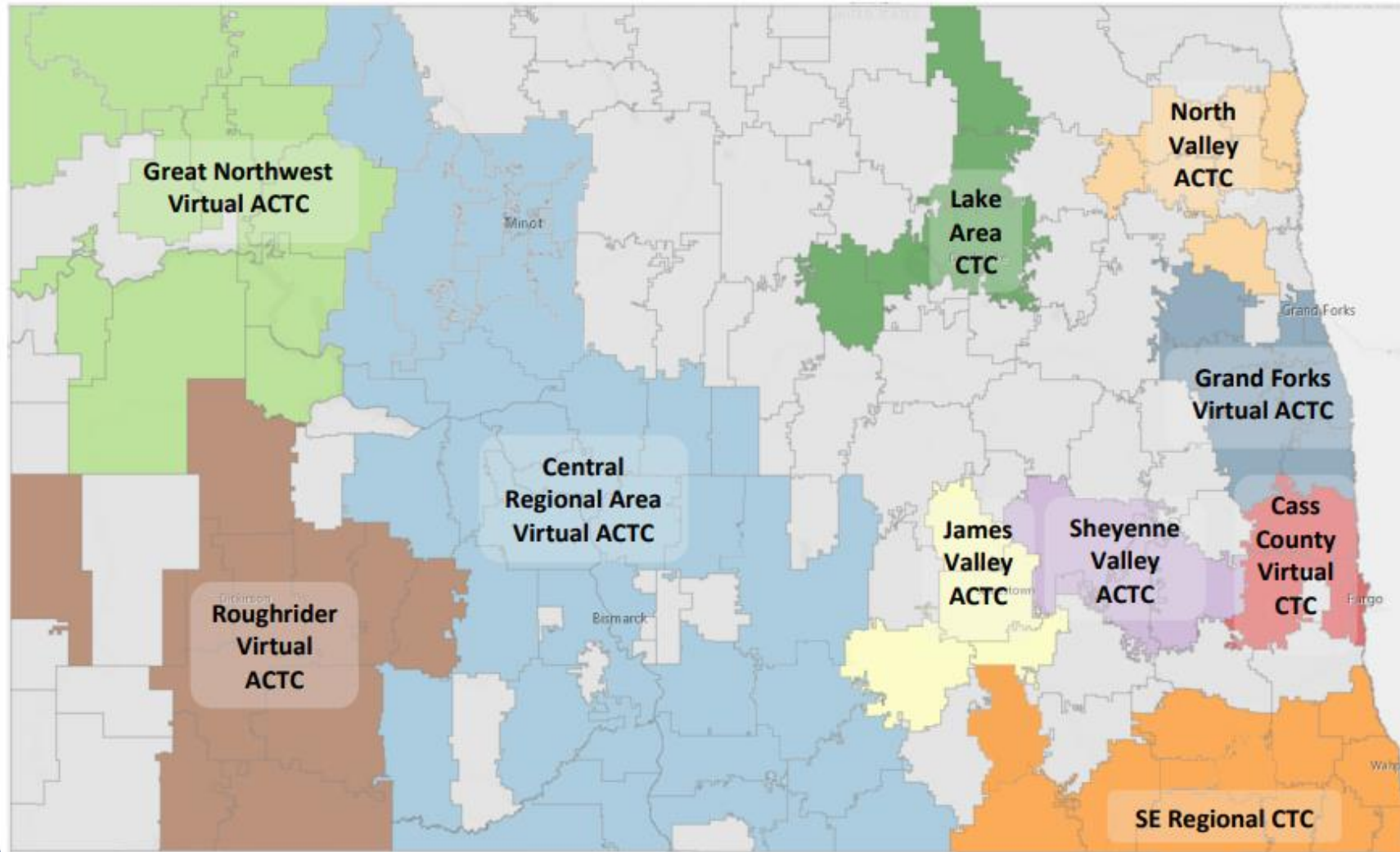


Change Package Requests – 2021-23

Budget Line Items	Agency Requested	Executive Budget	Senate Budget
Cost to Continue – Secondary Grants – Add to Base	\$1,500,000	\$1,000,000	\$1,500,000
New and Expanding – Secondary Grants – Add to Base	\$1,500,000	\$0	\$1,000,000
Funding for CDE to accommodate enrollment growth – Add to Base	\$1,051,449	\$0	\$630,119
Funding to Establish new CTE Centers – One Time Funding	\$40,000,000	\$45,000,000	\$45,000,000
Reimbursement for new CTE Centers	\$2,000,000	\$0	\$0
New Funding Formula	\$3,000,000	\$0	\$0
Increase Federal Grants (Apprentice)	\$300,000	\$300,000	\$300,000
Transfer Funds from Operating Transfer Funds to Grants (STEM Network)	\$100,000 (\$100,000)	\$100,000 (\$100,000)	\$100,000 (\$100,000)



Current CTE Centers



COVID-19 Funding

- Center for Distance Education - \$270,980 – Fund adjunct teachers due to surge in enrollments
- Career and Technical Education - \$200,000 – Funding for Area Career and Technology Centers to purchase PPE, cleaning supplies and equipment (IT and eliminate multiple student use)



Visionary Framework

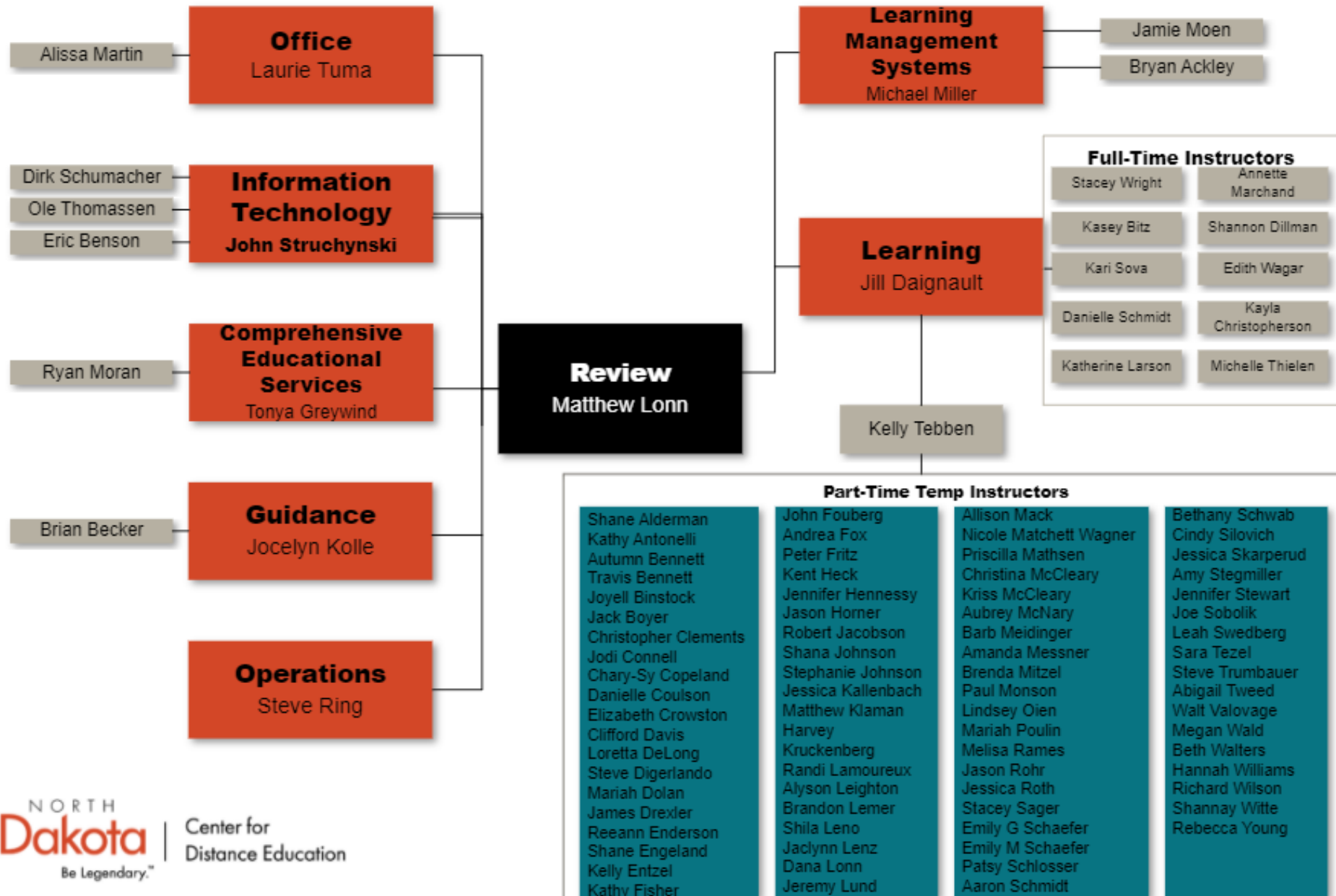
Purpose: To provide educational opportunities for North Dakota's learners.

Mission: To ensure that ALL ND students regardless of location have access to educational opportunities that meet or exceed customer expectations for:

- the quality of curriculum,
- ongoing contact time with highly qualified instructors,
- monitoring course delivery efficiency, effectiveness, and
- student learning.

Envisioned Future: CDE will become a recognized leader in education because CDE helps, serves, nurtures, guides, and encourages every North Dakota learner, providing them with the opportunity to take charge of their own learning.

North Dakota Center for Distance Education Organizational Chart



ND CDE Audit Findings Summary

North Dakota Information Technology Department Audit Findings

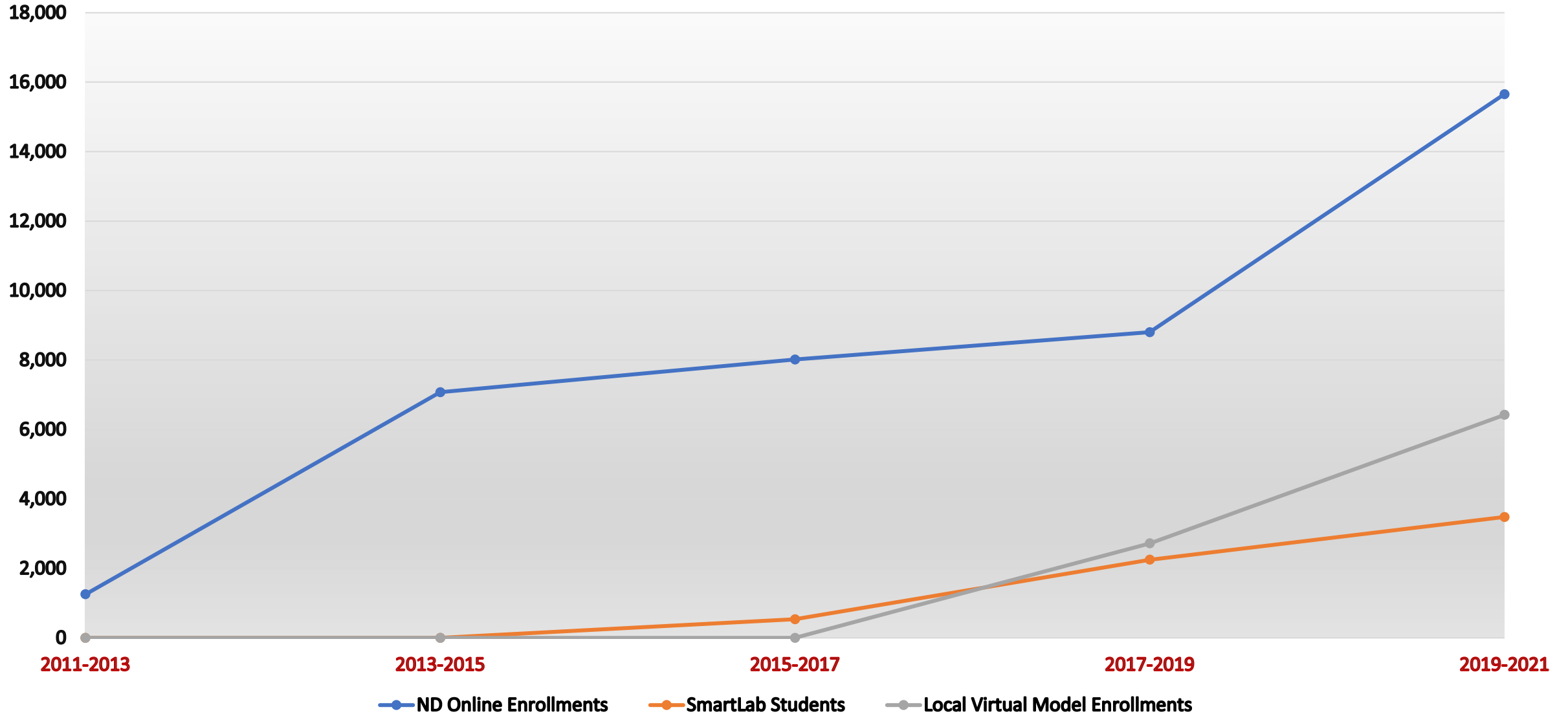
Completed June 30th, 2018

1. Why the audit was conducted:
 - a) The purpose of this audit was to determine that financial transactions including expenditures were made in accordance with law and appropriation requirements.
2. What was found:
 - a) The North Dakota Information Technology Department complied with law and appropriation requirements except for inadequate annual inventory procedures surrounding assets.
3. Center for Distance Education:
 - a) CDE was found to be in full compliance and no additional action was needed on the agencies part. Full documentation is attached.

CDE Key Programs

1. Online Courses: nearly 400 different online ½ credit courses for grades K-12 taught by ND highly qualified instructors and all curriculum approved by NDDPI.
 - a) 15,651 Enrollments
 - b) 84% Successful completion rate.
2. SmartLab Program: 19 different hands-on, project-based learning labs across the state to over 3,300 students.
3. Local Virtual Model: schools and organizations using CDE's learning management system to provide their own online instruction to students.
 - a) 6,418 Enrollments

Performance Per Biennium



2021 – 2023 CDE Opportunities

1. Provide greater choice and opportunity for more kids (3% annually).

- a) Over 110,000 ND students.
- b) Courses that prepare students for industry recognized certifications.

2. Improve student learning.

- a) Increase successful completion rates to over 90% by improving online instruction.
- b) New courses that offer adaptive technology and competency-based learning.
- c) Newly installed and support learning labs (5 annually).

3. Internal efficiency improvements

- a) Rapid enrollment feature, accounting practices, customer purchase experience.
- b) IT support responsiveness.

Biennium Request Comparison

2021-2023 Request

- 28.8 FTE's
- Total Budget:
\$9,750,000
 - General Funds:
\$6,700,000 (6%)
 - Spending
Authority:
\$3,050,000
 - 11,087 Online
Enrollments

2019 – 2021 Budget

- 28.8 FTE's
- Total Budget:
\$9,351,188
 - General Funds:
\$6,301,188
 - Spending
Authority:
\$3,050,000
 - 10,387 Online
Enrollments

2021-2023 Executive

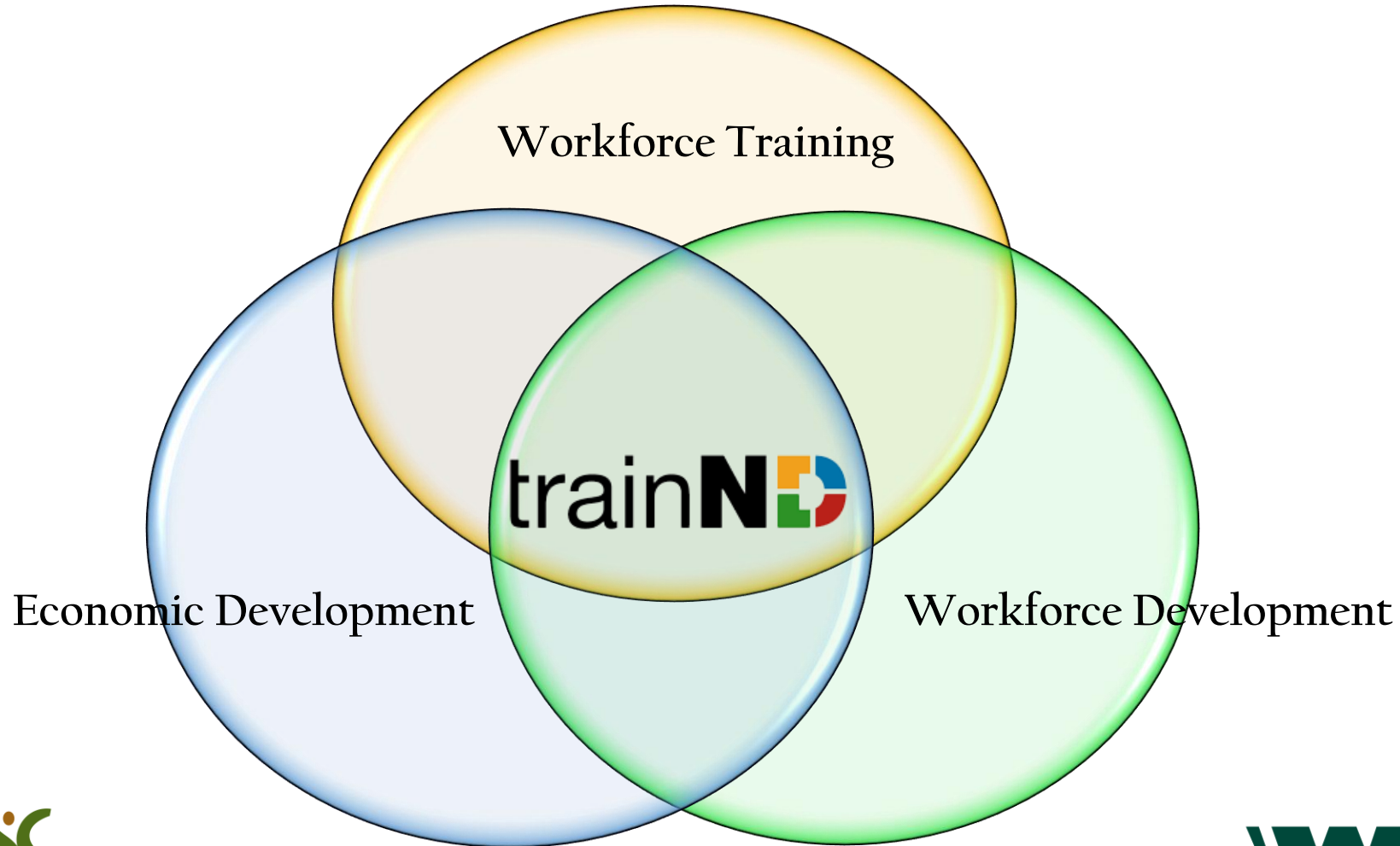
- 28.8 FTE's
- Total Budget:
\$8,842,998
 - General Funds:
\$5,792,998 (-8%)
 - Spending
Authority:
\$3,050,000
 - 9,543 Online
Enrollments

CDE Pricing Strategy for Services

- Prices are set at an amount that allows CDE to cover operational expenses needed for a new enrollment and a small portion of adjunct salaries.
- Prices must allow CDE to compete with lower quality out of state providers.
- Current ND student pricing
 - \$179 per enrollment
 - \$149 NDSOS membership schools
 - \$189 Ag enrollments
 - \$209 AP Courses
 - \$141.26 Dual Credit per credit
 - \$10 - \$89 LVM courses
 - \$5,000 for SmartLab support and install

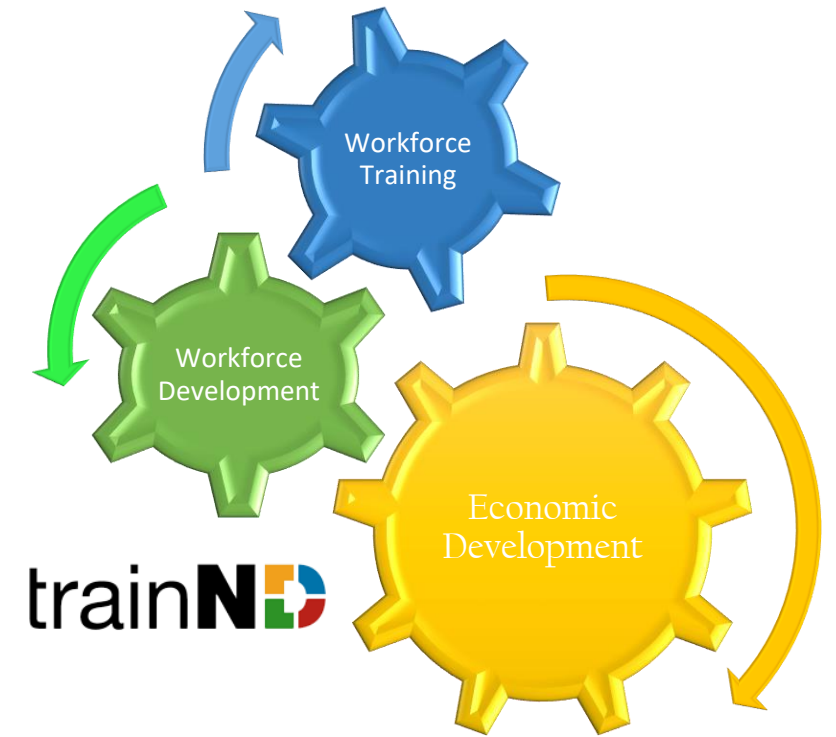
An Investment into North Dakota

Building a Sustainable Workforce



A Return on Investment

- Workforce Development
 - Brings Trained People Into the Workforce
- Workforce Training
 - Brings greater skills to incumbent workers
- Economic Development
 - Brings growth to communities and state



Need is Greater than Ever

- Short term programming for workforce development
- Qualified workers help drive economic development
- Incumbent workers to gain new skills for enhanced work
- Economic recovery amid a pandemic
- Continued funding to assist with program expansion
- Economic diversity within North Dakota
- Investment in our workforce and business growth
- 74% of businesses in North Dakota have less than 10 employees



Workforce Program Impacts

- Certified Nursing Assistant (CNA Programs)
 - Statewide programming
 - Stackable Certificate & Pathway to Education
 - Job Service WIOA Funding Eligible
 - 326 students
 - 36 classes
 - 636 CNA State Board Exams (Registered Students & Challenge Exams)
 - Pre CNA
 - Fast Track Temporary CNA
 - Quality Service Provider (In Home Care)



Workforce Program Impacts

- Commercial Drivers License (CDL Programs)
 - Statewide programming
 - Stackable Certificate & Pathway to Education
 - Job Service WIOA Funding Eligible/Veterans Funding
 - ND Commerce Grant to Expand CDL programming
 - 134 students
 - 22 classes

Williston, Dickinson, Minot, Fargo, Bismarck, Devils Lake





NDUS Annual Enrollment Summary FY20

- Non-Credit TrainND Headcount 19,008
- Total Community College Headcount 35,038
- Percentage of Headcount from TrainND 54%
- Total NDUS Headcount (11 Institutions) 74,014
- Percentage Headcount from TrainND 26%

TrainND Annual Report FY20

- Number of Businesses Receiving Training in FY20 1,412
- Number of Businesses with less than 50 employees 1,026
- Number of Unduplicated Employees receiving Training 19,008



Changing Modes of Delivery

- Accelerated changes to the way people learn
- Flexible with new costs in transition
- Increased options for companies and workers
 - Distance Learning
 - Synchronous/Asynchronous
 - Virtual
 - Hybrid
 - Recorded Presentations
 - Traditional Face-to-Face/In person
 - Mobile labs





Virtual
Delivery
Options

Programming Growth Areas



Stackable Certificates
Pathways to Education

Return on Investment

- FY20 Accountability Measures
- State Investment to TrainND for FY20 - \$1,000,000

- Total Revenue - \$4,826,886
- Total State Investment of \$1 million generated \$4.8 million

- Total Contact Hours of Training Provided – 196,444
- Total State Investment - \$5.09 per contact hour

- Total Number of Duplicated Individuals Trained – 23,320
- * Total Number of Unduplicated Individuals Trained – 19,008
- Total State Investment - \$42.88 per learner

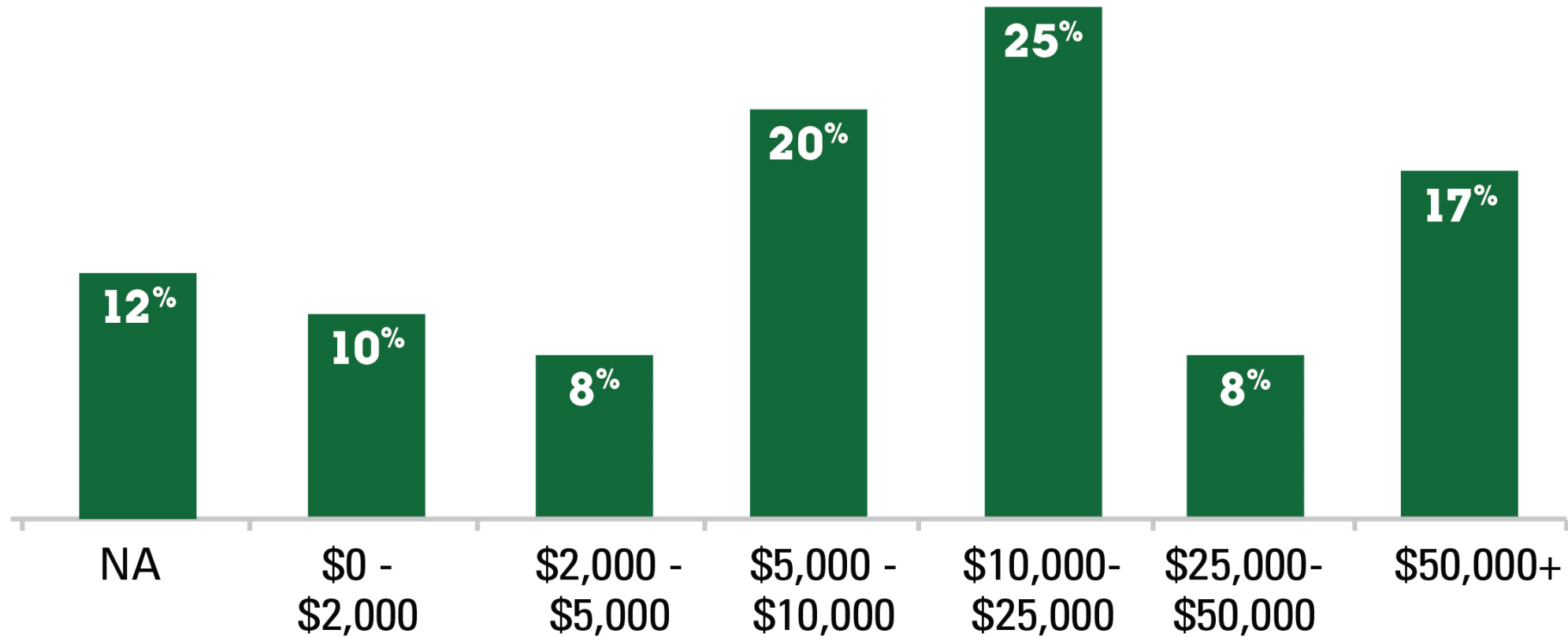
TrainND Request

Request to continue funding at \$2 million based on recommendation from Workforce Development Council

- Reinvention to education
- Expansion of programming
- Flexible modes of delivery
- Delivery at the speed of business

The logo for TrainND features the word "train" in a lowercase, sans-serif font, followed by a large, bold "N". To the right of the "N" is a stylized "D" composed of four colored segments: orange, blue, green, and red.

ND Farm Management Education



What is the annual economic gain of participating in the Farm Management program for your farm/ranch?



The Entrepreneurs of Tomorrow Are in Our Schools and Homes Today!



Mission:

To encourage youth to explore entrepreneurship and self-employment through the recognition and development of their inventive, creative thinking and problem-solving skills.

Vision:

Our vision is for every student to receive entrepreneurship education and encouragement to become a lifelong partner in building stronger communities.



2021/22 Goals

- ✓ Host First Virtual Education Day at DSU 2/15/21
- ✓ First "LIVE Virtual" Education Day Bowman/Fargo 3/15/21
- ✓ Regular "In-Person" Education Day Williston 4/27/21
- ✓ Regular "In-Person" Education Day Jamestown 5/11/21
- ✓ Regular "In-Person" Education Day Wahpeton 5/17/21

HOW DOES MFK ALIGN WITH CTE'S VISION?

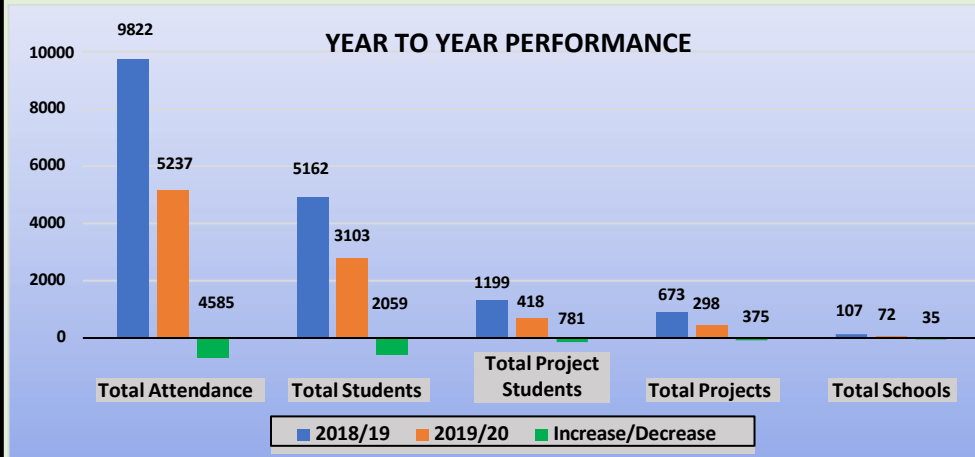
MFK, in partnership with CTE, annually provides ***“entrepreneurial educational experiences based on labor market information relating to the needs of North Dakota's business, industry and the private sector”***. This is accomplished using feedback from students, presenters, business and industry. This information is used to target future programming in the greatest needs areas AND careers that students WANT to get involved with. MFK is ***“committed to providing career awareness”*** by partnering directly with Career & Tech Centers, Colleges, and industry leaders using their knowledge, equipment and processes to introduce these career choices to thousands of students across the state who may never have this opportunity. This allows our students to use ***“the latest methods of instruction while using up-to-date technology”***. MFK's focus on elementary students in grades 3-8 is the only Statewide program that ***“provides youth with exploration opportunities and the foundation skills needed to enter the world of work”***.

Covid-19 Affects

Registered attendance was 46.7% lower - 3 Education Days were held, 2 - new.
With expected attendance including ALL Education Days scheduled - an increase of 1,439 or 14.7% would have been realized.

2020 Donation Reductions

- ✓ Private donations were down February 1st through December 31 in 2019-20 period (year on year) **-\$21,155.99**
- ✓ Decrease Percentage (Not including CTE) **- 46.4%**



WHERE IS MARKETPLACE FOR KIDS NOW (during/after Covid-19)?

- ❖ In 2021/22 Marketplace for Kids has **5 Education Days** tentatively scheduled
- ❖ Currently we are in the testing phase of "**A-Synchronous and Synchronous**" Education Days (3,500 est. attendance this year!)
- ❖ A schedule will be set in the coming weeks for the year including 3 In-Person Education Days (dependent on guidelines).
- ❖ Classes such as "**Electrical Circuits**", "**Power Plant Puzzle**", and "**WHAT DO LAND SURVEYORS REALLY DO?**" at all Education Days for the 20/21 year.
- ❖ Covid-19 virus has had a **Massive Impact** to MFK attendance and finances. A **reduction of nearly 47%** in both total attendance and private sponsor donations.
- ❖ MFK staff and grant writers have been working feverishly to overcome the financial deficit by applying for new grants and reaching out to past and new supporters.

Thank you.
Any questions?



House Appropriations
Education and Environment Division
SB 2019
Department of Career and Technical Education
March 5, 2021

Chairman Monson and members of the committee, my name is Wayde Sick, State Director of the Department of Career and Technical Education. I am here to provide testimony for Senate Bill 2019 or the Department of Career and Technical Education Appropriations Bill.

2020 has been a year like no other. We have seen drastic changes in how we work, how we live, how we educate. What has become very apparent is the vital role the programs that are housed within SB2019 are to the state's and the nation's economic recovery. The occupations that originate in a high school CTE program have been commonly referred to as "Essential Workers" during the COVID pandemic. Distance education became a necessity, delivered by our schools, our CTE centers, and CTE's Center for Distance Education. Workforce recovery and skilling up workers who may have lost their jobs was addressed by our community colleges and TrainND. The backbone of our state's economy is agriculture, making the ND Farm Management Education Program vital in helping North Dakota producers be more profitable and productive, which enables them to provide products that feed the world. This morning you will hear testimony from myself and others about the impact the programs embedded within the Department of Career and Technical Education budget have on our state. This is going to be a difficult budget year, we all know that, but the programs and initiatives we will discuss this morning will play a key role in economic recovery and a sustained future. I would like to add that many of the priorities of the Department of CTE also align with the strategic themes of the K12 Strategic Vision and the priorities of the North Dakota Workforce Development Council.

My testimony and those of others today will address the requests that were made of the Senate Appropriations Committee and believe the House Appropriations Education and Environmental Sub-Division may also be interested.

First, North Dakota Century Code that provides the agency the authority to do what it does. The Department of Career and Technical Education can be found in NDCC 15-20.1, 15-20.2 and 15-20.4. 15-20.1 gives the agency the authority to reimburse CTE programs using state and federal funds, develop a STEM grant program, a Career Development and the ND Elementary Student Entrepreneurship program, which is administered by Marketplace for Kids. You will hear later from Bob Heitkamp, director of Marketplace for Kids. 15-20.2 provides guidance and authority to operate area career and technology centers. 15-20.4 provides the State Board for Career and Technical Education the authority to approve private postsecondary career schools to operate in North Dakota. Examples of postsecondary career schools that required approval are Lynnes Welding, Emerging Digital Academy and Rasmussen College.

The North Dakota Center for Distance Education is created in 15-19-01. NDCC states NDCDE shall provide K-12 course, comprehensive educational support and High School Diplomas. Dr. Matthew Lonn is here to provide deeper testimony later in the hearing.

The mission of ND Career and Technical Education is to work with others to provide all North Dakota citizens with the technical skills, knowledge, and attitudes necessary for successful performance in a globally competitive workplace. I bring this up because the work CTE does is often through partnerships with industry, the various Career and Technical Student Organizations, higher education and other state agencies.

Next is the agency organizational chart. NDCTE is a relatively flat agency. The agency is divided into divisions, with most overseeing the various program areas. Dr. Lonn, with NDCDE, is on this organizational chart as he reports directly to me and will explain his organization in greater detail.

The most recent audit completed in March 2020 by the State Auditor's Office found no areas of concern.

Moving on, what did the agency accomplish in the 2019-21 biennium. First, the agency wrote state plan for the Strengthening Career and Technical Education in the 21st Century Act, also known as Perkins V. Rewriting the state plan was a requirement of the federal law. The first step in rewriting the plan was stakeholder feedback. We needed to connect with multiple organizations, spanning tribal, employers, educators, labor unions, workforce development council, etc. and gather feedback. Perkins IV and V were relatively similar, but with a few major changes. The first was the requirement of the agency to create and require completion of a comprehensive local needs assessment. Each school district, receiving Perkins funds, was required to complete the CLNA. The CLNA was to guide the school districts on how best to use their federal funds, based on student performance and enrollments, identify any gaps that may be based on demographics and program alignment with in-demand, high wage, and high skill jobs. The agency developed the CLNA within our current reimbursement system and provided all the data and Labor Market Information to complete the CLNA. We also provided multiple workshops over the winter of 2019-20 to help administrators complete the process. A second change brought upon by Perkins V was the selection of a new secondary performance quality indicator. The indicator under Perkins IV was the completion of a Technical Assessment, which was simply a posttest after completing a program. The state selected Work-Based Learning as its new indicator. This is an attempt to create more opportunities for students to receive hands on experience, either with an employer or some sort of simulated experience, to further enhance their skills. The agency is rolling out guidance in the spring of 2021 for programs to use to stand up and expand WBL. The final change, spurred by Perkins V, was the state to develop a federally funded Innovation Grant Program. On an annual basis, we are setting aside approximately \$300,000 of the current federal allocation we receive for schools, centers and colleges

to apply for funds, with a required match, to enhance their programming opportunities. The first grants were awarded in this fall.

Internal agency accomplishments are as follows:

We have a looked at many of our internal processes, looking for efficiencies. Two processes we are improving upon are new program approval and teacher endorsement approval. We have had retirements in the past year, that allowed us to evaluate those positions prior to re-hiring. In two instances, we were able to absorb duties across the agency, leaving vacant positions. Due to these vacancies, we created a Strategic Projects Manager position within the agency, that will tackle projects that we currently do not have the staffing to do so. Once onboarded, this person will begin working on streamlining CTE distance education and expanding on work-based learning and dual credit opportunities. Finally, COVID-19 has changed how we did our work. We, as many others, had to move to a virtual world. We also compiled a list of distance learning resources for schools to use when all education moved to virtual in April 2020. Finally, it gave the agency the opportunity to evaluate our office needs and begin to make decisions on what we need in the capitol.

Next is an overview of the accomplishments that have occurred in our schools and area career and technology centers.

- 1) Growth of new and expanding programs – As you can see we do lose programs every year, typically due to a school district being unable to replace a teacher. Our largest growth in new and expanding programs tend to be at our area career and technology centers, where they are able to serve multiple school districts. Expanding programs are programs that added course sections due to enrollments or add new courses, to add to the existing program.
- 2) The number of students in North Dakota that enroll in CTE courses and become concentrators continues to grow. We did see a dip in enrollment in 2019-20, but this doesn't concern us as fluctuations can occur. Also, we continue to improve our data collection, so it is possible past

years enrollments may include duplications. A concentrator is a federal term that is defined as a student that take at least two courses in the same Career Cluster. The state defines a course as a full credit. In the 2019-20 school year 23,007 students enrolled in at least one course, with 8,129 becoming a concentrator. Postsecondary enrollment at our community colleges are 8,929 and concentrator count is 4,752. A post-secondary concentrator is a student that has completed at least 12 credits in a program or completed a program that is less than 12 credits. As you can see on this next slide is although our secondary programs data is trending up, our post-secondary have dipped. We contribute the most recent dip was due to COVID-19 and again, improved data collection. The data was pulled from the most recent term, where many students in CTE programming may not have been able to finish their coursework due to campuses shutting down.

- 3) CTE coursework continues to have a positive impact on High School Graduation rates. Data from 2018-19 graduates, continues to illustrate that students who complete at least two credits in a CTE program graduate at a higher rate, than those that do not.
- 4) Finally, accomplishments in the enrollment in the North Dakota Farm Management Education Program. This program provides one-on-one assistance to producers across the state to help them become more efficient, more profitable, in turn producing more with the same resources. We unfortunately have seen a dip in enrollments over the past few years, primarily as instructors retire and are programs are unable to find candidates to fill. The ND Farm Management Education Program is working very hard to turn this around. For one, Dakota College at Bottineau is in the process of expanding their program into the Northwest corner of the state. Secondly, the program launched an aggressive marketing campaign, in order to inform producers of this opportunity. Bismarck State College Farm Management Education Instructor Kyle Olson will provide additional details and answer questions later in the hearing.

Next what do we hope to accomplish in the 2021-23 biennium. We have several lofty goals. They are as follows:

- Continue to develop new and expanding programs at our High Schools and Existing Centers
- Increase enrollee and concentrator numbers in both secondary and post-secondary
- Assist in the development of three additional area career and technology centers
 - Development of at least three new programs at each center, serving multiple districts
- Study and potentially restructure CTE funding model
- Coordinate distance education
- Secondary/Post-Secondary alignment
 - Expand Dual Credit CTE Options
- Expand Work-based Learning Opportunities
- Increase ND Farm Management Education Enrollment

Dr. Lonn, Ms. Vollmer, Mr. Olson and Mr. Hietkamp will discuss in greater detail the goals of their respective programs.

To meet these goals, we need assistance from the legislature. It does take funding to meet many of the goals we have set for ourselves. The remainder of my testimony will focus on the various budgets including our current biennial budget, the agency's proposed budget including the various requested change packages as well as the Governor's Executive Budget. I will also be able to address decreases the agency made to its budget to meet the 10% reduction as directed by the Governor's Office. During the change package slide, I will provide more detail on each of the change packages and the importance of each. Again, Dr. Lonn with CDE, Sara Vollmer with TrainND, Kyle Olson with BSC ND Farm Management Education and Bob Heitkamp with Marketplace for Kids will address their specific programs and budgets.

Slide 15 is a comparison of the 2019-21 biennial base budget compared to the 2021-23 agency proposed base budget. I will review each line item and explain the deltas.

Slide 16 is a comparison of the 2021 agency proposed budget, including the optional requests, compared to the Governor's Executive Budget and the Senate Version of SB2019. Again, I will review each line item and explain the variances.

Slide 17 lists the change packages, submitted by the agency, those included in the Governor's Executive Budget, and what was adopted by the Senate. You will find a one-pager document in your packet that includes each of these change packages.

Cost to Continue – Currently, the agency reimburses the existing approved CTE programs at our high schools and centers, based on instructor salaries and other expenses. As those salaries and expenses increase so does the reimbursement. The agency determined that \$1.5M is needed to maintain the existing reimbursement rates. The Governor included \$1,000,000 in the Executive Budget. The Senate adopted a \$1.5M increase.

New and Expanding Programs – Every year, our schools and centers submit applications to create new or expand their existing programs. Without additional dollars, we will be unable to support those expansions. The agency requested \$1.5M. This was not included in the Executive Budget. The Senate included a \$1M increase.

Center for Distance Education Funding – Dr. Lonn can provide details later, but before COVID-19, CDE was seeing an increase in enrollment. The additional request is to maintain that growth and not turn students away due to staffing capacity. The Senate adopted a \$630,119 increase over the Governor's Executive Budget, which holds the Center for Distance Education whole at the 2019-21 biennium level.

Funding to Establish new CTE Centers – Currently, there are ten regional area Career and Technology Centers (CTCs) in North Dakota. Instruction at the CTCs varies. It can be provided face-to-face, online, or through interactive television (ITV). Five of the CTCs are considered brick and mortar centers. The other five are considered virtual, meaning they lack a central physical space. A

total of eight of the ten CTCs provide distance instruction, whether through ITV and/or online. The virtual centers are almost exclusively distance, but still provide a level of face-to-face hands-on instruction for every program.

The ND CTE approves the operation of the CTCs, approves their programming, and supports them through funding and technical assistance. The CTCs also raise revenue through center membership and course enrollment fees. The ten area CTCs currently have a school district membership totaling 100 school districts.

Career and technical education is available to every high school student in the state; what the CTCs can provide is career specific coursework. This can be done because a CTC is able to scale coursework by providing courses to multiple school districts at the same time.

Another benefit is that CTCs employ an administrator whose primary focus is career and technical education. This focus allows the administrator time to build quality programs, foster employer partnerships, and advocate for career and technical education. It is not that local district superintendents and principals do not do a good job at this; they simply don't often have the time for that level of commitment.

The request is to provide funding to expand access to CTCs through center expansion and start up grants. This would be a \$40 million competitive matching grant program. To ensure partnership and industry alignment, applications will be reviewed by a team comprised of representatives from the ND CTE, Department of Public Instruction, Job Service ND, the Department of Commerce, and the ND Workforce Development Council. This idea stems from the success that has been seen from the current CTCs. Applicants will be required to ensure there is industry and community support, higher education partnership including dual credit and postsecondary offerings, and commitment from school districts to agree to partner with the center. As you can see, the Governor's Executive Budget includes \$45million. The Senate maintained the Governor's recommendation.

New and Expanding CTE Center Operating - The intent of this change package is to support the operating of any new area CTCs that happen to come online during the 2021-23 biennium at the current reimbursement rate. Neither the Governor nor the Senate included this.

Revised Funding Model - The ND CTE has been exploring various models of funding career and technical education programs. The intent of this funding is to support all programs equally. Currently, Family and Consumer Science Education and Business Education programs receive lower reimbursement rates and are not totally funded. Also, the state does not currently support Middle School CTE programs. This funding could provide opportunities to expand access. Neither the Governor nor the Senate included this.

Transfer from Operating to Grants – ND CTE provides funds to the STEM Network, to provide professional development and Regional STEM Days. The STEM Network has attained 501(c)3 status, so the agency wishes to grant funds to the STEM Network instead of managing the funds itself. This was adopted by both the Governor and the Senate.

To go back to the funding for additional CTE centers, I felt it would be appropriate to include a map of existing centers, to better understand Center coverage.

The final slide is a summary of Cares dollars the agency received, in response to COVID-19 pandemic. The agency did receive dollars through approval at the November Emergency Commission and the December Budget Section for a total of \$470,980. \$270,980 were used by the ND Center for Distance Education to fund adjunct teachers due to the surge in enrollments because of the pandemic. Mr. Lonn is here to provide more details you may request. \$200,000 was granted out to our ten area career and technology centers to cover expenses such as PPE, cleaning supplies and equipment that was used for distance education or to cut down on multiple student use. The Centers were not included in any of the specific set aside Cares funds. Examples of equipment

include health careers mannequins, cameras and safety goggles that cut down on multiple student use.

Senator Monson and members of the House Appropriations Education and Environmental Committee. This concludes my testimony and I am happy to answer any questions you may have. If not, I would like to turn the podium over to Dr. Matt Lonn, Director for the Center for Distance Education.

LIFE'S BEST LESSONS ARE LEARNED ON THE FARM.

Hard work. Caring for the land. And business operations.



Generations of farmers and ranchers have learned the valuable lessons of those who came before them. With changing markets and increased costs, farming and ranching the same way year after year may not keep your operation profitable. Continue life's lessons with the North Dakota Farm Management Education Program.

You'll learn to gather and analyze data:

- Keep detailed records
- Develop cash flow projections and balance sheets
- Prepare yearly analysis to establish benchmarks
- Create financial statements for ag lenders and tax preparers
- Evaluate crop and livestock profitability, and more

Hear more life lessons from
ND farmers and ranchers at
ndfarmmanagement.com

ND FARM
MANAGEMENT EDUCATION



Maximize your potential and meet your professional and personal goals with the North Dakota Farm Management Education Program

How do I enroll?

Enrollment in the program involves registering for a class with a one-on-one instructor. Contact an instructor from your area and they will guide you through the process of filling out a few simple forms. Visit www.ndfarmmanagement.com to find an instructor near you.

What does it cost to enroll?

The annual enrollment costs vary based on when the participant enrolls at either of the four community colleges or Glen Ullin High School. On average, the personalized instruction costs \$650 per year.

I don't want my financial information to become public. Should I be concerned?

There is no need for concern in sharing information. All information and data collected is completely confidential. We will establish a relationship with your lender so information can be shared. Your analysis will be submitted for the purpose of publishing state and regional averages but will only be used as part of a group average.

Who should enroll in the ND Farm Management Education Program?

Our program has great value to all ages and situations. We have students from ages 18 to 70, and from 1st year farms to well-established operations. It is all about understanding your farm or ranch's financial situation and performance to help you make better decisions.

What is the time commitment required of me?

The time you put into the program will determine how much you get out of it. At a minimum you will be expected to keep a complete set of financial and production records suitable to complete a whole farm analysis. Three to five visits a year are typical, but new students may meet monthly. Long-term students may meet less often. Each student's needs are different.

Work one-on-one with an experienced instructor for a program tailored to your specific needs. Enroll at any time to ensure a brighter future for your farm or ranch.



"The Farm Management Program has played a huge role in our operation over the years. We used it to help transition the operation from my parents to myself. Now we are using the Farm Management Program to assist in transferring the operation from ourselves to our son."

- Bismarck State College Program Enrollee 

"It has allowed us to make more intelligent decisions based on the information provided to us in the packet. It has allowed our lender to also better understand the farming operation. With the stress and tight margins in the farm sector today, the Farm Management program is a wonderful working tool to assist all involved in the operation."

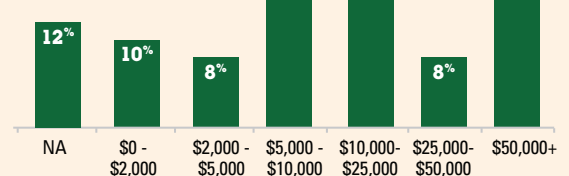
- Dakota College at Bottineau Program Enrollee 

"I tell all of the new farmers in the area that the best money they could spend is to join this program and learn how to do this part of farming correctly. I feel it is one of the most vital parts of my farming regimen. Everybody says a farmer needs a team to help on the farm (loan officer, agronomist, chemical specialist, equipment specialist, insurance agent). My instructor in this program is one of these parts of my farming team, and I hope it continues."

- Bismarck State College Enrollee 

ANNUAL ECONOMIC GAIN OF PARTICIPATING IN THE FARM MANAGEMENT PROGRAM FOR YOUR FARM/RANCH

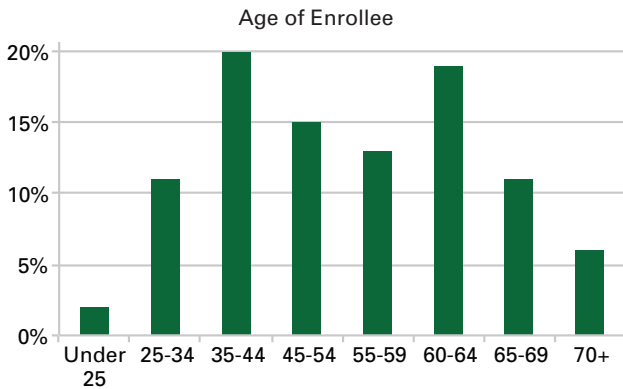
50% of enrollees surveyed benefit from an annual economic gain of \$10,000 or more



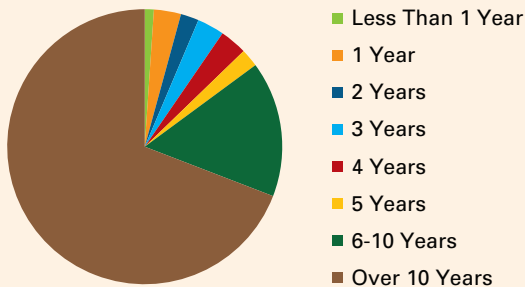
2020 ND FARM MANAGEMENT EDUCATION SURVEY

The following information was gathered through a survey of producers enrolled in the North Dakota Farm Management Education Program in 2020. (105 responders)

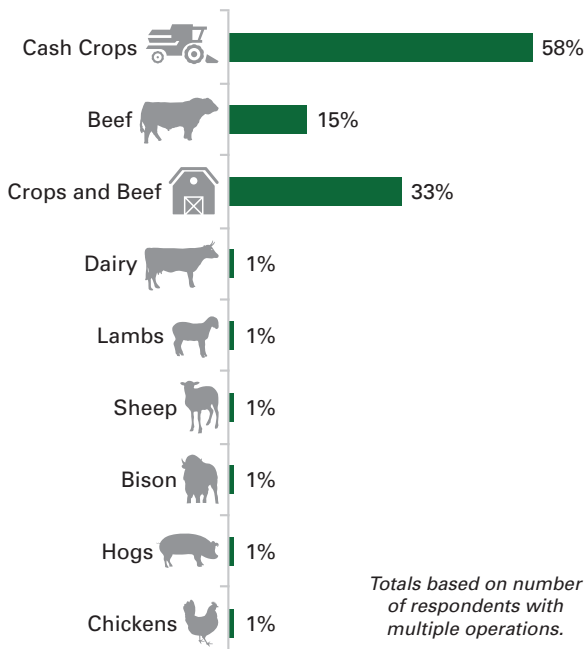
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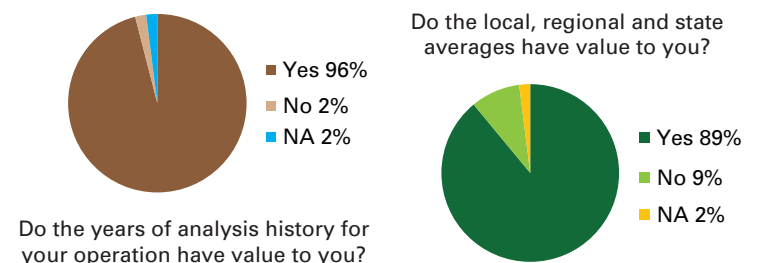
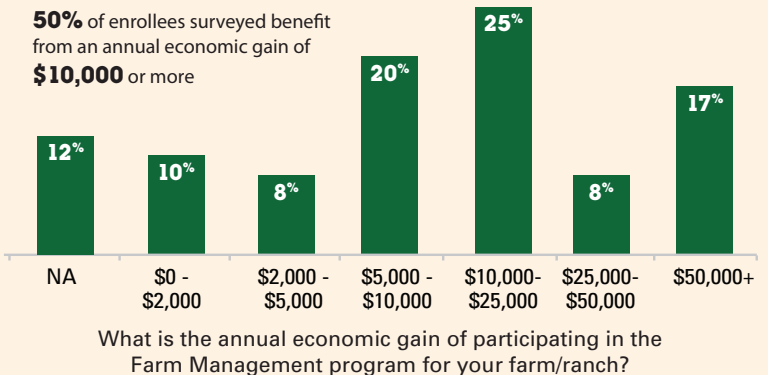
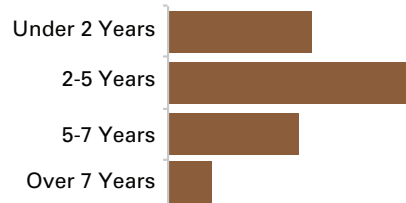
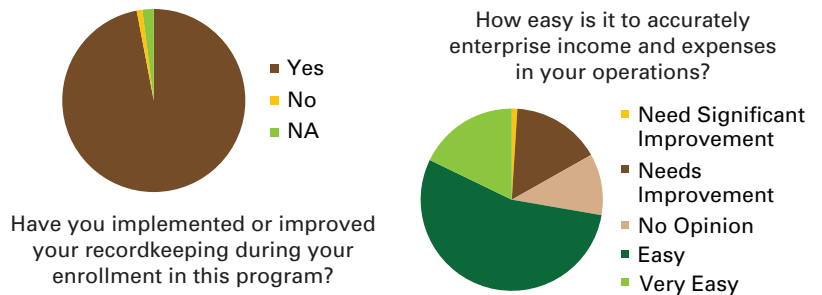
How many years have you been a member of the Farm Management analysis program?



Type of Farm Operations

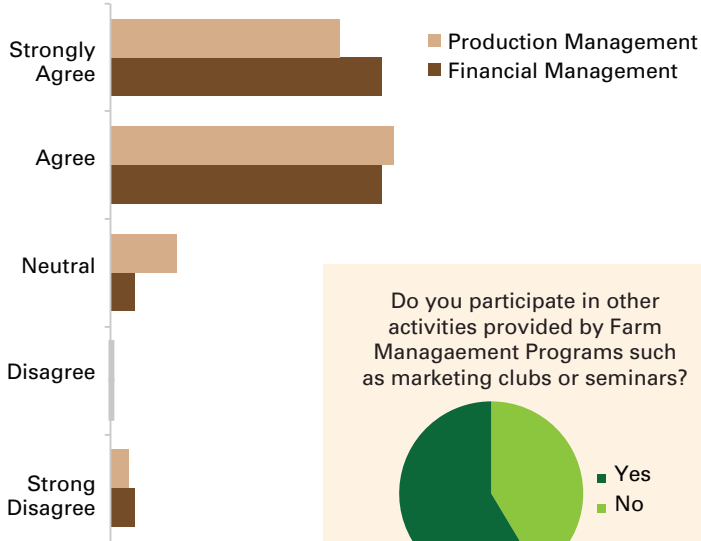


PROGRAM MEASUREMENT AND BENEFITS

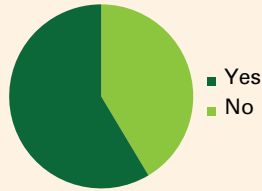


CHANGE IN CONFIDENCE LEVELS

Are you more confident in your ability today versus before you entered the FM program?



Do you participate in other activities provided by Farm Management Programs such as marketing clubs or seminars?




TOP REASONS OUR ENROLLEES HAVE MAINTAINED THEIR ENROLLMENT YEAR AFTER YEAR

- To keep better records
- Enterprise analysis
- Helpful in planning for next year and the future
- Very useful in evaluating my farm and controlling expenses
- Determines profitability and management decisions
- Transitioning the operation to the next generation
- Helpful to bank in securing operating loans
- An unbiased look at the entire operation

96% of participants believe working with the same instructor for several years is a benefit.

Why producers feel the ND Farm Management Program is valuable to their operations:

"I feel it is a very important tool for making good management decisions and it has helped me tremendously. I will continue to participate in the program as long as I am farming. I will encourage others to do the same."

- Glen Ullin Program Enrollee 

"FBM is a wonderful program. It is vital to decision making and success. I feel fortunate to be part of it."

- Dakota College at Bottineau Program Enrollee 

"The Farm Management Program is absolutely a critical tool for my operation. It is vital to securing my operating funds. It is crucial to my decision making. It is extremely useful when comparing to other producers throughout the state to evaluate things that are good or poor. Every farm operation, large or small, should be required to participate in this program."

- Bismarck State College Program Enrollee 

"I feel this program is a benefit to all farmers no matter what your age or experience maybe."

- Dakota College at Bottineau Program Enrollee 


"It's nice to have someone you can talk to that knows and understands your operation and is willing to help you achieve your personal goals. The Farm Management Program is a very valuable source of guidance for my operation."

- North Dakota State College of Science Program Enrollee 

"I tell all of the new farmers in the area that the best money they could spend is to join this program and learn how to do this part of farming correctly. I feel it is one of the most vital parts of my farming regimen. Everybody says a farmer needs a team to help on the farm (loan officer, agronomist, chemical specialist, equipment specialist, insurance agent). My instructor in this program is one of these parts of my farming team, and I hope it continues."

- Bismarck State College Enrollee 

"It helps me realize where I have to improve compared to other farms in the region to stay competitive."

- Lake Region State College Program Enrollee 

"The Farm Management Program has played a huge role in our operation over the years. We used it to help transition the operation from my parents to myself. Now we are using the Farm Management Program to assist in transferring the operation from ourselves to our son."

- Bismarck State College Program Enrollee 

"It has allowed us to make more intelligent decisions based on the information provided to us in the packet. It has allowed our lender to also better understand the farming operation. With the stress and tight margins in the farm sector today, the Farm Management program is a wonderful working tool to assist all involved in the operation."

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ND FARM
MANAGEMENT EDUCATION

North Dakota
cte
Career and Technical
Education

CRAIG KLEVEN
Supervisor Agricultural Education
701-328-3162
ckleven@nd.gov
www.ndfarmmanagement.com





North Dakota Department of Career and Technical Education 2021-23 Legislative Budget Priorities

For the 67th Legislative Session, the North Dakota Department of Career and Technical Education (ND CTE) has identified the following as budget priorities. The following change packages are increases to the agency's budget. In addition to these increases, the agency, through efficiencies and other reductions, made a 10% reduction, as directed by the Governor's Office.

CHANGE PACKAGES

Cost to Continue – \$1.5 million

Currently, high school career and technical education programs are reimbursed at our comprehensive high schools at 27% and 40% at our area Career and Technology Centers (CTCs). In order to account for increases in costs and maintain reimbursement rates, ND CTE is requesting \$1.5M for cost to continue.

New and Expanding – \$1.5 million

Every year, new career and technical education programs are introduced and make substantial expansions. In order to support these programs, but not at the expense to reimbursement of existing programs, ND CTE is requesting \$1.5 million.

New and Expanding CTE Centers – \$40 million

Currently, there are ten regional area Career and Technology Centers (CTCs) in North Dakota. Instruction at the CTCs varies. It can be provided face-to-face, online, or through interactive television (ITV). Five of the CTCs are considered brick and mortar centers. The other five are considered virtual, meaning they lack a central physical space. A total of eight of the ten CTCs provide distance instruction, whether through ITV and/or online. The virtual centers are almost exclusively distance, but still provide a level of face-to-face hands-on instruction for every program.

The ND CTE approves the operation of the CTCs, approves their programming and supports them through funding and technical assistance. The CTCs also raise revenue through center membership and course enrollment fees. The ten area CTCs currently have a school district membership totaling 100 school districts.

Career and technical education is available to every high school student in the state; what the CTCs can provide is career specific coursework. This can be done because a CTC is able to scale coursework by providing courses to multiple school districts at the same time.

Another benefit is that CTCs employ an administrator whose primary focus is career and technical education. This focus allows the administrator time to build quality programs, foster employer partnerships, and advocate for career and technical education. It is not that local district superintendents and principals do not do a good job at this, they simply don't often have the time for that level of commitment.

The request is to provide funding to expand access to CTCs through center expansion and start up grants. This would be a \$40 million competitive matching grant program. To ensure partnership and industry alignment, applications will be reviewed by a team comprised of representatives from the ND CTE, Department of Public Instruction, Job Service ND, the Department of Commerce, and the ND Workforce Development Council. This idea stems from the success that has been seen from the current CTCs. Applicants will be required to ensure there is industry and community support, higher education partnership including dual credit and postsecondary offerings, and commitment from school districts to agree to partner with the center.

New and Expanding CTE Center Operating – \$2 million

The intent of this change package is to support the operating of any new area CTCs that happen to come online during the 2021-23 biennium.

Revised Funding Model – \$3 million

The ND CTE has been exploring various models of funding career and technical education programs. The intent of this funding is to support all programs equally. Currently, Family and Consumer Science Education and Business Education programs receive lower reimbursement rates and are not totally funded. Also, the state does not currently support Middle School CTE programs. This funding could provide opportunities to expand access.

Center for Distance Education – Funding Student Choice and Opportunity – \$1,051,449

Center for Distance Education (CDE) exists to guarantee that every K-12 North Dakota student, regardless of where they live, has the opportunity to learn what they want, when they want. CDE is requesting \$6.7 million in general funds to ensure that over 11,000 online courses can be taken by all of ND's K-12 students and over 3,400 of ND's students can continue to have access to blended learning opportunities through project-based learning labs. The executive budget reduced CDE's general fund appropriation to \$5.8 million from its 19-21 biennium level of \$6.3 million. This reduction has the potential to reduce CDE's capacity by 1,500 online course enrollments at a time when need of CDE's services continues to grow.

House Appropriations
Education and Environment Division
SB 2019
Department of Career and Technical Education
March 5, 2021

Chairman Monson and members of the committee, my name is Wayde Sick, State Director of the Department of Career and Technical Education. I am here to provide testimony for Senate Bill 2019 or the Department of Career and Technical Education Appropriations Bill.

2020 has been a year like no other. We have seen drastic changes in how we work, how we live, how we educate. What has become very apparent is the vital role the programs that are housed within SB2019 are to the state's and the nation's economic recovery. The occupations that originate in a high school CTE program have been commonly referred to as "Essential Workers" during the COVID pandemic. Distance education became a necessity, delivered by our schools, our CTE centers, and CTE's Center for Distance Education. Workforce recovery and skilling up workers who may have lost their jobs was addressed by our community colleges and TrainND. The backbone of our state's economy is agriculture, making the ND Farm Management Education Program vital in helping North Dakota producers be more profitable and productive, which enables them to provide products that feed the world. This afternoon you will hear testimony from myself and others about the impact the programs embedded within the Department of Career and Technical Education budget have on our state. This is going to be a difficult budget year, we all know that, but the programs and initiatives we will discuss this afternoon will play a key role in economic recovery and a sustained future. I would like to add that many of the priorities of the Department of CTE also align with the strategic themes of the K12 Strategic Vision and the priorities of the North Dakota Workforce Development Council.

My testimony and those of others today will address the requests the Committee had of the agency.

First, North Dakota Century Code that provides the agency the authority to do what it does. The Department of Career and Technical Education can be found in NDCC 15-20.1, 15-20.2 and 15-20.4. 15-20.1 gives the agency the authority to reimburse CTE programs using state and federal funds, develop a STEM grant program, a Career Development and the ND Elementary Student Entrepreneurship program, which is administered by Marketplace for Kids. You will hear later from Bob Heitkamp, director of Marketplace for Kids. 15-20.2 provides guidance and authority to operate area career and technology centers. 15-20.4 provides the State Board for Career and Technical Education the authority to approve private postsecondary career schools to operate in North Dakota. Examples of postsecondary career schools that required approval are Lynnes Welding, Emerging Digital Academy and Rasmussen College.

The North Dakota Center for Distance Education is created in 15-19-01. NDCC states NDCDE shall provide K-12 course, comprehensive educational support and High School Diplomas. Dr. Matthew Lonn is here to provide deeper testimony later in the hearing.

The mission of ND Career and Technical Education is to work with others to provide all North Dakota citizens with the technical skills, knowledge, and attitudes necessary for successful performance in a globally competitive workplace. I bring this up because the work CTE does is often through partnerships with industry, the various Career and Technical Student Organizations, higher education and other state agencies.

The next request was the agency organizational chart. NDCTE is a relatively flat agency. The agency is divided into divisions, with most overseeing the various program areas. Dr. Lonn, with NDCDE, is on this organizational chart as he reports directly to me and will explain his organization in greater detail.

The most recent audit completed in March 2020 by the State Auditor's Office found no areas of concern.

Moving on, the committee asked what has the agency accomplished in the 2019-21 biennium. First, the agency wrote state plan for the Strengthening Career and Technical Education in the 21st Century Act, also known as Perkins V. Rewriting the state plan was a requirement of the federal law. The first step in rewriting the plan was stakeholder feedback. We needed to connect with multiple organizations, spanning tribal, employers, educators, labor unions, workforce development council, etc. and gather feedback. Perkins IV and V were relatively similar, but with a few major changes. The first was the requirement of the agency to create and require completion of a comprehensive local needs assessment. Each school district, receiving Perkins funds, was required to complete the CLNA. The CLNA was to guide the school districts on how best to use their federal funds, based on student performance and enrollments, identify any gaps that may be based on demographics and program alignment with in-demand, high wage, and high skill jobs. The agency developed the CLNA within our current reimbursement system and provided all the data and Labor Market Information to complete the CLNA. We also provided multiple workshops over the winter of 2019-20 to help administrators complete the process. A second change brought upon by Perkins V was the selection of a new secondary performance quality indicator. The indicator under Perkins IV was the completion of a Technical Assessment, which was simply a posttest after completing a program. The state selected Work-Based Learning as it's new indicator. This is an attempt to create more opportunities for students to receive hands on experience, either with an employer or some sort of simulated experience, to further enhance their skills. The agency is rolling out guidance in the spring of 2021 for programs to use to stand up and expand WBL. The final change, spurred by Perkins V, was the state to develop a federally funded Innovation Grant Program. On an annual basis, we are setting aside approximately \$300,000 of the current federal allocation we receive for schools, centers and colleges

to apply for funds, with a required match, to enhance their programming opportunities. The first grants were awarded in this fall.

Internal agency accomplishments are as follows:

We have a looked at many of our internal processes, looking for efficiencies. Two processes we are improving upon are new program approval and teacher endorsement approval. We have had retirements in the past year, that allowed us to evaluate those positions prior to re-hiring. In two instances, we were able to absorb duties across the agency, leaving vacant positions. Due to these vacancies, we created a Strategic Projects Manager position within the agency, that will tackle projects that we currently do not have the staffing to do so. Once onboarded, this person will begin working on streamlining CTE distance education and expanding on work-based learning and dual credit opportunities. Finally, COVID-19 has changed how we did our work. We, as many others, had to move to a virtual world. We also compiled a list of distance learning resources for schools to use when all education moved to virtual in April 2020. Finally, it gave the agency the opportunity to evaluate our office needs and begin to make decisions on what we need in the capitol.

Next is an overview of the accomplishments that have occurred in our schools and area career and technology centers.

- 1) Growth of new and expanding programs – As you can see we do lose programs every year, typically due to a school district being unable to replace a teacher. Our largest growth in new and expanding programs tend to be at our area career and technology centers, where they are able to serve multiple school districts. Expanding programs are programs that added course sections due to enrollments or add new courses, to add to the existing program.
- 2) The number of students in North Dakota that enroll in CTE courses and become concentrators continues to grow. We did see a dip in enrollment in 2019-20, but this doesn't concern us as fluctuations can occur. Also, we continue to improve our data collection, so it is possible past

years enrollments may include duplications. A concentrator is a federal term that is defined as a student that take at least two courses in the same Career Cluster. The state defines a course as a full credit. In the 2019-20 school year 23,007 students enrolled in at least one course, with 8,129 becoming a concentrator. Postsecondary enrollment at our community colleges are 8,929 and concentrator count is 4,752. A post-secondary concentrator is a student that has completed at least 12 credits in a program or completed a program that is less than 12 credits. As you can see on this next slide is although our secondary programs data is trending up, our post-secondary have dipped. We contribute the most recent dip was due to COVID-19 and again, improved data collection. The data was pulled from the most recent term, where many students in CTE programming may not have been able to finish their coursework due to campuses shutting down.

- 3) CTE coursework continues to have a positive impact on High School Graduation rates. Data from 2018-19 graduates, continues to illustrate that students who complete at least two credits in a CTE program graduate at a higher rate, than those that do not.
- 4) Finally, accomplishments in the enrollment in the North Dakota Farm Management Education Program. This program provides one-on-one assistance to producers across the state to help them become more efficient, more profitable, in turn producing more with the same resources. We unfortunately have seen a dip in enrollments over the past few years, primarily as instructors retire and are programs are unable to find candidates to fill. The ND Farm Management Education Program is working very hard to turn this around. For one, Dakota College at Bottineau is in the process of expanding their program into the Northwest corner of the state. Secondly, the program launched an aggressive marketing campaign, in order to inform producers of this opportunity. Bismarck State College Farm Management Education Instructor Kyle Olson will provide additional details and answer questions later in the hearing.

The Committee asked what we hope to accomplish in the 2021-23 biennium. We have several lofty goals. They are as follows:

- Continue to develop new and expanding programs at our High Schools and Existing Centers
- Increase enrollee and concentrator numbers in both secondary and post-secondary
- Assist in the development of three additional area career and technology centers
 - Development of at least three new programs at each center, serving multiple districts
- Study and potentially restructure CTE funding model
- Coordinate distance education
- Secondary/Post-Secondary alignment
 - Expand Dual Credit CTE Options
- Expand Work-based Learning Opportunities
- Increase ND Farm Management Education Enrollment

Dr. Lonn, Ms. Vollmer, Mr. Olson and Mr. Hietkamp will discuss in greater detail the goals of their respective programs.

To meet these goals, we need assistance from the legislature. It does take funding to meet many of the goals we have set for ourselves. The remainder of my testimony will focus on the various budgets including our current biennial budget, the agency's proposed budget including the various requested change packages as well as the Governor's Executive Budget. I will also be able to address decreases the agency made to its budget to meet the 10% reduction as directed by the Governor's Office. During the change package slide, I will provide more detail on each of the change packages and the importance of each. Again, Dr. Lonn with CDE, Sara Vollmer with TrainND, Kyle Olson with BSC ND Farm Management Education and Bob Heitkamp with Marketplace for Kids will address their specific programs and budgets.

Slide 15 is a comparison of the 2019-21 biennial base budget compared to the 2021-23 agency proposed base budget. I will review each line item and explain the deltas.

Slide 16 is a comparison of the 2021 agency proposed budget, including the optional requests, compared to the Governor's Executive Budget and the Senate Version of SB2019. Again, I will review each line item and explain the variances.

Slide 17 lists the change packages, submitted by the agency, those included in the Governor's Executive Budget, and what was adopted by the Senate. You will find a one-pager document in your packet that includes each of these change packages.

Cost to Continue – Currently, the agency reimburses the existing approved CTE programs at our high schools and centers, based on instructor salaries and other expenses. As those salaries and expenses increase so does the reimbursement. The agency determined that \$1.5M is needed to maintain the existing reimbursement rates. The Governor included \$1,000,000 in the Executive Budget. The Senate adopted a \$1.5M increase.

New and Expanding Programs – Every year, our schools and centers submit applications to create new or expand their existing programs. Without additional dollars, we will be unable to support those expansions. The agency requested \$1.5M. This was not included in the Executive Budget. The Senate included a \$1M increase.

Center for Distance Education Funding – Dr. Lonn can provide details later, but before COVID-19, CDE was seeing an increase in enrollment. The additional request is to maintain that growth and not turn students away due to staffing capacity. The Senate adopted a \$630,119 increase over the Governor's Executive Budget, which holds the Center for Distance Education whole at the 2019-21 biennium level.

Funding to Establish new CTE Centers – Currently, there are ten regional area Career and Technology Centers (CTCs) in North Dakota. Instruction at the CTCs varies. It can be provided face-to-face, online, or through interactive television (ITV). Five of the CTCs are considered brick and mortar centers. The other five are considered virtual, meaning they lack a central physical space. A

total of eight of the ten CTCs provide distance instruction, whether through ITV and/or online. The virtual centers are almost exclusively distance, but still provide a level of face-to-face hands-on instruction for every program.

The ND CTE approves the operation of the CTCs, approves their programming and supports them through funding and technical assistance. The CTCs also raise revenue through center membership and course enrollment fees. The ten area CTCs currently have a school district membership totaling 100 school districts.

Career and technical education is available to every high school student in the state; what the CTCs can provide is career specific coursework. This can be done because a CTC is able to scale coursework by providing courses to multiple school districts at the same time.

Another benefit is that CTCs employ an administrator whose primary focus is career and technical education. This focus allows the administrator time to build quality programs, foster employer partnerships, and advocate for career and technical education. It is not that local district superintendents and principals do not do a good job at this; they simply don't often have the time for that level of commitment.

The request is to provide funding to expand access to CTCs through center expansion and start up grants. This would be a \$40 million competitive matching grant program. To ensure partnership and industry alignment, applications will be reviewed by a team comprised of representatives from the ND CTE, Department of Public Instruction, Job Service ND, the Department of Commerce, and the ND Workforce Development Council. This idea stems from the success that has been seen from the current CTCs. Applicants will be required to ensure there is industry and community support, higher education partnership including dual credit and postsecondary offerings, and commitment from school districts to agree to partner with the center. As you can see, the Governor's Executive Budget includes \$45million. The Senate maintained the Governor's recommendation.

New and Expanding CTE Center Operating - The intent of this change package is to support the operating of any new area CTCs that happen to come online during the 2021-23 biennium at the current reimbursement rate. Neither the Governor nor the Senate included this.

Revised Funding Model - The ND CTE has been exploring various models of funding career and technical education programs. The intent of this funding is to support all programs equally. Currently, Family and Consumer Science Education and Business Education programs receive lower reimbursement rates and are not totally funded. Also, the state does not currently support Middle School CTE programs. This funding could provide opportunities to expand access. Neither the Governor nor the Senate included this.

Transfer from Operating to Grants – ND CTE provides funds to the STEM Network, to provide professional development and Regional STEM Days. The STEM Network has attained 501(c)3 status, so the agency wishes to grant funds to the STEM Network instead of managing the funds itself. This was adopted by both the Governor and the Senate.

To go back to the funding for additional CTE centers, I felt it would be appropriate to include a map of existing centers, to better understand Center coverage.

The final request of the Committee was if the agency received any Cares dollars, in response to COVID-19 pandemic. The agency did receive dollars through approval at the November Emergency Commission and the December Budget Section for a total of \$470,980. \$270,980 were used by the ND Center for Distance Education to fund adjunct teachers due to the surge in enrollments because of the pandemic. Mr. Lonn is here to provide more details you may request. \$200,000 was granted out to our ten area career and technology centers to cover expenses such as PPE, cleaning supplies and equipment that was used for distance education or to cut down on multiple student use. The Centers were not included in any of the specific set aside Cares funds. Examples of equipment

include health careers mannequins, cameras and safety goggles that cut down on multiple student use.

Senator Monson and members of the House Appropriations Education and Environmental Committee. This concludes my testimony and I am happy to answer any questions you may have. If not, I would like to turn the podium over to Dr. Matt Lonn, Director for the Center for Distance Education.

Dr. Matthew Lonn Testimony to House Appropriations – Education and Environment Division

Chairman Monson and members of the house appropriations education and environment division, I speak to you today on behalf of North Dakota's Center for Distance Education (NDCDE, CDE). For the record, I am Dr. Matthew Lonn, Director at the Center for Distance Education.

Center for Distance Education (CDE) has been given three specific responsibilities under Century Code 15-19-01, that is to provide: (1) K-12 courses, (2) comprehensive educational support, and (3) high school diplomas. Put simply, the guiding purpose of CDE is to provide learning opportunities for ND's K-12 learners. The mission that continues to be at the center of everything the organization does is to ensure that all ND students, regardless of location have access to educational opportunities that meet or exceed customer expectations for quality of curriculum, contact time with highly qualified instructors, course delivery efficiency and effectiveness, and student learning.

Throughout the 2019-2021 biennium, your investment in Center for Distance education proved to be invaluable. When the COVID-19 pandemic broke out in March of 2020, ND schools, students, and parents had a trusted distance learning organization that they could rely on to provide vital services. During the 2019-2021 biennium, CDE will have enrolled ND students in over 15,000 online courses. That is an increase from the previous biennium of over 50%. In addition, over 6,000 enrollments will have worked with schools or organizations that leverage CDE's learning management system, and over 3,000 students will have actively participated in hands-on, blended learning labs supported by CDE. Overall, nearly 20,000 students will have been provided learning opportunities through CDE.

It is important to remember that even pre-pandemic, students, parents, and schools utilizing CDE's services had been increasing at annual growth rates of 4-7%. Even without COVID-19, CDE anticipates that over 10,000 online course enrollments would have occurred. The reasons for this are many. But essentially, CDE fills needs across the K-12 educational landscape. These are often unique needs that must be met for specific situations. The following are just a few actual examples that CDE saw over the 2019-2021 biennium.

- A small rural school is notified in December that their math teacher will not be returning.
- Dozens of ND schools want to offer ag. courses but are unable to hire any qualified applicants.
- A district cannot find any qualified business or Spanish instructors.
- A student in a local school fails a course and needs to retake it at their own pace to stay on track for graduation.
- A student cannot fit certain courses that they want to take in their local school schedule.
- Students want to explore topics that their school cannot offer.
- Students want to take courses that help prepare them for industry recognized certifications, asynchronously.
- A school cannot find enough funds to provide students with a quality blended, project-based, hands on learning environment.
- Because of bullying or other mental health issues, a student needs an alternative to traditional, face to face instruction.

Looking forward into the 2021-2023 biennium, CDE has the opportunity to help more kids. Based on feedback from parents and schools, the need is great for CDE's services. CDE anticipates annual growth in students needing supplemental online courses of at least 3% annually. In addition, CDE's growth in industry recognized certification preparation courses, adaptive technology, and competency-based learning opportunities hold great potential to help kids improve mastery of skills in an online delivery format. These developments in online course delivery hold potential to help CDE continue to increase its successful completion rate from 84% to 90% over the next two years. CDE also anticipates growth of blended, hands-on project-based learning with approximately 5 new labs installed and supported annually averaging over 1,500 more students each year. Lastly, CDE will continue to innovate internally to leverage new efficient processes like a rapid enrollment feature that leverages the SLDS database to improve the customer enrollment and payment experience.

To meet these expectations of students, parents, and schools, CDE is not requesting any additional FTE's. CDE is requesting a general fund allocation of \$6.7 million and special fund spending authority of \$3,050,000 for a total budget of \$9,750,000. This request reflects a 6% increase in general funds from CDE's 2019-2021 general fund allocation. This increase is necessary for CDE to continue to provide learning opportunities for the expected 11,000 enrollments utilizing CDE's services. The increase in general funds would be allocated to salaries and wages and would allow CDE the ability to hire the additional adjunct/temporary instructors needed to work with each one these students. CDE's operational expenses for each additional learner will continue to be collected from tuition and fees.

CDE is both a school and a state agency. Just like any other ND K-12 school, it must rely on tax dollars allocated from the state legislature. As a state agency, it must also generate revenue from the services it provides. This delicate balance allows approximately 65% of CDE's funding to come directly from state general funds and 35% of CDE's funding to be obtained by a per user fee or tuition payment. CDE's pricing strategy must meet two key objectives. (1). CDE sets a price that allows nearly all its operational expenses to be paid for with special funds. (2). Prices must be competitive with out of state online providers. Over a decade ago, CDE was asked by both the executive and legislative branches to help reduce the use of poor quality, out of state, online providers being used in ND. Keeping prices at current competitive rates is vital to keeping a quality online K-12 service in ND.

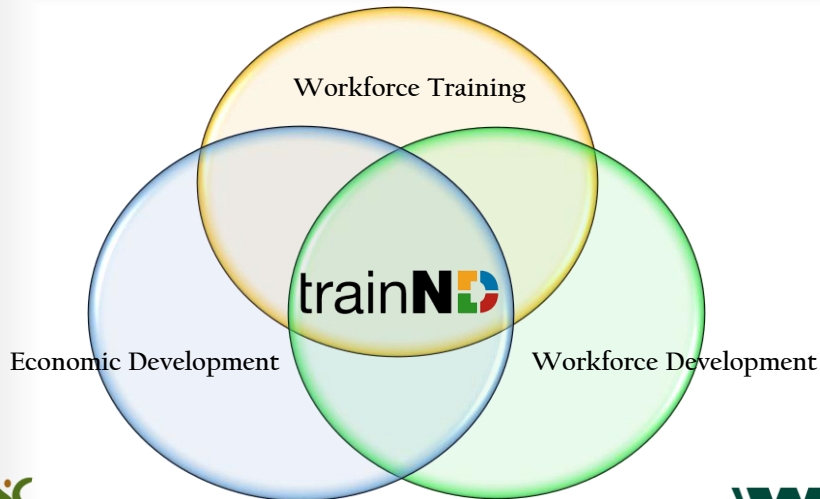
CDE is not simply an add-on to ND's K-12 educational system. CDE is a necessity that ensures a uniform system of education can be provided to every student.

Thank you for your time. I will now stand for any questions.

Dr. Matthew Lonn, State Director
North Dakota Center for Distance Education

An Investment into North Dakota

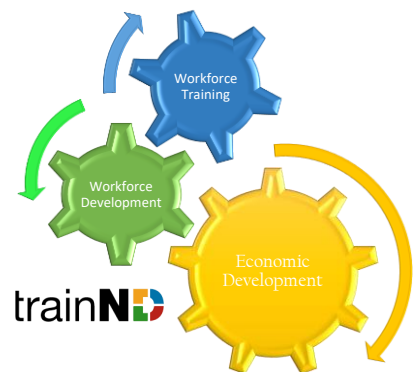
Building a Sustainable Workforce



1

A Return on Investment

- Workforce Development
 - Brings Trained People Into the Workforce
- Workforce Training
 - Brings greater skills to incumbent workers
- Economic Development
 - Brings growth to communities and state



2

Need is Greater than Ever

- Short term programming for workforce development
- Qualified workers help drive economic development
- Incumbent workers to gain new skills for enhanced work
- Economic recovery amid a pandemic
- Continued funding to assist with program expansion
- Economic diversity within North Dakota
- Investment in our workforce and business growth
- 74% of businesses in North Dakota have less than 10 people



3

Workforce Program Impacts

- Certified Nursing Assistant (CNA Programs)
 - Statewide programming
 - Stackable Certificate & Pathway to Education
 - Job Service WIOA Funding Eligible
 - 326 students
 - 36 classes
 - 636 CNA State Board Exams (Registered Students & Challenge Exams)
 - Pre CNA
 - Fast Track Temporary CNA
 - Quality Service Provider (In Home Care)



4

Workforce Program Impacts

- Commercial Drivers License (CDL Programs)
 - Statewide programming
 - Stackable Certificate & Pathway to Education
 - Job Service WIOA Funding Eligible/Veterans Funding
 - ND Commerce Grant to Expand CDL programming
 - 134 students
 - 22 classes

Williston, Dickinson, Minot, Fargo, Bismarck, Devils Lake



5



NDUS Annual Enrollment Summary FY20

• Non-Credit TrainND Headcount	19,008
• Total Community College Headcount	35,038
• Percentage of Headcount from TrainND	54%
• Total NDUS Headcount (11 Institutions)	74,014
• Percentage Headcount from TrainND	26%

TrainND Annual Report FY20

• Number of Businesses Receiving Training in FY20	1,412
• Number of Businesses with less than 50 employees	1,026
• Number of Unduplicated Employees receiving Training	19,008



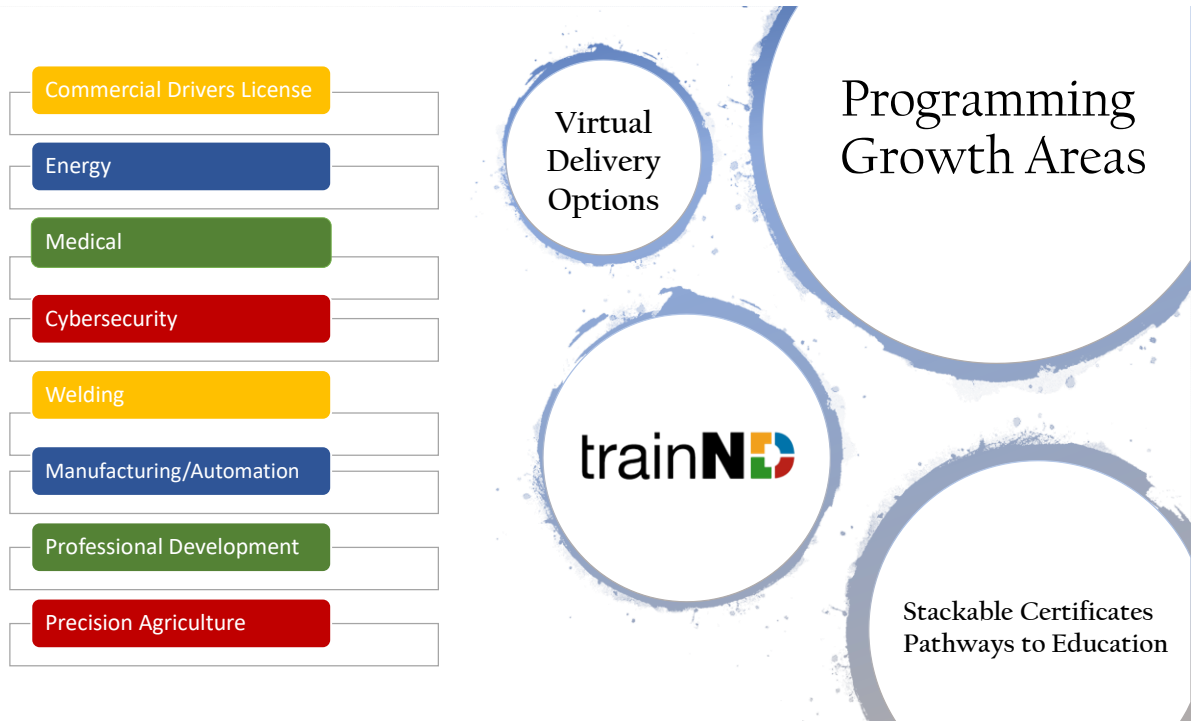
6

Changing Modes of Delivery

- Accelerated changes to the way people learn
- Flexible with new costs in transition
- Increased options for companies and workers
 - Distance Learning
 - Synchronous/Asynchronous
 - Virtual
 - Hybrid
 - Recorded Presentations
 - Traditional Face-to-Face/In person
 - Mobile labs



7



8

TrainND Request

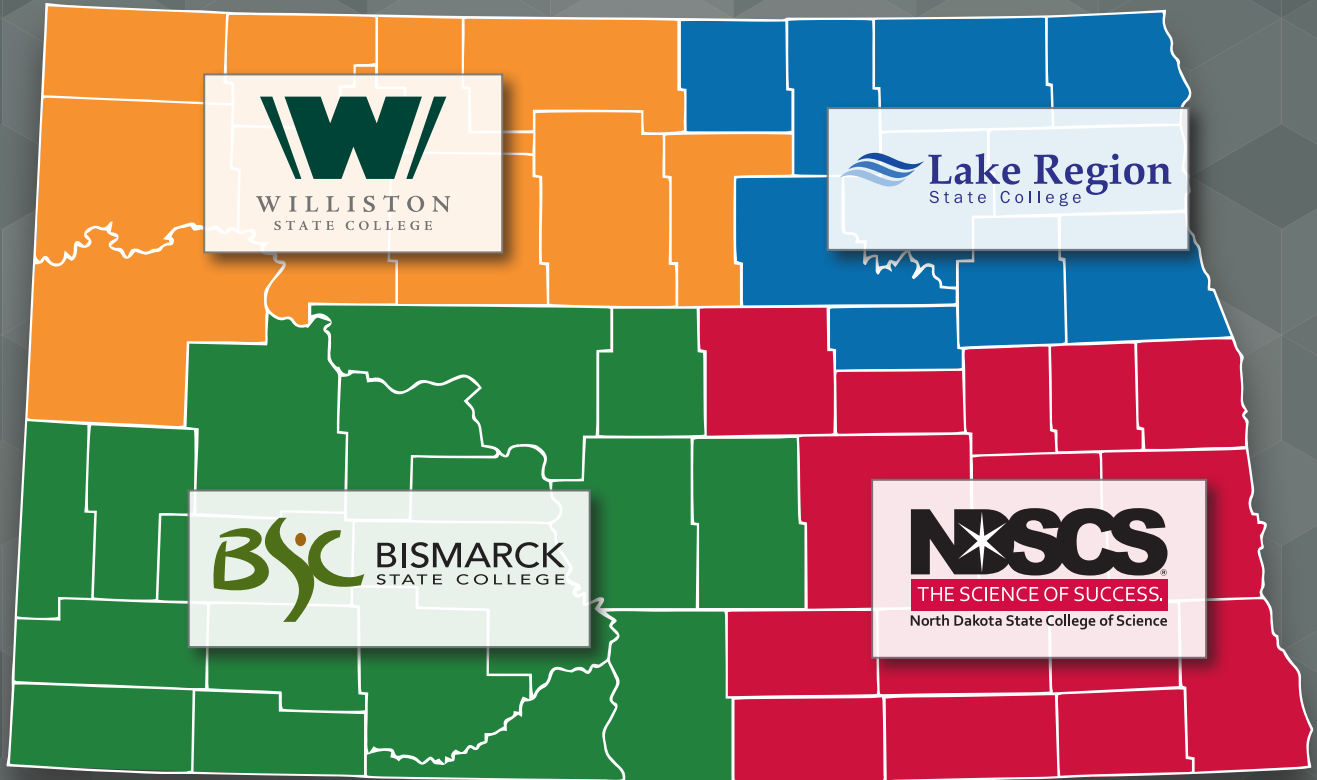
Request to continue funding at \$2 million based on recommendation from Workforce Development Council

- Reinvention to education
- Expansion of programming
- Flexible modes of delivery
- Delivery at the speed of business



BUSINESS PLAN

Fiscal Years
2021 & 2022



trainND

[It's a competitive world. Train for it.]

TrainND provides training for North Dakota business and industry, enhancing their ability to compete globally.

FOUNDATION

TrainND is the state's most comprehensive and inclusive training network. TrainND resulted from a 31-member statewide task force on workforce development and training formed in 1998 to research "best practices" in other states and to design a more effective workforce training system in North Dakota. This initiative was coordinated by the Greater North Dakota Chamber of Commerce in 1998. These recommendations were enacted into legislation during the 1999 session. House Bill 1443 was passed, setting the stage for North Dakota to develop a world-class workforce training system.

TrainND expands opportunities in North Dakota by training employees to achieve more for themselves and their employers. Four regions cooperate with four community colleges to ensure coverage for all of North Dakota's current workforce needs.

THE KEY COMPONENTS INCLUDE:

- Establishment of four service regions within the state.
- Designation of workforce training to four two-year colleges in the North Dakota University System.
- Establishment of local advisory boards.
- Financial support from state funds, institution support, and training fees.
- Development of collaborative relationships.

Three TrainND Summits have been held to re-evaluate the effectiveness of the four TrainND Regions operating model in meeting the needs of North Dakota Businesses. In addition advisory board meetings are held twice a year with key stakeholders throughout North Dakota. While the original TrainND model was solid, the following recommendations have been made:

- Raise awareness of TrainND Services through social media tools and technologies
- Develop stronger relationships with the business community
- Expand training services throughout the state
- Obtain training equipment and software to deliver effective training
- Leverage current training results and strengthen TrainND's personnel to identify/develop skill shortages for existing and new companies.

VALUE STATEMENT

Timely – Provided **WHEN** our customers need it

Relevant – Designed for **WHAT** our customers need

Adaptable – Customized to **SUIT** our clients

Innovative – Developed with **CURRENT** trends in mind

National – Recognized **CERTIFICATIONS** and credentials

Network – Partner to **COLLABORATE** efficiently

Dependable – Committed to **RESPOND** promptly

FINANCIAL HISTORY AND PROJECTIONS

A financial history for TrainND activity in FY 2018, 2019, and 2020 is provided on the following spreadsheet. TrainND has also provided the financial projections for FY 2021 and 2022.

The four TrainND Regions collectively delivered over \$4,716,886 in training to individuals and businesses in the state during Fiscal Year 2018. Comparing direct training revenue to state aid, TrainND earns approximately \$4.72 for every dollar provided by the Legislature. This return on the state investment reflects the quality training developed and delivered throughout the state. Employee training and education has a direct impact on employee confidence, safety, and overall business productivity.

State allocated funds are currently divided by region the number of employees in each region. Job Service provides this information based on the Quarterly Census of Employment and Wages Program Report. The funding is based on most recent data available to ND Job Service, which is based on 2020 annual averages from the 2020 Employment and Wages by Industry publication.

Both state appropriations and net margin are used to pay for costs that are non-billable to the client. Such costs include program management, support staff, outreach to potential new clients, awareness building, new initiatives, and office supplies.

Operational expenses total \$310,693 for Fiscal Year 2020. These expenses include marketing, travel, office operations, professional development, and new initiatives. Total Direct Training Expenditures were \$1,612,327 and include all costs associated directly to the delivery of training. These items include books, supplies, trainer salaries, food, etc. Salaries for the four regions totaled \$3,598,066 for Fiscal Year 2020. This line item includes all salaries and benefits for full time staff.

Funds listed under net results for the future investments can include grant dollars received that fiscal year, but not spent. Many times, grant dollar expenses cross several fiscal years. These dollars are often used to enhance programs such as purchase curriculum, provide software, upgrade equipment, and to invest in professional development.

Of great value are the in-kind services provided by the four community colleges charged with operating the TrainND regions in the state. These institutions provide physical space, utilities, and equipment for both office and training activities. Leadership is provided by the College President, along with indirect services provided by payroll, business offices, plant services, and others too numerous to mention. For FY 16 and 17 the total amount of indirect services is \$2,027,909. For FY 18, 19, and 20 the total of indirect services is \$2,156,087. This downward trend for yearly in-kind contributions is a direct result of TrainND Northwest building its own campus thus requiring substantially less in-kind investment from WSC.

The original funding formula (HB 1443) adopted in 1999 is an excellent working model that continues to be effective despite current changes in workforce needs. Funding is provided from the following areas: Training, State Legislative funds, and Business Donations (equipment, cash, etc.). Legislative funds are allocated to pay for infrastructure, awareness of services, additional employees, and the cost to continue workforce

training services. Business and industry are to pay for their employee training programs. Businesses have donated equipment, cash, and services to assist TrainND with specific types of training.

- In FY 20, Direct Training Revenue accounts for 75.7% (\$4,716,886) of the total funding
- In FY 20, State legislative funds account for 16% (\$1,000,000) of the total funding
- In FY 20, other funding sources, community/regional funds, and grants account for 6.1% (\$382,448) of the total funding
- In FY 20 the four community colleges provided in-kind services for office space, training rooms, IT support, business office support, etc. that amounts to \$714,324

incoming revenue

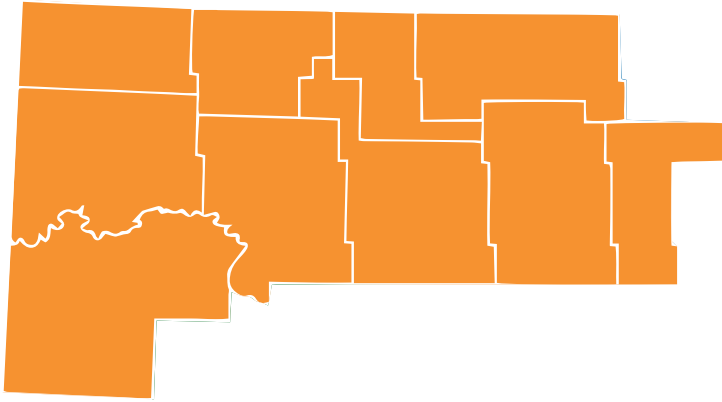
- WSC received additional workforce training moneys as defined in HB 1003. \$250,000 of those moneys are identified in the State General Fund (HB 1003) and reflected in 2021 as itemized in the overall budget

FISCAL YEAR 2021 AND 2022 PROJECTIONS

- Training revenue projections are projected to drop as a result of the current downturn. We are projecting a modest recovery in revenue during FY 2022
- State General Funds are projected to hold steady at \$2,000,000 for the biennium and is defined in HB 1019
- Expenses are projected to fall in response to the lack of

FY 2018-2022 Statement of Revenues, Expenses and Funding Sources

	Actual FY 2018	Actual FY 2019	Actual FY 2020	Budget FY 2021	Budget FY 2022
REVENUES					
Direct Training Revenues	\$4,772,101	\$4,974,939	\$4,716,886	\$3,486,173	\$4,060,000
Community/Regional Funds	\$176,700	\$129,000	\$110,000	\$125,000	\$130
Institutional Funds	\$0	\$0	\$0	\$0	\$0
Other	\$132,541	\$119,790	\$147,205	\$80,000	\$100,000
Grant Funding	\$230,000	\$68,000	\$125,140	\$0	\$0
State General Fund (HB 1003)	\$0	\$0	\$125,000	\$125,000	\$0
State General Fund (HB 1019)	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Total Revenues	\$6,311,341	\$6,291,729	\$6,224,231	\$4,816,173	\$5,290,000
EXPENDITURES					
Total Direct Training Expenditures	\$1,763,408	\$1,470,842	\$1,612,327	\$897,515	\$1,132,374
Outreach/Coordination Expenses					
Total Salaries/Wages and Benefits	\$3,309,502	\$3,202,843	\$3,598,066	\$3,483,385	\$3,409,382
Marketing	\$46,910	\$31,578	\$35,941	\$67,320	\$59,633
Travel	\$60,523	\$45,063	\$37,567	\$42,500	\$36,750
Other Operating Expense	\$208,496	\$184,376	\$105,679	\$101,165	\$168,655
New Initiatives	\$230,000	\$68,453	\$118,994	\$118,500	\$157,655
Professional Development	\$17,818	\$12,233	\$12,511	\$17,000	\$43,500
Total Operational Expenses	\$563,748	\$341,703	\$310,693	\$346,485	\$465,538
Total Expenditures	\$5,636,658	\$5,015,388	\$5,521,086	\$4,727,385	\$5,007,294
Net Result For Future Investments	\$674,683	\$1,276,341	\$703,144	\$87,248	\$281,166
College In-Kind	\$720,351	\$721,412	\$714,324	\$797,792	\$832,594



GOALS AND STRATEGIES

Through strategic planning and partnerships TrainND Northwest will continue a focus on serving business and industry partners through safety and technical training. TrainND Northwest will also pursue efforts to diversify. Despite challenges brought about by the recent downturn and the COVID-19 pandemic the target industries for training in the northwest region remain oil and gas and related auxiliaries. Exclusive opportunities to provide producer required safety orientations continue to provide relatively consistent revenue for TrainND Northwest. Additionally, our flagship Commercial Driver and Crane Programs endure in providing consistent revenue as high demand for these skills remains prevalent in the northwest region.

TrainND Northwest has made great efforts to diversify into high need training areas such as: Well Control, Industrial Maintenance Technology (Apprenticeship), Lease Operator, Gas Plant Operator and Technician, Polish Rod Maintenance, Introduction to Production Equipment for Roustabout, and Short-Term Welding. Additionally, TrainND Northwest is working to develop programs for Unmanned Aerial Systems (UAS), Heavy Equipment Operator, Soft Skills, and Mechatronics. These efforts to diversify will allow TrainND Northwest the opportunity to expand our scope of services and provide our industry partners and region with highly skilled workers in high demand areas.

An effort to expand our training services to include distance learning format has been successful during the COVID-19 Pandemic. We have effectively designed curriculum and trained our instructors to provide the same high quality of training our customers have come to expect while allowing the convenience and safety of instructor-led distance delivery. TrainND Northwest will continue to offer our high-quality trainings in face-to-face and distance learning formats as determined by the demand of our customers.

OBJECTIVES FOR FY 2021:

- Provide training to over 800 regional businesses each fiscal year with a minimum 45% repeat rate.
- Train 1,000 employees (unduplicated count) each fiscal year.
- Provide over 80,000 contact hours each fiscal year
- Maintain a client satisfaction rate of 98%.
- Meet budgeted training revenue as outlined in the TrainND Northwest Business Plan.

STRATEGIES IMPLEMENTED IN ORDER TO ACCOMPLISH OR EXCEED OBJECTIVES:

- Serve as marketer, broker, and coordinator of training programs.
- When requested serve as developer of custom curriculum.
- Implement an infrastructure that is supportive to business, industry, and organizations.
- Collaborate with stakeholders to promote economic development.
- Identify the highest quality trainers and continue to develop and expand their abilities.
- Continued refinement of the TrainND Northwest strategic plan
- Develop a marketing plan.
- Expand services within the region.
- Constantly seek partnerships with business and industry in our Region.
- Develop leaders within our organization.

BUDGET NARRATIVE

Funding sources come from:

- Direct training revenue
- State general fund dollars
- Other
- WSC in-kind match

Direct training revenue has increased for the third fiscal year in a row despite the challenges of the COVID-19 pandemic and the industry downturn Oil and Gas experienced the second half of fiscal year 2020. This success is a direct result our continued efforts to expand partnerships within business, industry, and organizations in the northwest region of North Dakota and beyond. TrainND Northwest was successful in pivoting to distance learning very early into the COVID-19 crisis and as a result was successful in generating revenue during a time that many businesses were not so fortunate.

TrainND Northwest has established a goal that earnings and profits will be used to fund the following:

- Expand and strengthen training offerings that are vital to the workforce of North Dakota
- Continue to invest in cutting edge technologies to ensure our offerings are of the highest quality

The strategic use of excess funds over the next biennium will ensure that TrainND Northwest is able to emerge from the current downturn primed to train the workforce of Western North Dakota and continue as the premier training facility in North Dakota.

TrainND Northwest will receive allocations from the state general fund this biennium through HB1019 and HB 1003. HB 1019 TrainND Northwest will receive a percentage of the funds outlined for the statewide TrainND system (\$2,000,000). TrainND Northwest's portion is estimated to be \$408,560. HB 1003 granted WSC \$700,000 for workforce training and technical programs for the 20-21 biennium. The additional funds will be used for costs associated with expansion of programs including salaries and equipment. During fiscal year 2020 TrainND used these funds to upgrade and expand our CDL with the purchase of a CDL simulator, 2 semi-trucks. Additionally, a quality control specialist

position was developed and hired with a focus to ensure our training programs are of the highest quality. This funding specifically allocated to TrainND Northwest is identified in the “State General Fund (HB 1003)” line item in the budget for the 2020 and 2021 fiscal years.

TrainND Northwest has 8 FTE staff positions and 8 FTE trainer positions. Due to the demand of the oil and gas industry, with the various training certifications needed full time trainer positions are required to meet industry training needs.

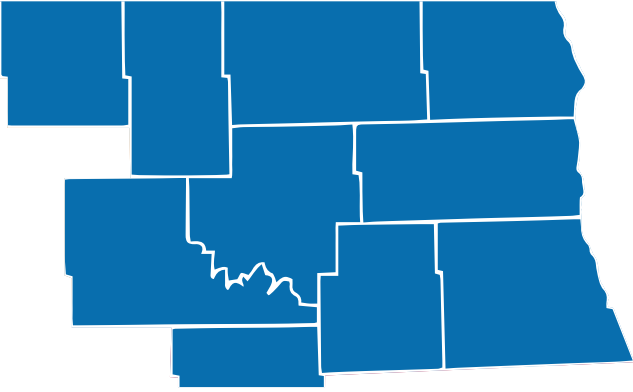
TrainND Northwest generates revenue that is classified as “other” through room rentals, catering, the operation of a bistro on the training campus, and training equipment rentals. TrainND Northwest continues to look for opportunities to meet the needs of the northwest region and state of North Dakota in providing space, training equipment rentals, and value-added services.

Williston State College contributes in-kind services to TrainND Northwest in the following ways: presidential leadership, business office support, human resources support, maintenance, and custodial services.



FY 2018-2022 Statement of Revenues, Expenses and Funding Sources

	Actual FY 2018	Actual FY 2019	Actual FY 2020	Budget FY 2021	Budget FY 2022
REVENUES					
Direct Training Revenues	\$2,620,497	\$2,835,655	\$3,082,690	\$1,845,275	\$2,240,000
Community/Regional Funds	\$25,000	\$0	\$0	\$0	\$0
Grant Funding	\$230,000	\$0	\$125,000	\$125,000	\$0
State General Fund (HB 1003)	\$0	\$0	\$125,000	\$125,000	\$0
State General Fund (HB 1019)	\$194,760	\$194,760	\$204,280	\$204,280	\$204,280
Other	\$132,541	\$119,790	\$147,205	\$80,000	\$100,000
Total Revenues	\$3,202,797	\$3,150,205	\$3,684,315	\$2,254,555	\$2,544,280
EXPENDITURES					
Total Direct Training Expenditures	\$914,805	\$605,332	\$945,189	\$384,372	\$550,000
Outreach/Coordination Expenses					
Total Salaries/Wages and Benefits	\$1,412,086	\$1,478,439	\$1,919,010	\$1,662,698	\$1,500,000
Marketing	\$25,025	\$7,415	\$17,292	\$33,300	\$25,633
Travel	\$21,710	\$17,514	\$25,009	\$16,000	\$15,000
Other Operating Expense	\$89,024	\$22,087	\$30,061	\$25,000	\$90,000
New Initiatives	\$230,000	\$0	\$118,994	\$115,000	\$150,000
Professional Development	\$7,384	\$7,172	\$5,927	\$10,000	\$30,000
Total Operational Expenses	\$373,143	\$54,188	\$197,284	\$199,300	\$310,663
Total Expenditures	\$2,700,034	\$2,137,959	\$3,061,483	\$2,246,370	\$2,360,663
Net Result For Future Investments	\$502,764	\$1,012,246	\$622,831	\$8,185	\$186,647
WSC In-Kind	\$42,720	\$51,264	\$58,682	\$59,730	\$59,730



GOALS AND STRATEGIES

The goals, objectives, and strategies are created through a team effort, approved by the executive team, and adopted by the Advisory Board. The performance objectives are reported and measured annually to determine if the strategies are producing the desired results. By executing the strategies, TrainND Northeast can fulfill its mission as set forth by legislation, facilitate economic development of the region, build long-term relationships, and position itself to sustain the vision of an efficient workforce training system.

TrainND Northeast will continue to adapt to the training needs of business and industry. The COVID-19 crisis has not only demanded the innovative delivery of training but has also created increased demand to train displaced workers. Collaboration and partnering with the other TrainND regions, businesses and state organizations will be key to servicing the wide-ranging training needs of the workforce.

Goal: To deliver innovative, cost-effective, results-oriented, workforce training and services for the businesses and industries in the Northeast region.

OBJECTIVES FOR FY 2021:

- Provide training to 100 businesses each fiscal year with minimum of 45% repeat rate.
- Train 1,500 employees (unduplicated head count each fiscal year).
- Provide 12,000 contact hours each fiscal year.
- Maintain a client satisfaction rating of 100%.
- Meet budgeted training revenues as outlined in the TrainND Business Plan.

STRATEGIES TO BE IMPLEMENTED IN ORDER TO MEET AND EXCEED OBJECTIVES:

- Collaborate with other TrainND regions to expand training offerings and deliver best-value training solutions to our clients.
- Continually identify training needs and prospective clients to expand client base.
- Leverage curriculum and seek instructional expertise from Lake Region State College (LRSC) to expand training offerings.
- Continue developing innovative training delivery methods, primary focus is distance synchronous learning.
- Lean out administrative processes to reduce lead times to rapidly deploy accelerated training.
- Market and promote TrainND Northeast solutions and services, using social media marketing.
- Expand outreach and sales efforts.
- Become an extension of our clients' human resources and training departments; using client needs assessments to determine fits for training.
- Collaborate with regional and state economic development resources to gain further focus on training to support diversification and economic development goals.
- Research, evaluate, and invest in new training initiatives to strengthen North Dakota's workforce.

BUDGET NARRATIVE

Funding sources for TrainND Northeast come from direct training revenue, state allocated dollars, and institutional in-kind funds.

Direct training revenue and net results for FY2020 were lower than original forecasts; a decline in training revenue due to COVID-19 crisis occurred during Q3 and Q4. Pivoting to distance learning, quickly establishing COVID-19 safety protocols for in-person classes, and rapidly standing up an accelerated wind tech training for dislocated oil workers assisted TrainND NE with bouncing back during Q4. Distance synchronous learning is slowly being embraced by clients as a means of training delivery and upside exists to reach out to rural areas with an affordable method of training delivery.

Lake Region State College continues to support the efforts of TrainND Northeast by providing indirect services including President and Vice President of Academic and Student Affairs time, Administrative Services support, office space & utilities, meeting rooms, classrooms, lab equipment, human resources, IT support, security, and plant services. The LRSC in-kind amount is calculated based on LRSC's authorized federal indirect rate.

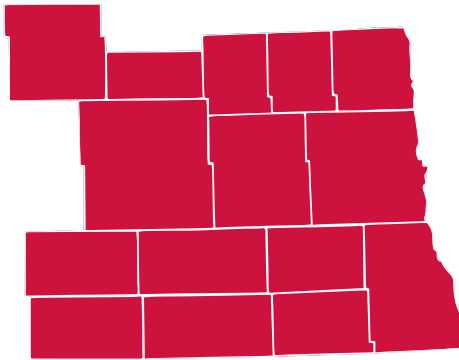
TrainND Northeast has 3.0 staff positions and all trainers are adjunct trainers.



Michael Griffin and Reed Naset, wind technician students, stand atop the GE 1.6 MW turbine at Lake Region State College during training in June 2020.

FY 2018-2022 Statement of Revenues, Expenses and Funding Sources

	Actual FY 2018	Actual FY 2019	Actual FY 2020	Budget FY 2021	Budget FY 2022
REVENUES					
Direct Training Revenues	\$291,825	\$211,129	\$183,206	\$200,000	\$275,000
Community/Regional Funds	\$0	\$0	\$0	\$0	\$0
Grant Funding	\$0	\$0	\$0	\$0	\$0
State General Fund (HB 1019)	\$159,920	\$159,920	\$155,550	\$155,550	\$155,550
Total Revenues	\$451,745	\$371,049	\$338,756	\$355,550	\$430,550
EXPENDITURES					
Total Direct Training Expenditures	\$140,557	\$78,580	\$106,182	\$94,570	\$107,124
Outreach/Coordination Expenses					
Total Salaries/Wages and Benefits	\$211,138	\$214,625	\$218,201	\$236,324	\$260,342
Marketing	\$200	\$1,246	\$55	\$2,000	\$3,000
Travel	\$1,714	\$1,178	\$466	\$500	\$750
Other Operating Expense	\$1,878	\$5,100	\$2,438	\$10,155	\$5,655
New Initiatives	\$0	\$453	\$0	\$0	\$5,655
Professional Development	\$0	\$0	\$0	\$0	\$1,000
Total Operational Expenses	\$3,792	\$7,977	\$2,959	\$12,655	\$15,405
Total Expenditures	\$355,487	\$301,182	\$327,342	\$343,549	\$382,871
Net Result For Future Investments	\$96,258	\$69,867	\$11,414	\$12,001	\$47,679
LRSC In-Kind	\$72,695	\$80,763	\$72,443	\$78,460	\$86,434



GOALS AND STRATEGIES

CUSTOMIZED TRAINING

Every business and organization is different, with distinctive processes, singular needs and unique objectives. One-size-fits-all training just won't cut it.

TrainND (SE) offers open enrollment courses and customized programs for nearly every industry. More importantly, we make our training fit your organization and your needs, not the other way around. Our staff will:

- Train at the NDSCS-Wahpeton, NDSCS-Fargo or at your site.
- Customize every program to address your specific challenges and need.
- Tailor courseware to deliver only topics you select.
- Maximize cost effectiveness by training on multiple topics in a single program.
- Deliver private training on any of the topics we regularly offer.

COVID-19 IMPACT

In response to the impacts of the COVID-19 pandemic, the NDSCS TrainND program is responding to business and industry workforce needs by delivering virtual training formats as well as traditional face to face training by adopting CDC social distancing guidelines.

Examples of recent training events include: Situational Leadership II Concepts, Management Essentials, Forklift Train the Trainer, Customized Excel Formulas & Functions Training, Designing Ads & Marketing Materials and Supervisor and Manager Training.

OBJECTIVES FOR FY 2021

- Business Served: Provide customized training to 120 regional businesses each fiscal year.
- Repeat Rate: Minimum of 45% each year
- Unduplicated Headcount: Train 675 employees each fiscal year.
- Satisfaction Rate: Maintain a 98% or higher satisfaction level for training
- Contact Hours: 25,000 each year
- Meeting Revenue Goal: Obtain budgeted training sales revenue goals.

STRATEGIES TO BE IMPLEMENTED IN ORDER TO ACCOMPLISH THE OBJECTIVES

- Provide sales and marketing services to deliver quality training programs.
- Collaborate with business and industry to promote economic development.
- Create awareness of training services across the region.
- Maintain an inventory of qualified trainers and facilitators with areas of expertise.
- Provide training for business and industry to compete globally.

BUDGET NARRATIVE

Funding sources for TrainND SE:

- Direct training revenue
- State allocated dollars
- Institutional funds
- Workforce Partner Memberships
- Grant funds

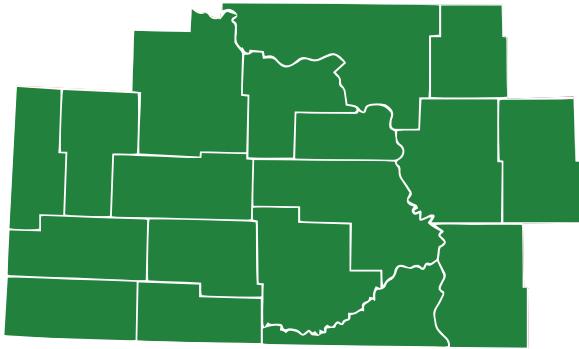
North Dakota State College of Science contributes to the division by providing projected 30% in-kind support. In-kind support includes office space, and plant services as well as indirect services including human resources, payroll, security, IT support, etc. Additional support is provided by the NDSCS President and the Vice President of the Division for Workforce Affairs.

TrainND has 5.0 FTE staff positions.



FY 2018-2022 Statement of Revenues, Expenses and Funding Sources

	Actual FY 2018	Actual FY 2019	Actual FY 2020	Budget FY 2021	Budget FY 2022
REVENUES					
Direct Training Revenues	\$680,372	\$784,455	\$489,215	\$461,200	\$500,000
Community/Regional Funds	\$151,700	\$129,000	\$110,000	\$125,000	\$130,000
Grant Funding	\$0	\$68,000	\$0	\$0	\$0
State General Fund	\$383,940	\$383,940	\$385,480	\$385,480	\$385,480
Total Revenues	\$1,216,012	\$1,365,395	\$984,695	\$971,680	\$1,015,480
EXPENDITURES					
Total Direct Training Expenditures	\$227,205	\$337,030	\$204,720	\$206,300	\$225,000
Total Salaries/Wages and Benefits	\$878,636	\$791,646	\$698,000	\$614,400	\$640,000
Operational Expenses					
Marketing	\$10,976	\$11,022	\$11,541	\$12,000	\$15,000
Travel	\$32,641	\$23,750	\$8,656	\$15,000	\$15,000
Other Operating Expense	\$111,095	\$145,136	\$64,147	\$52,500	\$60,000
New Initiatives	\$0	\$68,000	\$0	\$0	\$0
Professional Development	\$7,506	\$1,539	\$4,024	\$4,000	\$10,000
Total Operational Expenses	\$162,218	\$249,447	\$88,368	\$83,500	\$100,000
Total Expenditures	\$1,268,059	\$1,378,123	\$991,088	\$904,200	\$965,000
Net Result For Future Investments	(\$52,047)	(\$12,728)	(\$6,393)	\$65,940	\$48,940
NDSCS In-Kind	\$209,191	\$237,500	\$209,400	\$184,320	\$192,000



GOALS AND STRATEGIES

The goals, objectives, and strategies for TrainND Southwest are created as a cooperative process with our advisory board, industry partners and Bismarck State College (BSC). The goals and objectives are measured and reported annually to our advisory board. Through this process, TrainND Southwest assesses our programs and products to equip the workforce with the tools they need to succeed in the changing environment.

In the age of swift and dramatic technological disruption, TrainND Southwest and BSC must respond just as swiftly and dramatically to ensure that all incumbent and future workers have access to quality employment throughout their careers. Technology will continue to change the way that we work, requiring workers to continuously learn new skills, adapt to new workplace technologies, and even new work environments.

Due to the pandemic and uncertainty in the business and environment, TrainND Southwest and BSC will pivot to provide resources to not only incumbent workers but workers looking to re-skill. We will modernize the delivery of training and education to meet the rapidly evolving needs of the workforce.

As we move forward, TrainND Southwest will fulfill its mission by enabling all citizens to engage in lifelong learning and high-quality employment.

OBJECTIVES FOR FY 2021:

- Provide training to 200 businesses each fiscal year with 50% repeat rate
- Train 2,000 employees (unduplicated head count) each fiscal year
- Provide 60,000 contact hours each fiscal year
- Maintain a client satisfaction rate of 98%
- Meet budgeted training revenues as outlined in the TrainND Business Plan

THE FOLLOWING STRATEGIES WILL BE IMPLEMENTED TO ACCOMPLISH OUR GOALS AND OBJECTIVES:

Develop and promote a culture of lifelong learning for all current and future workers.

Collaborate with business and industry to train new and incumbent workers. Provide integrated options for participants to move quickly into career pathway programs/programs of study.

Develop and offer industry recognized stackable credentials to non-degree or degree seeking students to expand their skill sets and enhance career pathway options.

- Collaborate with business and industry to address essential and occupational skill gaps in our region as well as partnering to educate and re-skill their existing workforce.
- Continue to develop training programs in the area of technology, cybersecurity and healthcare.
- Expand technical training offerings and delivery methods for businesses and industry including virtual, hybrid, online and hands-on training.
- Rely on our accountability measures to ensure that training programs are industry driven and produce positive outcomes for learners.
- Consult through assessments and needs analysis to become part of our client's business strategy.
- Continue to provide talent development services to our clients to increase their human capital.
- Collaborate with other regions to ensure coverage of all North Dakota's workforce.
- Research and invest in curriculum development for in-demand skills.

It is our intent to shift the conversation from training being a public expense to training being an economic investment. The return on investment of a talent development system that serves the private sector is undeniable. TrainND Southwest is a critical driver in maintaining economic stability and advancement of the region's growth by tactically fulfilling the key talent needed for the high priority occupations.

BUDGET NARRATIVE

The primary funding source for TrainND Southwest comes from direct training revenues paid for by the companies, along with state allocated dollars and institutional in-kind funding. BSC continues to support the efforts of TrainND Southwest by providing indirect services including office space, human resources, IT, security and plant services (maintenance, parking, snow removal, etc.) The BSC in-kind amount is calculated based on BSC's authorized federal indirect rate.

TrainND Southwest has FTE 8.74 staff positions and 1.07 FTE trainer positions.



FY 2018-2022 Statement of Revenues, Expenses and Funding Sources

	Actual FY 2018	Actual FY 2019	Actual FY 2020	Budget FY 2021	Budget FY 2022
REVENUES					
Direct Training Revenues	\$1,179,407	\$1,143,700	\$961,775	\$979,698	\$1,045,000
Community/Regional Funds	\$0	\$0	\$0	\$0	
Grants	\$0	\$0	\$0	\$0	
State General Fund (HB 1019)	\$261,380	\$261,380	\$254,690	\$254,690	\$254,690
Total Revenues	\$1,440,787	\$1,405,080	\$1,216,465	\$1,234,388	\$1,299,690
EXPENDITURES					
Total Direct Training Expenditures	\$480,841	\$449,900	\$356,236	\$212,273	\$250,250
Outreach/Coordination Expenses					
Salaries/Benefits	\$807,642	\$718,133	\$762,855	\$969,963	\$1,009,040
Operational Expenses					
Marketing	\$10,709	\$11,895	\$7,053	\$20,020	\$16,000
Travel	\$4,458	\$2,621	\$3,436	\$11,000	\$6,000
Other Operating Expense	\$6,499	\$12,053	\$9,033	\$13,510	\$13,000
New Initiatives	\$0	\$0	\$0	\$3,500	\$2,000
Professional Development	\$2,928	\$3,522	\$2,560	\$3,000	\$2,500
Total Operational Expenses	\$24,594	\$30,091	\$22,082	\$51,030	\$39,500
Total Expenditures	\$1,313,077	\$1,198,124	\$1,141,173	\$1,233,266	\$1,298,790
Net Result For Future Investments	\$127,710	\$206,956	\$75,292	\$1,122	\$900
BSC In-Kind	\$395,745	\$351,885	\$373,799	\$475,282	\$494,430

train 

[It's a competitive world. Train for it.]

Powered by:



Good Afternoon Mr. Chairman and members of the Committee,

Thank you for providing the time to talk about the Farm Management Education program

My name is Kyle Olson. I run the Farm Management Education Program at the Bismarck Campus of Bismarck State College. I am one of 14 instructors across the state in 5 different educational institutions.

BSC located in Bismarck and Dickinson; Dakota College at Bottineau located in Bottineau, Rugby, Minot and is now in a new additional location in Stanley; Lake Region State College located in Devils Lake, Langdon, and Carrington; ND State College of Science located at Wahpeton, Fargo, and Jamestown, and finally Glen Ullin Public School located at Glen Ullin.

Instructors, at these institutions, work one on one with active agricultural producers on financial and production recordkeeping in order to generate and accrual-based income statement for their specific operation. Instructors aid in developing a projection for the upcoming year derived from past financial and production performance.

New producers / students are introduced to bookkeeping software to track cash income and cash expenditures. Yes, I have had students begin the program with a shoe box full of receipts. One even came into my office with a laundry basket full of paperwork. We help set up the software specifically for their operation and the different enterprises they participate in. We also set up this software to track loan advances and payoffs throughout the year. With returning students, we review the input and look for entry errors or misinterpretations they have entered previously. This data is the foundation for the accrual adjustments made in the income statement.

In addition, we provide methods to track production. This is typically done with spreadsheet software.

We provide guidance in filling out balance sheets to accurately represent what is owned and what is owed. This is accomplished with either spreadsheet templates or FINPACK which is a computer program developed decades ago by the University of Minnesota, Center for Farm Financial Management. It is specifically designed for agriculture.

With these two activities completed, we can start developing the accrual-based income statement also referred to as the analysis or closeout.

We effectively balance out the beginning balance sheet and the ending balance sheet. Almost 40 different accrual adjusted categories of expenses are review. It's an involved process that is accomplished using FINPACK.

Now with these three activities completed, the producer and instructor allocate these accrual-based incomes and expenses to a specific enterprise, let's say Wheat, Sunflowers, or Cow/Calf.

The next step is building the projection for the coming year. We use the information gathered in the analysis to look forward to the potential profitability of the next time period, usually the next calendar year. If we have 3 years of history, we use a 3-year average. If we have 5 years, we use a 5-year average. Every projection is based on past performance.

The top end, or highest level, for students in the program is when they can complete all the tasks I just talked about on their own, develop a break-even forecast price for each crop and livestock enterprise, and develop a marketing plan based on that forecast.

What happens next? Data generated from the individual analysis of farms and ranches is pooled and sent to NDSU Extension in Fargo where those numbers are combined to produce the regional and state averages. There are both private and public entities that utilize these averages in business and economic research.

Are there any questions at this point?

Now I would like to focus on the impact of the program. As a group, the program instructors surveyed producers enrolled in the program and I want to focus on one question that 93 of the survey respondents answered.

Producers were asked -- **What is the annual economic gain of participating in the Farm Management program for your farm/ranch?**

Please refer to the slide.

The weighted average of the response to this question is \$19,885.

There were 494 students/producers enrolled statewide last fiscal year.

Last biennium the State of North Dakota appropriated \$947,000 dollars annually for the Farm Management Education program and state got a return of economic activity for their investment.

At this point, I would love to talk about economic multipliers. But that isn't my area of expertise. So, I will stick to what I know well.

Minnesota and Utah Farm Management Education programs have surveyed their producers with a very similar question. The results were a \$12,000 gain for producers in Minnesota and a \$13,000 gain for producers in Utah.

Please take some time, in the near future, to review some of the other information derived from the survey.

Many of the new students are young and just starting in production agriculture.

ND Farm Management Programs have contracts with the ND Department of Agriculture to help with Credit Counseling and Mediation when workload allows.

The Farm Management Education program provides Borrower Training for producers required to do so by the Farm Service Agency.

Several programs across the state coordinate marketing clubs focusing on commodities marketing with producers. I work alongside both Burleigh and Morton County Extension to coordinate these meetings in the Bismarck area.

Part of the goal within these Farm Management Education programs is to have a diverse group of producers with a diverse group of enterprises. Young producers just starting out, mid-career producers with some years behind them, and older producers who have experienced many diverse years. Enterprises like irrigated crops and beef backgrounding are also important to the program due to limited financial information about these enterprises.

In my program specifically, I have a lot of mechanics. Those who graduated high school, went to State College of Science and received their Diesel Mech degree. They worked in that career for 3 to 10 years and then, when presented with the chance to enter production agriculture, they jumped at it.

These individuals were never been exposed any finance or bookkeeping methods. That's where the Farm Management Education program comes into their situation. The same could be said for agronomy or animal science graduates. They have limited knowledge of financial methods. The same could be said for those coming straight out of high school and entering a crop or livestock operation.

The bottom-line goal for North Dakota Farm Management Education is education. Teaching the critical thinking it takes to make sound business decisions.

With that, I would love to answer any questions you have.



Marketplace for Kids 2021-23

The Entrepreneurs of Tomorrow
Are in Our Schools and Homes Today!



Mission:

To encourage youth to explore entrepreneurship and self-employment through the recognition and development of their inventive, creative thinking and problem-solving skills.

Vision:

Our vision is for every student to receive entrepreneurship education and encouragement to become a lifelong partner in building stronger communities.



2021/22 Goals

- ✓ Host First Virtual Education Day at DSU 2/15/21
- ✓ First "LIVE Virtual" Education Day Fargo 3/15/21
- ✓ Regular "In-Person" Education Day Williston 4/27/21
- ✓ Regular "In-Person" Education Day Jamestown 5/11/21
- ✓ Regular "In-Person" Education Day Wahpeton 5/17/21

HOW DOES MFK ALIGN WITH CTE'S VISION?

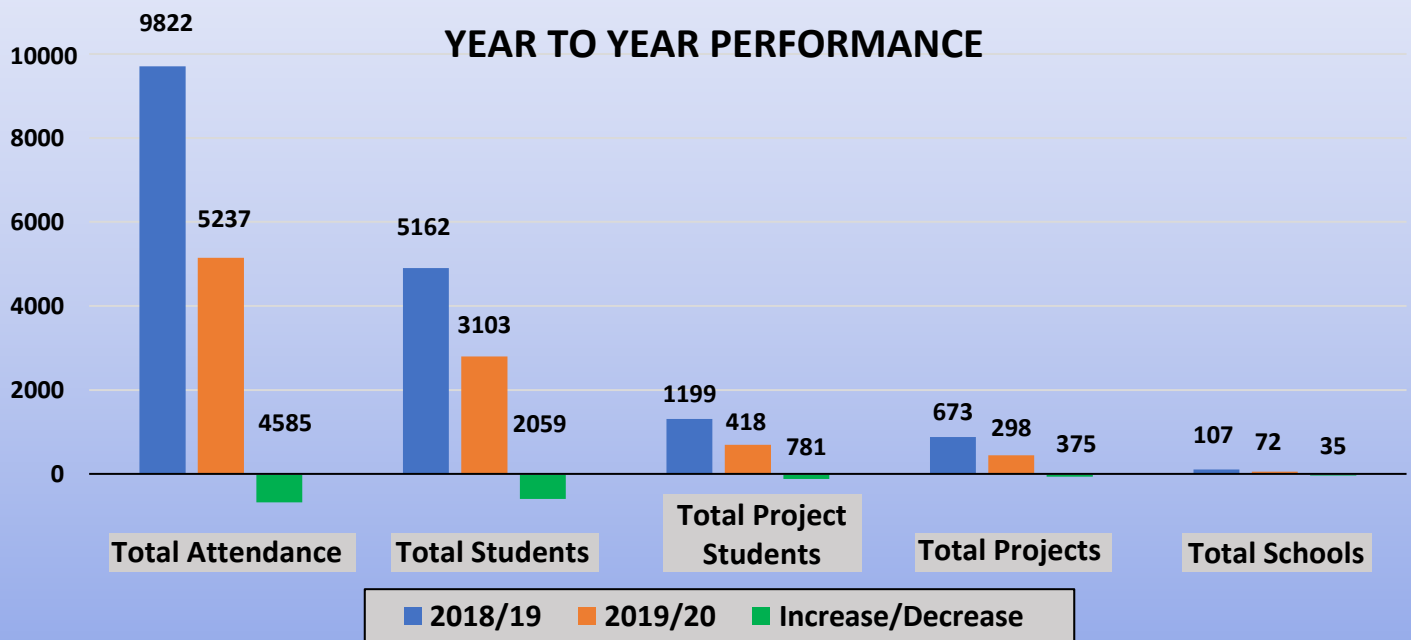
MFK, in partnership with CTE, annually provides ***“entrepreneurial educational experiences based on labor market information relating to the needs of North Dakota's business, industry and the private sector”***. This is accomplished using feedback from students, presenters, business and industry. This information is used to target future programming in the greatest needs areas AND careers that students WANT to get involved with. MFK is ***“committed to providing career awareness”*** by partnering directly with Career & Tech Centers, Colleges, and industry leaders using their knowledge, equipment and processes to introduce these career choices to thousands of students across the state who may never have this opportunity. This allows our students to use ***“the latest methods of instruction while using up-to-date technology”***. MFK's focus on elementary students in grades 3-8 is the only Statewide program that ***“provides youth with exploration opportunities and the foundation skills needed to enter the world of work”***.

Covid-19 Affects

Registered attendance was 46.7% lower - 3 Education Days were held, 2 - new. With expected attendance including ALL Education Days scheduled - an increase of 1,439 or 14.7% would have been realized.

2020 Donation Reductions

- ✓ **Private donations were down February 1st through December 31 in 2019-20 period (year on year) \$-21,155.99**
- ✓ **Decrease Percentage (Not including CTE) - 46.4%**



WHERE IS MARKETPLACE FOR KIDS NOW (during/after Covid-19)?

- ❖ In 2021/22 Marketplace for Kids has **5 Education Days tentatively scheduled**
- ❖ Currently we are in the testing phase of **"A-Synchronous and Synchronous" Education Days** (3,500 est. attendance this year!)
- ❖ A schedule will be set in the coming weeks for the year including 3 In-Person Education Days (dependent on guidelines).
- ❖ Classes such as **"Electrical Circuits", "Power Plant Puzzle", and "WHAT DO LAND SURVEYORS REALLY DO?"** at all Education Days for the 20/21 year.
- ❖ Covid-19 virus has had a **Massive Impact** to MFK attendance and finances. A **reduction of nearly 47%** in both total attendance and private sponsor donations.
- ❖ MFK staff and grant writers have been working feverishly to overcome the financial deficit by applying for new grants and reaching out to past and new supporters.

MFK AND OPPORTUNITY:

Dear Chairman Monson,

December 28, 2020

My name is Mary Haugo and I have been a Region 5 co-chair on the Marketplace for Kids (MFK) Leadership Team since 1995 and currently a Board Member for MFK.

I am writing to request sustaining our regular funding for MFK. Governor Burgum suggested a \$50,000 cut for the biennium but due to Covid-19 our private funding for the year is down. If we lose that funding, we will fall short next year.

MFK is an amazing and worthwhile program for young entrepreneurs. The Education Day provides learning and hands-on activities for teachers, parents, and students helping them discover entrepreneurship, explore career fields, new technology and self-employment.

Students can showcase their inventions that they've designed. Each inventor creates a project board that requires using reading, language, and technology skills. They also practice their skills on public speaking, meeting new friends, and listening to others, following the Standards of North Dakota and National Standards in Science, Technology, Entrepreneurship Education, Arts, Math, and Language in all attending grades.

Our vision is for students to become lifelong partners building stronger communities in ND. Showing students these possibilities, they will realize the opportunities in our great state.

I urge you to continue with our regular funding for this worthwhile program. We are investing in the future of North Dakota by educating and keeping the leaders of tomorrow in ND.

Dear Chairman Monson,

December 28, 2020

I am Roger Demers, (Partner Acct. Exec.-Wex Health) and I'm asking you to continue to fund the Marketplace for Kids (MFK) at the **same level or even greater** in your next budget round.

I have had the Pleasure of speaking at this event a few years ago. I can tell you that it was a Great day of learning for all of the students, parents and School faculty that attended.

Among the many other skills that Marketplace for Kids teaches these young students, they also focus on Career Opportunities that are available right here in North Dakota. Our goal should be to continually educate your Young Students about the great diversity of career opportunities in our Home state.

Did you know that the many teachers and former teachers who run this program are Volunteers who never take any Salary for their work with this Great program? We should acknowledge these founding members for their Great work over the years!

I urge all North Dakota Legislators to strongly consider funding this program at their current levels, or even digging deeper to add some additional funding to this Great program for the Students of North Dakota!

Respectfully submitted,
Roger Demers



Marketplace for Kids

“The Entrepreneurs of Tomorrow Are Preparing Today!”

WHY DOES MARKETPLACE FOR KIDS HAPPEN?

ND CTE and MFK believe that **“every student has the right to receive entrepreneurship education and encouragement to become a lifelong partner in building stronger communities.”** We strive to **“encourage youth to explore entrepreneurship and self-employment through the recognition and development of their inventive, creative thinking and problem-solving skills.”**

HISTORY:

- ✓ Marketplace for Kids started in 1995 as a pilot.
- ✓ Elementary teachers designed a concept to encourage students to showcase their innovative ideas and attend age appropriate experiential classes of all types.
- ✓ The Advisory Leadership Team elected Jamestown as the site for that first Education Day was a success with over 600 students/teachers/dvisorsparticipating.
- ✓ 1997 the regional concept was developed, expanding to 12 Education Days in 2015

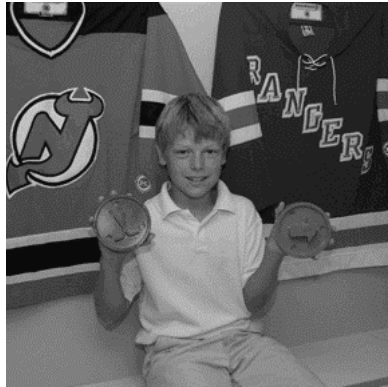
STANDARDS:

- ✓ MFK meets State and National Standards in Science, Technology, Entrepreneurship Education, Arts, Math, and Language.
- ✓ Numerous MFK representatives reviewed the standards and provided feedback to the Consortium for Entrepreneurship Education to validate and/or improve the content and organization of the National Content Standards for Entrepreneurship Education. These standards represent a framework for all organizations to work together to “Accelerate Entrepreneurship in America.”

RESOURCES:

- ✓ MFK provides continuing education credit to the education network.
- ✓ Does classroom outreach sessions to help students and teachers get started with planning.
- ✓ Supplies lesson plans (from teachers), Learning Guide and resources to meet the demand of a growing/changing education network.

Success Stories



Riley Giauque is an Ambassador for the MFK Program and has represented the program as a Keynote Speaker at the Consortium for Entrepreneurship Education Annual Meeting and numerous Marketplace for Kids Education Days. Riley's passion for hockey and creativity led him to invent the EZPUCK and ONETIMER. EZPUCK is a stationary disk that allows users to improve their stickhandling and puck control on the ice. ONETIMER is a hockey training device that allows users to practice passing both on and off the ice. Riley featured his EZPUCK invention at Marketplace for Kids when he was in the fourth grade and has since filed and received a patent for both the EZPUCK and ONETIMER. He currently markets his products online through his website www.ezpuck.com and has sold his products across

the globe. Riley was also the recipient of the 2018 Scholarship for Entrepreneurship at North Dakota State University.



Ethan Bowman is an Ambassador for the MFK Program. Ethan's invention, EZGRO, a self-watering system was the 1st Place winner of the Bright Ideas Showcase and Contest in 2012. He has gained national recognition with an interview in a National Agriculture magazine and his garden concept was used at a nursery in his hometown of Jamestown, ND where he also volunteered his time to improve his concept. You can view his EZGRO invention on YouTube at:

<https://bit.ly/3nu6iIi>



Joshua Boen is an Ambassador for the MFK Program. In 2014, his love of competitive swimming and technology came together in the invention, iCoach, a real-time coach-athlete communication tool. iCoach is an app that enables coaches to directly communicate with their athletes while they're in action. The app connects with the athlete's headpiece via Bluetooth allowing the coach to speak to the athlete and gives the coach control over who is receiving their communication. iCoach allows the coach to pick recipients by displaying a list of all the athletes and allowing them to select one or all. Josh's iCoach invention was the 2014 1st Place winner of the Marketplace for Kids Bright Ideas Showcase and Contest held at Minot State University. Also, in 2014, Marketplace for Kids arranged for

Joshua to present his invention to Microsoft, Myriad Mobile, and One Million Cups in Fargo.



Marketplace for Kids “The Entrepreneurs of Tomorrow Are Preparing Today!”

WHAT’S AN EDUCATION DAY?

Education Days are unique, one-of-a-kind experience where students **explore careers, technology, and the future through hands-on activities** that are rooted in **entrepreneurship and innovation**. We have Education Days scheduled throughout North Dakota each year and will be in Dickinson, Bowman (Virtual events), Williston, Jamestown, and Wahpeton (tentative In-person events)!

WHAT DOES MARKETPLACE FOR KIDS TEACH?

MFK has a primary focus on **Entrepreneurship** and is many times a student’s first look at **business ownership, career choices, innovative technology and even college settings**. The vast array of class choices at all Education Days are nothing short of **phenomenal, including STEAM classes, HANDS-ON LEARNING ACTIVITIES** such as **Financial Literacy, Starting a Business, Wildlife, Industry Safety, Railroad, Energy Resources etc., Agriculture, Automotive, Aerospace, Construction, Plumbing, HVAC, Robotics, Electronics, Drones and Virtual Reality applications**.

WHO MAKES MARKETPLACE FOR KIDS HAPPEN?

MFK (in partnership with ND CTE) begins with the programming created and approved by **Regional Advisory Leadership Teams and Marketplace staff**. Hundreds of volunteers including people from **business, Chambers of Commerce, Economic Development Corps., Score, Retired Teachers Associations, students from DECA, 4-H, Honor Societies** etc. present classes and provide guidance, direction, and hands-on help to presenters, students and staff throughout the day. Volunteer hours during the 2018-19 Education Day season amounted to over **2,001.5 hours (\$51,578.67)**.



Marketplace for Kids

“The Entrepreneurs of Tomorrow Are Preparing Today!”

RECOGNITION:

- MFK has been recognized as a program that should be replicated by the Consortium for Entrepreneurship Education.
- Featured in the national publication “Education Update” (a publication of ASCD Association for Supervision and Curriculum Development) as a program to begin teaching entrepreneurship early.
<http://www.ascd.org/publications/newsletters/education-update/jun09/vol51/num06/Educating-Emerging-Entrepreneurs.aspx>
- Recognized in the Midwestern Office of the Council of State Governments Newsletter as “**One of the best youth Entrepreneurship programs in the nation.**” (MFK students have presented at their annual Conference)
- Collaborates with the Consortium for Entrepreneurship Education on National Entrepreneurship Education Standards to provide entrepreneurial education programs to all Americans.

SUMMARY:

Entrepreneurship education positively impacts learners at all levels in a wide number of contexts. Marketplace for Kids is the **only** Elementary (Grades 3-8) Entrepreneurship Education Program (provided in partnership with CTE) in North Dakota. We support entrepreneurship education and the Consortium for Entrepreneurship, CTE and all programs that fall under the framework of the National Standards for Entrepreneurship Education. The North Dakota Legislature has supported Elementary Entrepreneurship Education since 2005 with a total number benefiting from that funding surpassing **155,000**.



Marketplace for Kids

“The Entrepreneurs of Tomorrow Are Preparing Today!”

REMARKS:

My experience, while limited to the one year, has shown me that the Marketplace for Kids program has merit as an instructional tool for a large group of students in a very short period of time.

The diversity of the material and presentations, the interaction between students and presenters, and maybe most importantly, the enthusiasm of the children/students is something that I certainly feel is beneficial for our North Dakota kids. It's an experience worth having and an experience worth funding.

Jim Murphy, Executive Director
Traill County Economic Development Commission

“Fantastic Entrepreneurial day for 3-8th grade students”; “we believe the future of our state’s economy lies in the innovative spirit of our children.”; “It’s a day where students learn that they can do and be anything they want to, and they can do it in North Dakota”; “those contributions do not cover the cost of the event. CTE funding is critical to the continuation of the program”; “there is something for everyone, some students want to showcase business plans, inventions, bring ideas to life and create something”; “MFK allows for both in a non-competitive environment. MFK is something our area students and teachers look forward to year after year”; “It is a program that greatly contributes to the future Workforce Development goals that the state has.” “My son attended one of the first Marketplace for Kids when it was held in Jamestown. He now owns and operates his own home design service. This is one example of how this program is beneficial to the North Dakota population.”; “since 2005 we have had over 7,500 students, teachers, chaperones and parents walk the halls of Dakota College to enjoy a large variety of classes”; “Our community is actively building tomorrow’s workforce with the help of this educational program, which needs the CTE grant to be able to continue.”; “North Dakota’s economy is changing, and we’re seeing the emergence of new solutions built on innovative ideas.”; “My granddaughter is in elementary school (third grade) and she is a builder. Her dad, our son, is a house designer and he attended one of the early Marketplace for Kids in Jamestown while he was a student. When she gets to grades 5-6, I sure hope that she can attend a Marketplace for Kids! This is an age group who really needs to have opportunities like Marketplace for Kids available to them.”

March 4, 2021

Kenny Bahm
Assistant Vice-President
Farm Credit Services of Mandan
Mandan, North Dakota

Dear Mr. Chairman,

I am writing on behalf of the Adult Farm Management/Farm Management Education program which is part of the Department of Career and Technical Education bill being discussed.

Along with my career as an agricultural lender, I also serve as the Committee Chairman for the Bismarck State College/Bismarck Public Schools Agriculture, Technology, Food, and Natural Resources Advisory Committee. I get to see firsthand the great work that this program does and provide ongoing input to continually improve the program for the agriculturalists of our state.

At times I have heard that this program is competing for business with private sector accounting firms. However, I oversee this area of our business at Farm Credit Services of Mandan and can tell you that this is not the case. Many times, we have mutual producers that have their records and taxes completed within our department and use that information for their classes with this program. This program takes a financially disinterested view with each operator in their class and makes a deep dive into general financial and specific enterprise analysis. This program is not here to complete data input or file tax returns for a producer, but to show individuals how to balance this data, analyze it, and use it to improve their operation.

In addition to the individuals it serves, I also appreciate the statewide public reports they produce. Their data is accurate to the current economic environment and gives those in, and outside the agriculture industry, information on this major sector of our great state.

I would continue to ask for your support of this vital education program and would like to close with the following quote by Nelson Mandela— “Education is the most powerful weapon which you can use to change the world”.

Thank you for your consideration and support of the Senate Appropriation Committee—Bill 2019 during the 67th North Dakota Legislative Assembly.



DEPARTMENT OF CAREER AND TECHNICAL EDUCATION

State Capitol, 15th Floor, 600 East Boulevard Ave., Dept. 270, Bismarck ND 58505-0610
701-328-3180 www.cte.nd.gov email: cte@nd.gov

March 4, 2021

Legislative Assembly:

I am Gwen Ferderer, Budget & Finance Administrator for the Department of Career & Technical Education, and support of SB 2019. I am available for any questions.

Thank you,

A handwritten signature in black ink that reads "Gwen Ferderer".

Gwen Ferderer, Budget & Finance Administrator
Department of Career & Technical Education
State Capitol Building, 15th Floor
Bismarck, ND 58505-0610
(701) 326-3168
gferderer@nd.gov





THE CHAMBER
FARGO MOORHEAD WEST FARGO

To: House Appropriations – Education and Environment Division
From: Shannon Full, President/CEO, FMWF Chamber of Commerce
Date: March 5, 2021
RE: **Support SB 2019**

Chair Monson, members of the House Appropriations EE Division,

Thank you for the opportunity to provide **supportive testimony regarding SB 2019** on behalf of our Chamber's over 2,000 member businesses.

Workforce issues remain one of the top concerns hindering the future success of many of our local businesses. Our community has stepped up to address these workforce needs through collaboratively developing solutions focused on local workforce and employer needs to alleviate long-term workforce shortages. One of these solutions is the creation of a Cass County Career Workforce Academy (CWA). The academy will provide all Cass County K-14 students, incumbent workforce and new immigrants a curriculum to prepare them for successful careers. It will supply opportunities for career awareness, exploration, pathways, development and training. This is in part accomplished through hands-on career training and program opportunities for those interested in a technical degree.

We continue to see high demand for workforce and with Amazon moving to the region, and the future diversion construction requiring increased workforce, our region could be in danger of disastrous workforce shortage issues creating wide spread impacts if we don't invest in workforce solutions while expanding and growing our region and the state. Because our business, education and community leaders believe so strongly in this asset, the project is almost a reality. The academy has the impressive collaboration of NDSCS and several K-12 school districts. Also, over 60 private businesses as well as Cass County, the City of Fargo, the City of West Fargo, the U.S. Department of Commerce, and The Chamber and EDC through Fueling Our Future, have contributed \$21 million of the \$30 million project.

We need to invest in workforce solutions on a statewide level and have a statewide approach to talent attraction, retention and development. I'm glad to see this bill includes funding for this purpose across the state. I respectfully ask for your strong support of Career Workforce Academy grants and overall CTE funding by **supporting SB 2019**.

Thank you,
Shannon Full

Shannon Full
President/CEO
Fargo Moorhead West Fargo Chamber of Commerce
Cell: 920.422.3331 | Email: sfull@fmwfchamber.com



**Testimony of Jennifer Greuel
Economic Development Association of North Dakota
In Support of SB 2019
March 5, 2021**

Chair Monson and members of the House Appropriations Committee- Education and Environment Division:

I am Jennifer Greuel, executive director of the Economic Development Association of North Dakota (EDND). On behalf of EDND, I write to you in support of SB 2019.

EDND represents more than 80 state economic development organizations and related businesses on the front line of economic development efforts throughout North Dakota. The primary purpose of the organization is to promote the creation of new wealth throughout North Dakota to develop more vibrant communities and improve quality of life.

Although North Dakota's unemployment rate has gone up slightly due to the pandemic (4.1 percent in Dec. 2020), workforce availability is still a significant challenge facing North Dakota businesses, limiting the growth potential of the state's economy. EDND supports the development of workforce attraction, development and retention strategies that address the needs of the state's businesses and industries.

North Dakota is especially in need of skilled, trained workers, which the Department of Career and Technical Education (CTE) helps provide and equip. Information technology (IT) professionals, welders, CDL drivers, diesel technicians, electricians, and HVAC technicians, for example, are all desperately needed in most communities across the state and are areas in which CTE provides training. Workforce development is integral in creating a diversified economy and creating better employees

and competitive companies. The training programs provided by CTE are tailored to the needs of businesses and provide tools for more efficient and productive employees.

TrainND is a CTE program providing critical support and training for businesses and employees across the state. Through collaboration between state, business and education systems, comprehensive and customized employee training is created to address critical workforce shortages. EDND supports the agency's request to restore funding back to \$2 million, as this viable program brings business, higher education and employees together.

EDND also supports the Senate's inclusion of \$45 million for the building of career and technical education centers throughout the state. An investment in the skillset of people in North Dakota is an investment in the state's future economy and programs which target youth and encourage students to consider in-demand, technical degree career paths to which they might not otherwise be exposed.

The availability of a high-quality competitive workforce will continue to be a significant challenge facing North Dakota businesses. Even though, due to the pandemic, there are more people looking for jobs, North Dakota does not have enough skilled workers to fill in-demand and technical job openings. EDND supports the investments included in this bill and the development of workforce training strategies that address the diversification and growth of businesses and employees.

Thank you for this opportunity to address your committee and express our support of SB 2019.



Senate Bill 2019

Presented by: Barry Haugen
President
Independent Community Banks of North Dakota (“ICBND”)

Before: House Appropriations – Education and Environment Division
Representative David Monson, Chairman

Date: March 5, 2021

Good morning Chairman Monson and members of the House Appropriations – Education and Environment Division. For the record, my name is Barry Haugen and I am President of the Independent Community Banks of North Dakota (ICBND). ICBND membership totals nearly 60 independent community banks throughout our state.

ICBND supports Senate Bill 2019 as it specifically relates to the appropriation of \$1,756,138 for the Adult Farm Management Program. ICBND member banks vary greatly in size - from \$30 million in total assets to over \$7 billion in total assets. While community banks across our state are variable in size, they are unanimous in their recognition that our communities and community banks rely heavily on the financial health of production agriculture. Generally, North Dakota's community banks have significant farm and ranch loan portfolios. As such, we are writing in support of the appropriation for the Adult Farm Management Program.

Financial management education for producers is critical given the challenging economic conditions that exist today. The Adult Farm Management Program provides valuable tools for producers to enhance their financial management skills and increase the likelihood of maintaining successful operations. The Adult Farm Management Program has also been a tremendous partner to ICBND and its member banks through participation in ICBND’s School of Agricultural Lending held annually. ICBND's ag lenders regularly provide anecdotal evidence that more financial management education offerings for producers are necessary particularly in the areas of investment analysis (including farm, non-farm and equipment buying decisions), risk analysis, financial structuring, marketing and production operation strategies. A void still remains and ICBND believes that the Adult Farm Management Program continues to narrow that void. The work done through this program assists our member banks’ farm and ranch customers to improve their farm productivity, protect the nation’s food supply and strengthen the local economy.

Chairman Monson and members of the House Appropriations – Education and Environment Division, we encourage your support of Senate Bill 2019 specific to the Adult Farm Management Program. Thank you for your time and consideration.



North Dakota Small Organized Schools

#7488

Mr. Michael Heilman
Executive Director
3144 Hampton Street
Bismarck, ND 58504
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701-527-4621

Mr. Brandt Dick
President
PO Box 100 – 123 Summit Street
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Mr. Steven Heim
Vice-President
PO Box 256
Drake, ND 58736
Steve.heim@k12.nd.us
701-465-3732

Chairman Monson and members of the House Education and Environment Appropriations Committee, my name is Michael Heilman. I am the Executive Director of the North Dakota Small Organized Schools (NDSOS). NDSOS supports current levels of funding for Career and Technical Education programs that are vital to the students we serve. Any loss of funding for Career and Technical Education can force schools to make difficult decisions regarding course offerings in areas that are often related to the very careers many of our students will ultimately seek.

Many of the 154 member schools of NDSOS use the North Dakota Center for Distance Education (NDCDE) to support their curriculum. Schools use NDCDE not just to enhance their curriculum by adding electives or to resolve scheduling conflicts, but in some cases NDCDE is the choice of schools for required coursework when qualified staff are not available. NDSOS opposes any cut in funding to NDCDE that could result in an increase in the cost and availability of much needed coursework for the schools.

My career in education was directly influenced by my high school experiences in what was then called vocational agriculture classes. I chose to become an Ag-Ed teacher and ultimately moved into educational administration. There is little doubt that I would not have made those choices had it not been for my experience in high school. For me it was teaching, but for others it may be welding, food science, carpentry, health careers, automotive technology, electronics or one of the many other Career and Technical Education programs.

As a principal I knew that I had the ability to accommodate a student’s schedule when an unresolvable conflict existed by accessing coursework from the NDCDE. Yes, there are other options available to our schools, but why wouldn’t we first make every effort to use the program funded by our state. Thank you for the generous funding and opportunities offered our students by Career and Technical Education and the North Dakota Center for Distance Education.

Chairman Monson and members of the committee, North Dakota Small Organized Schools stands in support of funding at current levels for the North Dakota Center for Distance Education and for all of North Dakota Career and Technical Education.

Mr. Michael Heilman – Executive Director
North Dakota Small Organized Schools
mheilmanndsos@gmail.com
701.527.4621

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Dr. Steven Johnson, Supt. Lisbon

The mission of NDSOS is to provide leadership for the small/rural schools in North Dakota and to support legislation favorable to their philosophy while opposing legislation that is harmful.

As a small school administrator CDE has been vital in keeping educational opportunities available for our students. With the difficulty we have in finding and keeping teachers our students would suffer in course offerings if it were not for the courses we can offer through CDE. Please keep these options available to our students by supporting intact funding for the ND CDE.

Thank you

Steven Heim, Superintendent Drake and Anamoose Public Schools



Home Builders Association of Fargo-Moorhead

1802 32nd Avenue South · Fargo, ND 58103 · (701) 232-5846 · hbafm.com · info@hbafm.com

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March 5, 2021

Appropriations Committee
North Dakota House of Representatives
State Capitol Building
600 East Boulevard Avenue
Bismarck, ND 58505

Dear Chairperson and Members of the Committee,

The Home Builders Association of Fargo-Moorhead represents approximately 750 builders and related businesses throughout Cass County. Thank you for the opportunity to submit this letter urging you to catalyze economic development and financial stability by supporting Senate Bill 2019 and the funding it proposes for career and technical education.

The North Dakota workforce currently lacks the skills and knowledge required to build, update, and maintain homes. As a result, construction costs and purchase prices are pushed to levels that exclude potential homebuyers from the market and communities lose economic activity and revenue potential. The current shortage has brought the growth cycle to a standstill in North Dakota.

These economic losses will continue until we, as a state, acknowledge the fact that a 4-year degree and labor alone do not build homes, whereas Senate Bill 2019 supports the academies that cultivate skills, education and housing diversity that the North Dakota ecosystem desperately needs.

Rather than considering this testimony a plea, please accept it as an invitation for you to join us as economic investors in the state you represent. The private sector and other government entities are already collaborating to broaden the career and technical education resources.

For example, the Cass County Career Workforce Academy (CWA) is an educational facility planned through the collaborative work of the North Dakota State College of Science and multiple public and private entities in the region.

To date, 60 private businesses, Fueling Our Future, Cass County, the City of Fargo, the City of West Fargo, and the U.S. Dept. of Commerce have pledged a total of \$21 million to the CWA. Further, all K-4 schools in the area endorse the project.

This force was working before Senate Bill 2019 was introduced and today, its partners are compelled to ask, "Will the largest beneficiary of our efforts, the State of North Dakota, join us in correcting the workforce shortage?" Senate Bill 2019 is the state's opportunity and we urge you to support it.

Thank you for your time.

Respectfully,

Bryce Johnson
Chief Executive Officer

Kim Hochhalter
President

Affiliated With





**CAREER WORKFORCE
ACADEMY**

**PROGRAM PRIORITIES AND
CURRICULUM DEVELOPMENT**

STRATEGIC PLAN – PHASE II
MAY 9, 2019

PROGRAM PRIORITIES AND CURRICULUM DEVELOPMENT

The vision of a Career Workforce Academy (CWA) began in 2016 with a purpose to design education that is responsive to changing employer needs and to increase learner success. This desire was the catalyst for collaboration amongst area secondary schools and two-year colleges. In phase one, career awareness, exploration and preparation for K-12 learners and adults were identified as key elements in the CWA Strategic Plan, May 2018. These elements serve as foundational elements in the research and design of the CWA's program and curriculum identification process for phase two 2019.

As stipulated in the **CWA Strategic Plan - Initiative #6, Curriculum Development and Implementation** are critical to achieving vision outcomes of the Academy. Alignment of the curriculum to student interests, skill sets necessary to fulfill the needs of business and industry, and alignment between secondary and post-secondary are also essential to the design. Curriculums were to be organized around identified career clusters and meet state educational standards and/or certification requirements. Curriculums will also need to be fluid, be more responsive to changing employers and student needs, and have the ability to adjust career shifts.

In order to gain a broad consensus of the potential programs and curriculum through the Career Workforce Academy (CWA), Flint Group was enlisted to facilitate stakeholder input sessions with area K-12 schools and two-year colleges. Participants included: Central Cass, Fargo, Kindred, Moorhead, Northern Cass, and West Fargo Public Schools, along with Minnesota State Community and Technical College-Moorhead (M State-Moorhead) and North Dakota State College of Science (NDSCS).

Representatives were engaged in a process to identify and prioritize initial and future curriculums for the CWA. The phase two desired outcomes were to address the following CWA Strategic Plan - Initiative #6 goals:

Goal 1. In collaboration with business and industry, identify clusters and skills required.

1.1 Confirm initial clusters.

- Manufacturing and STEM
- Information technology
- Health science pathway
- Architecture and construction
- Ag and transportation
- Business and hospitality

1.2 Set up a curriculum team from all three stakeholder groups.

- Align curriculum to defined employer-based, student interest and career pathways
- Develop curriculum to attain clear pathway to graduation and/or industry third-party credentials

- 1.4 Understand employer skill needs and gaps to ensure proper development.**
 - Conduct study to determine employer needs
 - Identify how work-based learning may differ among industries and adjust accordingly
 - Research current knowledge about existing industry-adopted examples to support ongoing conversation with employers
- 1.6 Reduce duplication among training providers.**
 - Encourage collaboration between colleges and other training providers

Goal 2. Match curriculum with cluster group needs.

- 2.1 Review existing curriculum.**
 - Determine areas where curriculum is insufficient

Goal 7. Create new programs or utilize existing program for expanding curriculum needs.

- 7.1 Determine what the ongoing and expanding needs are**
- 7.2 Determine if there is enough student interest to continue to expand curriculum**

Goal 9. Determine location of course offerings (what is going to be offered where).

- 9.1 Set up committee to develop matrix on existing course offerings.**
 - Work with curriculum team to develop policy on distribution of courses
 - Establish procedure to regularly review course distribution

To accomplish this, Flint conducted input sessions with K-12 schools, M State-Moorhead, and NDSCS representatives. Groups studied current and future industry workforce trends and concluded with a combined input and feedback session with all three groups. The report outlines findings and preliminary recommendations toward initial CWA curriculum.

Report Outline

1. The Assignment
2. Process
 - a. Input Session K-12
 - b. Input Session NDSCS
 - c. Input Session M State-Moorhead
 - d. Combined Input and Feedback Session
3. Recommendations
 - a. Career Workforce Academy Concept
 - b. Career Pathway Learning Continuum
 - c. Delivery System
 - d. Curriculum Offerings
 - e. Advancing the Vision - Career Awareness and Education
4. Conclusion
5. Appendix 1

THE ASSIGNMENT

The scope of work proposed led us through a collaborative, consensus-building approach for alignment and directional outcomes. OUR PROPOSED WORK INCLUDED THE FOLLOWING ELEMENTS:

1. Discovery
 - a. Conduct sessions with education partners to ascertain current training programs, course offerings, and their vision for new programs at the academy.
 - b. Conduct input sessions with selected team members to gain knowledge of cluster group industry needs.
 - c. Work with local groups to understand the current information available and other organizations' discussions on workforce training.
2. Share findings with input session stakeholders for feedback.
3. Draft preliminary findings and a final report for the CWA Steering Committee for refinement, approval and direction.
4. Write final report.

Note: The original Scope of Work included interviews with industry representatives to further understand current and future workforce needs. Due to budget restrictions, these interviews were eliminated. Also eliminated were the student interviews, as the committee felt they had a grasp of student awareness levels and felt they could address this in ongoing current research efforts. Added to the Scope of Work was M State-Moorhead, including an input session, their involvement in the joint session and their program offerings. Timelines were adjusted in order to accommodate each group's input session and the addition of M State-Moorhead.

THE PROCESS – INPUT SESSIONS

Three stakeholder input sessions were conducted with representatives from each of the educational groups. Each group followed a similar agenda. Steps 1-3 were identical and reported below. Steps 4-7 were specific to each group and reported on under their specific session.

1. Review Strategic Plan and Initiative 6
2. Career cluster groups identified
3. Review labor statistics
4. Analyze current K-12 programs and courses
5. Collaboration areas (gaps and duplications)
6. Criteria for regular review of courses
7. Education on career pathways (discussion)

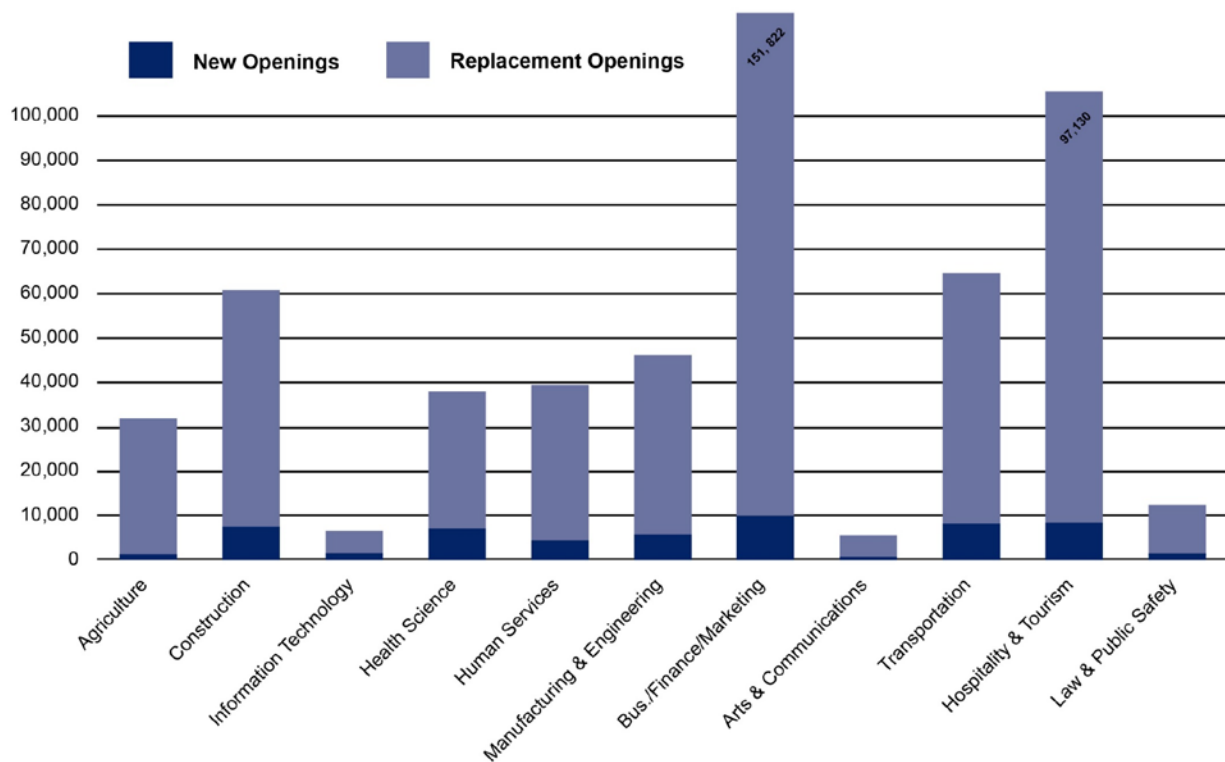
Career Cluster Groups

There was discussion around the identification of the career cluster groups, how they were formed and the overlap of jobs between each cluster. Examples included the need for transportation workers in almost all clusters, health care needs in all clusters, and IT positions open in every cluster. There was a general confirmation of these clusters and the formation of workforce needs under each of them.

Industry Labor Needs

We spent considerable time reviewing industry needs, with the emphasis on identifying careers, programs and classes that will help fill regional job openings now and into the near future (most labor reports went through 2026). These reports indicated that openings in regions served in NW Minnesota and eastern ND were very similar. High demands were found in Health Services, Hospitality and Tourism, Business Management and Administration, Transportation, Food Prep, Manufacturing, Architecture, and Construction; based on these reports, all will be in critical need. Openings included current new growth openings, exit worker openings and occupational transfer openings.

Projected 2025 Job Openings



Source: Labor Market Information Center, Job Service North Dakota

We also looked at input from CTE advisory committees. Many of the occupational needs they listed were in line with studies and analysis completed by North Dakota Job Service, Minnesota Department of Economic Development, and various regional reports. The advisory groups put much emphasis on soft skills and the need in most occupations to include them as part of a student's career path. (Note: the soft skills term has taken on many implications in the education world. It is important that it is defined with specific skill sets and what the industry needs.) Specifically mentioned were professional communications, business acumen, writing, and computer skills. The discussion around a student's approach to the workplace revealed many thoughts on how skill learning is not being applied to areas such as critical thinking, problem solving, communication skills, and the ability to work in a team environment. In addition, industry representatives also called out noticeable absence of pride in work, eagerness to learn, dependability and work ethic.

The following were specific careers identified as having high employment needs:

- Health Sciences: MLT, surgical technicians, CNA, LPN, RN, medical lab scientists, health care environmental services, dietary services
- Construction: carpenters, plumbers, electricians, all building trades
- Manufacturing: machining, welding, automated manufacturing, robotics
- Marketing: web designers, digital marketing, content writers, videographers, market research, social media, creative arts
- Business: sales and marketing, all entry levels, culinary, programmers
- Transportation: service technicians (diesel and auto), body shops, commercial drivers
- Agriculture: producers, agronomic technicians, animal science technicians, sales, ag mechanics, precision agriculture technicians, field techs, farm and ranch management
- Information Technology: network technicians, cyber security specialists, coders, web designers, programming
- Arts and Communications: varied occupations requiring creative skills, hospitality workers and management, culinary, technical writers, editing, entertainment industry
- Transfer Options: pre-programs for baccalaureate or professional degrees such as education, healthcare, criminal justice, engineering, computers, business

K-12 Input Session

The K-12 group was comprised of representatives from: Central Cass, Fargo, Northern Cass, Kindred, Northern Cass, Moorhead, and West Fargo. Stakeholders included superintendents, high school principals, and one counselor. Representatives reflected on proposed CWA cluster areas and were asked to consider student interest, current enrollments and industry needs for

potential CWA programs. A list of current class offerings by school district, M State-Moorhead, and NDSCS was supplied.

The following are K-12 group feedback, comments, or needs by career cluster:

- Agriculture received the lowest priority rating from most of the schools, although popular with schools currently offering the program. Schools reporting low interest do recognize an industry need and potential for course offerings through the “academy” to increase interest and access to classes for more students in the region. Many agriculture careers are intertwined with other career clusters, such as manufacturing; therefore, it was recommended that terminology and curriculum in this cluster be further defined with more input from industry input.
- Manufacturing showed moderate need by schools. Technology, engineering, automated systems and welding were listed as popular classes, with demand on the rise. Space and cost are an issue at district locations, as well as the need for qualified instructors. Stakeholder comments reveal that CWA offerings may contribute to student interest and the ability to fill classes with the sharing of students.
- Business and Finance most schools indicate high school students are interested in business. Marketing education was highly rated and popular as it fits with many cluster areas, including sales and hospitality. All schools have business course offerings on site. There is a desire to redesign course offerings at three high schools in the business areas. All agree business and marketing are high demand industry clusters. Some felt a comprehensive approach is needed in each high school because of the high student demand. There would be a need to evaluate how the “academy” could or would align with secondary, two-year and four-year programming in this cluster to create better alignment for programs.
- Construction introductory classes are currently offered at most schools. All rated this as a high need area, except for two high schools who currently offer advanced construction classes. Course offerings varied greatly by district based on course instructors. HVAC, plumbing, electrical, drafting, construction management, electrical technology are high areas of employment and were recommended as options to be considered at the “academy.”
- Transportation comments varied by district. Aviation was rated high by three high schools, with three indicating less interest. This program was not deemed cost-effective by some schools. Auto mechanics showed high interest at two high schools with others rating it lower. Diesel technology was also rated low due to cost of delivery. Two high schools confirmed interest in continuing recreational power sports due to high student success. Overall, comments reveal schools value transportation programs at a higher rate if they are a hosting site, as students can

participate. Hosting sites recognize the high cost of operation, along with concern in securing highly qualified staff. Non-hosting sites reveal student interest for programs, yet transportation and time as a barrier for student participation.

- Information Technology varied due to availability of instructional staff. All schools indicated high student interest and high industry need. Some schools are participating in the Microsoft TEALS, a Microsoft teacher training program, and are interested in exploring further advanced offerings. Both M State-Moorhead and NDSCS have significant course offerings in this area for alignment.
- Health Sciences is offered at most districts and there is a desire to keep courses at the high school due to a high concentration of student participation. High schools without direct access to health science curriculums reported a desire to have them available at their school or a central location. There are opportunities to provide advanced programming for students, yet staff qualifications, lab space, and teacher time create some limitations.
- Arts and Communications was suggested to change to hospitality and tourism. Introductory photography and graphic communications are offered at some high schools, yet programs do not fully exist at any site.
- General Education areas showed high interest in languages and varied rankings in science and math. One district expressed interest in exploring the integration of math and science – as they relate to the health sciences and business program areas.
- Other areas identified by the K-12 group included public safety (with high demand), veterinary (possible health science cluster), and sound system engineers. Most of the rankings indicated a desire for culinary courses. Cosmetology has also been suggested as an area of interest by some schools.

Program or Class Identification

The K-12 group provided preliminary input on courses that may be offered for grades 10, 11, 12, 13, and 14+. These suggestions will be incorporated with those provided by M State-Moorhead and NDSCS to develop a master list of current academic offerings in the region. This list is included in the combined meeting results area of this report.

NDSCS Input Session

Academic leadership from NDSCS also evaluated the cluster areas. Their overall indication of need was generally higher than the K-12 rankings.

- Agriculture received an average rating. Comments were related to the importance of agriculture in the region. It was noted that many other cluster areas support agriculture and a definition for agriculture is necessary.
- Manufacturing was rated high. Automated manufacturing indicated a strong need but needs more exposure in high schools. Welding has high needs currently but will go down as automation takes over more of the industry.
- Business and Finance was rated high. It was noted that there are numerous areas for two-year degrees within the cluster. Marketing careers had similar comments. Many career opportunities can be enhanced with a four-year degree which tends to be desired by many employers.
- Construction rated high and career opportunities are expanding rapidly in the FM area, but can be cyclical and it was indicated that high school's numbers in this area are down. Current classes have good enrollment but many of these occupations are trained on the job.
- Transportation received middle ratings for this group. Growing interest for aviation (drone) and diesel but needs career exposure at the high school level. This cluster has strong industry support. Automotive and recreational powersports are available at many high schools. Many of these occupations are trained on the job.
- Information Technology was rated high in need but lacks student interest and enrollment. This is a critical need area with more demand on the software engineering aspect of IT. Computer programming will continue to evolve. Cyber security is becoming an area of greater emphasis.
- Health Science has a high need in FM area. Critical shortages exist now and are projected well into the future. There is high student interest, and this should be a high priority offering. It is important to note that the health science cluster includes many health related careers in addition to nursing.
- Arts and Communications changed to Hospitality and Tourism. Culinary agreement with K-12 input.
- General Education rated high as many of the soft skills (language, ELL, oral and written communication, teamwork, etc.) are needed in all clusters. There are currently many offerings in this area.
- Other indication was public safety (e.g., law enforcement, criminal justice, education).

M State-Moorhead Input Session

This was a smaller group with limited time – many of the comments came after the group session. They did go through the rating assignment and course evaluation. The rating findings are below.

- Agriculture was rated the lowest by the group, finding little interest and shrinking need. There is a need for terminology clarity for ag career programs, as it covers many areas (e.g., IT, sales, GIS, science, etc.).
- Manufacturing saw a higher need in the technology and engineering area but only for the support careers associated with four-year degrees. All students are hired before graduation. In the automated area, robotics was mentioned but the area was rated low. Welding was perceived as a short-term need.
- Business and Finance was rated in the middle range of need with social and digital area called out as a high need in the marketing sector.
- Construction was rated high for immediate need and based on current enrollment. Currently M State-Moorhead offers a two-week summer Herdina intro to construction trades for ages 15-21. Certificates could be awarded in specialty areas taught at M State-Moorhead. Stackable certificates in framing, roofing, concrete, siding, and tile could be offered.
- Transportation areas rated the highest were auto and diesel. An intro to auto and diesel at high schools or the academy facility with transferability to M State-Moorhead was suggested. Automotive NitroX summer camp to be offered at M State-Moorhead summer of 2019 and they are exploring a diesel camp. Currently offer a two-year automotive program sponsored by business partners. They also indicated a need for more certificates in the auto and diesel area.
- Information Technology needs to develop a pipeline so there is clear understanding of career paths. There is high need and interest. Security area, network administration, and programming, etc.
- General Education was ranked higher in the math and science areas. M State-Moorhead is open to exploring this further as there are a lot of options in these two areas. Also, a need is recognized for languages as they are aligned with languages in our region.
- Health Science is a major area for M State-Moorhead offering a core curriculum. All are needed, and they could fill the day with classes.
- Arts and Communications noted two areas – culinary and criminal justice.

Joint Session – Curriculum Identification

The participants at the final combined input and feedback meeting were representatives from K-12, M State-Moorhead, and NDSCS. Flint reviewed the results from previous input sessions, by cluster groups, course/program ratings, and industry needs.

Discussion was held on the value of creating programs of study (POS) as an essential element of the CWA, career pathways, and the impact for all stakeholders.

Representative feedback indicates:

- The POS represent the effort to better align high school and post-secondary education with the demands of the changing economy and provide a more coherent pathway for youth as they move toward adulthood.
- Shaped by labor market demand, POS align secondary and post-secondary curricula and offer students the ability to explore careers, earn industry recognized credentials and participate in dual credit-earning opportunities, thus potentially shortening their time to a post-secondary degree.

Representatives noted some potential challenges for implementation of the CWA. Future scheduling issues will surface once initial career clusters and programs of study are confirmed, and location determined. School districts may have to move to block scheduling in some cases in order to accommodate CWA course offerings. The CWA will have to look at full- or half-day programs to accommodate high school scheduling and transportation to and from high schools.

Throughout the process, groups recognized that programming and curriculum currently exist across the region in all career clusters. The existence of the programs, facilities, and staffing may influence the recommendation and final programming.

A graphic was provided to illustrate cluster crossover of classes that support multiple program areas. Groups were challenged to discuss and identify potential CWA curriculum courses for initial implementation and future expansion.

Input was solicited on career awareness strategies starting in the lower grades and through high school as reflected in the CWA Learning Continuum. This information will be further refined by K-12 and post-secondary representatives and as the CWA continues to evolve.

RECOMMENDATIONS

The Association of Career and Technical Education (ACTE) has developed a research-based quality framework that identifies the key components of a high-quality CTE programming. The framework provides criteria for programming that spans secondary and post-secondary career and technical education.

The CWA will utilize the ACTE frameworks to guide recommendations based on our analysis of the input of all stakeholders. Further discussion will help refine the final report. We have broken the recommendations into five key areas.

1. Career Workforce Academy Concept – **The CWA will provide a highly coordinated and collaborative approach** that serves varied student learners while helping meet the workforce needs of the region.

The Career Workforce Academy is an educational delivery model that utilizes an organized, facilitated and collaborative approach for all levels of students to explore careers, establish a career pathway, gain or enhance employable skills, and secure employment. Offerings will be located at participating school district facilities, the CWA Center, NDSCS-Wahpeton, M State-Moorhead, and by remote delivery when appropriate.

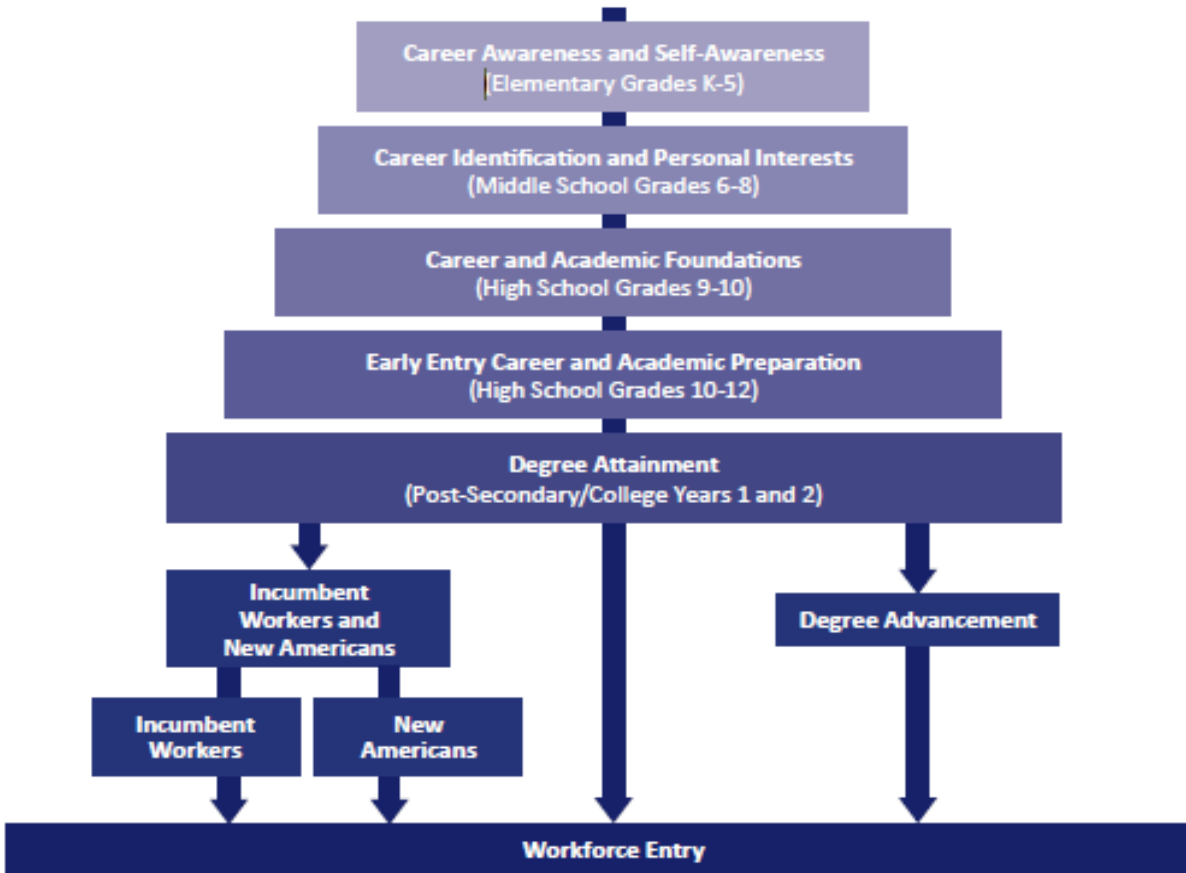
The CWA will provide needed coordination, support services and expanded delivery activities for secondary, post-secondary and adult worker classes in a new facility specifically designed for meeting the varied needs of the CWA. These needs are stated below:

- Provide exposure to multiple career paths for all levels of K-14 students.
- Present more opportunities for students to sample and experiment within a variety of careers.
- Create opportunity for those interested in a technical degree.
- Create a path for incumbent workers and new Americans for a new career.
- Provide appropriate facilities and equipment for hands-on career training.
- Focus on the region's workforce and employer.
- Engage with business and industry to strengthen K-14 relationships and programming.

The strength of the CWA will be based on the Career Pathway Model that draws upon collaboration between K-12 partners, business partners and post-secondary partners.



2. Career Pathway Learning Continuum – **The CWA will provide an integrated and developmental approach to serving all levels of learners.** It is based on serving students throughout the lifespan.

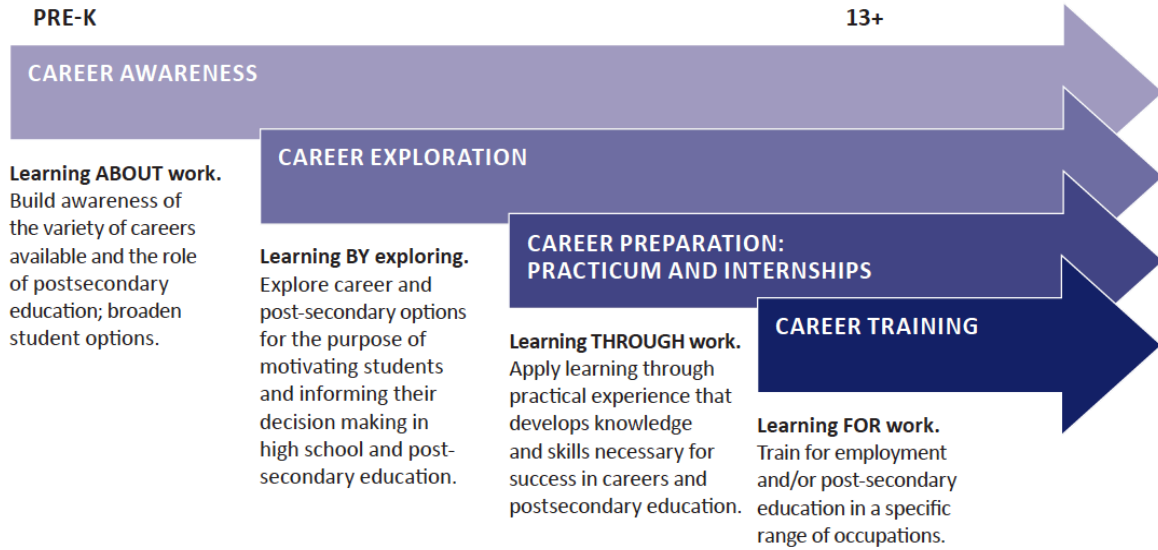


In developing our recommendation for the CWA delivery concept, we considered the courses and classes at all levels, from high school offerings through adults. This concept received a preliminary thumbs-up from participants in the input session.

Academic programming will follow the continuum as indicated in the graphic below. It will expose younger students to various jobs and begin identifying interest levels of the students; the next level will provide career choice exploration opportunities and help formulate their decision process of further career education; and lastly the program will give students the opportunity to have practical experience by learning through actual work experience. It will encourage students to participate in site visits and “on-the-job” training experiences. Opportunities for post-secondary degree attainment, industry certifications, and workforce training for New Americans or incumbent workers will also be facilitated through the CWA.

3. Delivery System – The CWA will provide a multi-faceted delivery system that leverages varied locations and delivery strategies.

Academy Learning Continuum



Instruction, educational activities and training will occur at the location and in the delivery mode that bests meets the needs of the learners and the activity being provided. Courses can be taught by the high school faculty, college faculty, via face to face, video, or online. Specifically, secondary offerings will be at participating high school facilities, at the CWA Center, at NDSCS-Wahpeton or at M State-Moorhead. Post-secondary offerings will be available at the CWA Center, NDSCS-Wahpeton or M State-Moorhead

Dual credit opportunities are a priority for CWA curriculum offerings, pathways for students to earn both high school and college credit toward a high school diploma, certificate or associate degree. Early entry coursework can motivate high school students to stay in school, improve high school graduation rates and creating a seamless transition from high school to college. Students who participate in dual credit have the opportunity to accelerate their college education as they engage in rigorous content and develop skills through advanced lab experiences, saving time and reducing their financial investment.

CAREER WORKFORCE ACADEMY Programming Model



CWA MODEL DEFINED

Career Workforce Academy - An overarching model for systemic coordination of curriculum, program alignment and business partnerships for the Center and satellite academies.

Satellite Academy - A school-based learning community providing academic and technical skills through a career-oriented pathway.

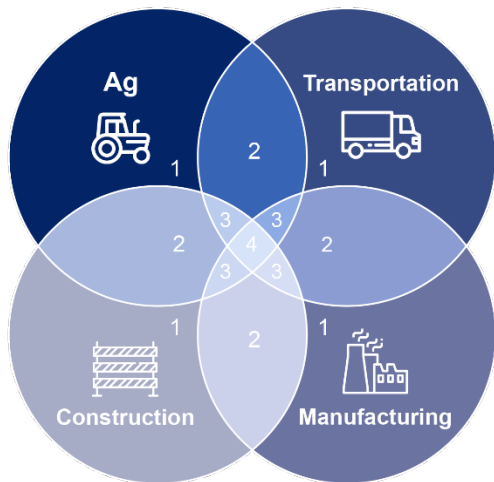
Career Workforce Center - A central location housing advanced secondary, post-secondary, adult workforce training solutions, and leadership coordination.

High School Satellites – CTE Foundations - Agriculture, Business, Construction, FACS, Graphics, Marketing, Health Science, Information Technology, Technology Education

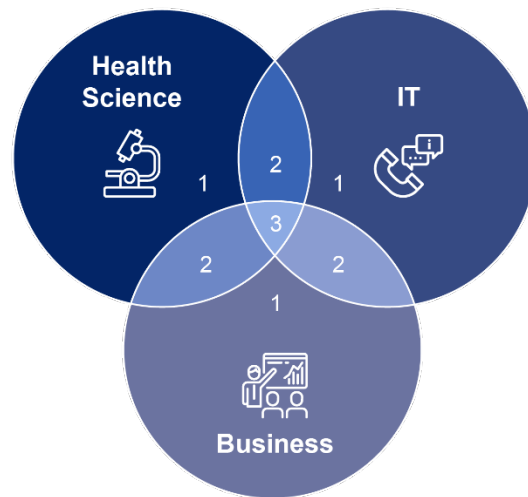
- Curriculum Offerings – A proposed listing of CWA courses, organized by industry cluster and delivery location, is attached as an appendix. In addition to the eight industry clusters, an additional cluster entitled Liberal Arts, Transfer and General Education was included. As stated previously, educational activities and training will occur at the location and in the delivery mode that best meets the needs of the learners and the activity being provided. Effectiveness of instruction and efficiency in delivery will be considered. Proposed offerings and locations listed in the appendix will be refined with the continued input of K-12, post-secondary and industry representatives. **See Appendix 1.**

Initial curriculum offerings were primarily identified through the input of K-12 and post-secondary participants. These are classes that would be initially offered through the CWA, with classes provided at varied locations. These offerings take into consideration both short- and long-term industry needs, institutional capabilities, and current student interest. In consideration of the courses recommended, we looked at cluster crossover. Many classes offered have educational and career implications in more than one cluster. This crossover happens as students explore all aspects of a career. A student interested in agriculture may look at courses in engineering and business and may want to learn more of the technical skills, like welding or UAS technology. This concept is reflected in the following diagram.

Cross Cluster Courses



Four Industry Clusters - Example



Three Industry Clusters - Example

1, 2, 3 and 4 indicate the number of industry clusters a selected course supports.

Academic offerings are dynamic in nature and will change to meet the evolving needs of the workplace. Although demand for a specific skill set may be recognized, student interest, space, instructor availability, and other resources will be weighed. Additionally, changes in industry needs may result in course offerings being modified. Flexibility and the ability to react quickly will be a hallmark of the CWA.

5. Advancing the Vision – Career Awareness and Education - The Career Workforce Academy will provide leadership and visibility in advancing the vision of a collaborative model focused on education and training workforce solutions. Building and sustaining community, industry and policy makers’ awareness and support for technical education, and the career opportunities available through such education, will be significantly enhanced by the creation of a CWA. The CWA and the resulting facility will provide an identifiable entity clearly focused on providing workforce education and training solutions.

Key components to successfully implement this recommendation include providing leadership and programming in the following areas:

- Actively involve community influencers
 - Chamber, GFMEDC, Marketplace for Kids, Fueling our Future, etc.
 - Community education groups, youth groups, Junior Achievement, etc.
- Actively involve parents, caregivers and other student influencers
 - Educate about career options and the impact on their children’s future
- Actively engage business and industry in career awareness, career exploration, career preparation, company specific training, and adult worker training or retraining
 - Work with all career cluster areas to identify and implement specific career exploration and awareness initiatives across the learner spectrum (K-12 through adult)
 - A wide array of potential activities were identified during the feedback sessions and will be made available to the CWA leadership for their consideration and use
- Actively provide programming designed to connect with high school graduates and/or young adults entering the workforce but lacking employable or technical skills
- Provide career pathway educational awareness activities for teachers, counselors and administrators in the broader educational community

Examples: roundtable discussions with industry experts, industry site tours, job shadows
- Provide coordinated and systematic career awareness and career exploration programming for K-12 students

Examples: industry presentations, industry site visits, hands on exploration activities, job shadowing, mentoring, enhancement activities, etc.

- Foster a strong connection between the secondary and post-secondary partners to ensure seamless and well-integrated programming

Examples: dual credit offerings, early college programs; curriculum alignment; shared professional learning; community and professional development activities; shared industry advisory committees, shared facilities/equipment, mentorships for new teachers, shared internship opportunities

- Shared marketing and public relations activities

Conclusion

The Career Workforce Academy is a proven, innovative educational model whose time has come for our region. The CWA has the potential to transform teaching and learning to the benefit of students, schools and colleges, the community, and employers. The identified proposed program offerings provide a foundation upon which to build the CWA model.

The Career Workforce Academy is a strong step in the journey to create an effective, efficient and enduring educational infrastructure that serves the needs of students, community, and the rapidly evolving workplace.

References and contributors

In the development of the Career Workforce Academy Program Priorities and Curriculum Development, background research and input sessions were facilitated by Flint Group. Additional information was obtained through CWA Steering Committee members, current career and technical education program advisory committee member feedback, and input from organizations engaged in coordinate input sessions, including:

- Cass County K-12 School Districts Superintendents and Secondary Principals
- M State – Moorhead President, Vice Presidents, Directors, and Faculty
- NDSCS Vice Presidents, Department Chairs, Deans, Instructional Leaders and Faculty

Career Workforce Academy

Proposed Listing of Academic Offerings



This document provides a proposed listing of courses, organized by industry cluster and delivery location. In addition to the eight industry clusters identified above, an additional cluster entitled Liberal Arts, Transfer and General Education is included. Proposed offerings and locations will be refined with the continued input of K-12, postsecondary and industry representatives.

March 28, 2019

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Agriculture Cluster

03/28/2019

Career Workforce Academy by Location

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo High	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
Secondary Courses													
Ag Intro Courses	C				C		C						
Foundations to Ag	C	VC	VC	VC	C		C	VC	VC	R			
World Ag	VC	VC	VC	VC	VC	VC	VC	VC	VC	R			
Plant Science I/Botany	C	VC	VC	VC	C		C	VC	VC	R			
Plant Science II/Botany	C	VC	VC	VC	C		C	VC	VC	R			
Small Animal Science I	C	VC	VC	VC	C		C	VC	VC	R			
Small Animal Science II	C	VC	VC	VC	C		C	VC	VC	R			
Vet Science I	C	VC	VC	VC	C		C	VC	VC	R			
Vet Science II	C	VC	VC	VC	C		C	VC	VC	R			
Ag Mechanical/Tech	C				C								
Post-Secondary Courses													
NDSCS													
AGRI 141 Principles of Ag Business										R		C	
ANSC 114 Intro to Animal Science										R		C	
PLSC 110 World Food Crops										R		C	
AGRI 275 Intro to Precision Ag										R		C	
MFG 110 Industrial Shop Practices										C-R		C	
M/State Moorhead													
BIOL 1107 Environmental Science Issues													C
BIOL 1108 Environmental Science Issues Lab													C
BIOL 1122 General Biology I													C
BIOL 1123 General Biology II													C
CHEM 1111 General Inorganic Chemistry I													C
CHEM 1112 General Inorganic Chemistry II													C
Post-Secondary Programs													
NDSCS													
Ag Business - AAS													C
Agronomy - AAS													C
Animal Science - AAS													C
Farm Management - AAS													C
Precision Agriculture - AAS													C
Ranch Management - AAS													C
M/State Moorhead													
Environmental Science - AS													C

Preliminary Recommendations

Business Management - Finance - Marketing - Hospitality Cluster

3/28/2019

Career Workforce Academy by Location													
Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
Secondary Courses													
Intro to Business OR Basics of Business		C	C	C				C	C				
Accounting	C	C	C	C	C	C	C	C	C				
Accounting II	C	C	C	C		C		C	C				
Business Law		C	C	C				C	C				
Personal Law & Ethics						C							
Business Finance													
Personal Finance		C	C	C		C		C	C				
Computer Applications	C	C	C	C		C		C	C				
Web Design										R			
Web Design II										R			
Marketing I	C	C	C	C	VCE		C	C	C				
Management/Entrepreneurship	C	C	C	C	VCE	C	C	C	C				
Sports Marketing		C	C	C	VCE	C		C	C				
Store Manager		C	C	C	VCE	C	C	C	C				
Culinary Arts Classes - TBD										R			
Post-Secondary Courses													
NDSCS													
Business Administration and Management Classes													
ACCT 118 Applied Accounting										C-R		C	
ACCT 200 Elements of Accounting I										C-R		C	
ACCT 201 Elements of Accounting II										C-R		C	
ACCT 215 Business in the Legal Environment										C-R		C	
BADM 103 Leadership Techniques										C-R		C	
BADM 201 Principles of Marketing										C-R		C	
BADM 202 Principles of Management										C-R		C	
BADM 217 Promotion and Advertising										C-R		C	
BADM 230 Marketing Information Analysis										C-R		C	
BADM 234 Customer Service										C-R		C	
BADM 240 Sales										C-R		C	
BADM 244 Sales Seminar										C-R		C	
BADM 251 Personal Finance										C-R		C	
BADM 281 Organizational Behavior										C-R		C	
BADM 282 Human Resource Management										C-R		C	
BADM 291 Career Seminar										C-R		C	
BUSN 120 Fundamentals of Business										C-R	R	C	
BUSN 170 Entrepreneurship										C-R	R	C	
BUSN 254 Financial Statement Analysis										C-R		C	
BUSN 282 Professional Development										C-R		C	
CIS 101 Computer Literacy										C-R	C-R	C	
CSCI 116 Business Use of Computers										C-R	R	C	
Culinary Arts Classes - TBD													
TBD										R			
TBD										R			

Preliminary Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
M/State Moorhead													
ACCT 1012 Principles of Bookkeeping													C
ACCT 1101 Payroll													C
ACCT 1108 Business Math and Calculators													C
ACCT 1120 Business Law													C
ACCT 1124 Spreadsheet Applications													C
ACCT 2201 Financial Accounting I Lab													C
ACCT 2202 Financial Accounting II Lab													C
ACCT 2203 Managerial Accounting Lab													C
ACCT 2210 Managerial Accounting													C
ACCT 2211 Financial Accounting I													C
ACCT 2212 Financial Accounting II													C
ACCT 2213 Managerial Accounting													C
ACCT 2215 Computerized Acct App													C
ACCT 2216 QuickBooks													C
ACCT 2217 Microsoft Dynamics GP													C
ACCT 2255 Income Tax-Individual													C
ACCT 2256 Income Tax-Business													C
ACCT 2620 Intermediate Accounting I													C
ACCT 2622 Intermediate Accounting II													C
ACCT 2640 Accounting Internship													C
ACCT 2800 Accreditation Council for Accountancy and Taxes or													C
ADMS 1100 Keyboarding I													C
ADMS 1110 Word Processing													C
ADMS 1112 Desktop Publishing													C
ADMS 1116 Business Communications I													C
ADMS 1120 Administrative Office Procedures													C
ADMS 1128 Records Management													C
ADMS 1130 Office Software Applications													C
ADMS 1190 Keyboarding II													C
ADMS 2124 Emerging Office Technologies													C
ADMS 2205 Advanced Word Processing													C
ADMS 2212 Integrated Office Software Applications													C
ADMS 2216 Business Communications II													C
ADMS 2240 Administrative Office Professional Internship II													C
BUS 1120 Spreadsheet & Database Concepts													C
BUS 1130 Introduction to Inventory Control and Purchasing													C
BUS 1141 Introduction to Business													C
BUS 1143 Office Procedures													C
BUS 1146 Personal Finance													C
BUS 1174 Principles of Banking													C
BUS 1175 Fundamentals of Investing													C
BUS 1300 Financial Statement Analysis													C
BUS 2150 Legal Environment of Business													C
BUS 2202 Management Information Systems													C
BUS 2204 Principles of Management													C
BUS 2206 Principles of Marketing													C

Preliminary
Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
BUS 2220 Global Business													C
BUS 2275 Money and Banking													C
CULN 1200 Fundamentals of Baking and Pastry													C
CULN 1205 Theories of Baking and Pastry													C
CULN 1210 Fundamentals of Food Fabrication and Production													C
CULN 1215 Theory of Food Fabrication and Production													C
CULN 1220 Fundamentals of Pantry Production													C
CULN 1230 Introduction to Professional Food Service													C
CULN 1240 Sanitation Certification													C
CULN 1250 Kitchen Math and Measurements													C
CULN 1260 Meats													C
CULN 1270 Culinary Nutrition													C
ENTR 1100 Introduction to Entrepreneurship													C
ENTR 1400 Opportunity Analysis													C
ENTR 2200 Entrepreneurial Field Studies													C
ENTR 2220 Business Ethics/Professionalism													C
ENTR 2222 Business Plan Development													C
HRES 1122 Human Resource Management													C
HRES 1126 Employee Processes													C
HRES 1130 Benefits Administration													C
HRES 1134 Training and Development													C
HRES 2204 Policy Administration													C
HRES 2212 Wage/Salary Administration													C
HRES 2224 Employee/Labor Relations													C
HRES 2254 Human Resource Systems and Portfolio Evaluation													C
MKTG 1040 Consumer Behavior													C
MKTG 1106 Professional Selling													C
MKTG 1110 Customer Service													C
MKTG 1116 Advertising and Promotion													C
MKTG 2204 Advanced Professional Selling													C
MKTG 2214 E-Marketing													C
MKTG 2218 Retail Management													C
MKTG 2230 Marketing Research													C
MKTG 2234 Computer Marketing Applications													C
MKTG 2236 Small Business Management													C
MKTG 2250 Strategic Selling and Account Management													C
MKTG 2290 Management, Marketing and Sales Internship													C
MKTG 2410 Marketing, Management, and Sales Capstone													C

Preliminary
Recommendations

Academic Offerings														
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)	E = Expanded offering (future) R = Recommended offering	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor- head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Post-Secondary Programs														
NDSCS														
Administration and Finance - AAS											C-R	C		
Business Technology Mgmt - AAS (3rd year option)											C-R	C		
Marketing, Sales, and Hospitality - AAS											C-R	C		
Restaurant Management - AAS (3rd year option)											C-R	C		
Entrepreneurship - Certificate											C-R	C		
Finance - Certificate											C-R	C		
Management/Supervision - Certificate											C-R	C		
Sales - Certificate											C-R	C		
Culinary Arts - Diploma and AAS														
M/State Moorhead														
Business: Management, Marketing and Sales - AAS														C
Business: Marketing and Sales - Diploma														C
Fundamentals of Culinary Arts - Diploma														C
Human Resources - AAS														C
Human Resources - AS														C
Payroll Specialist - Diploma														C
Accounting - AAS														C
Accounting - Diploma														C
Accounting Clerk - Diploma														C
Administrative Office Assistant - Finance - Certificate														C
Administrative Office Assistant - Human Resources														C
Administrative Office Assistant - Legal														C
Administrative Support - Diploma														C
Business Entrepreneurship - AAS														C
Business Entrepreneurship - Diploma														C
Professional Sales Skills - Certificate														C
Purchasing and Inventory Management - Certificate														C
Social Media Management - Certificate														C
Supervisory Leadership Essentials - Certificate														C

Preliminary
Recommendations

Construction Cluster

03/28/2019

Career Workforce Academy by Location													
Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
Secondary Courses													
Woods I	C	C	C	C				C	C				
Woods II	C	C	C	C				C	C				
Construction I	C	C	C	C				C	C				
Construction II	C	C	C	C				C	C				
Woodworking & Cabinetry						C							
Advanced Cabinetry						C							
Exploring Carpentry						C							
Drafting & Technical Drafting						C		C					
Civil Engineering & Architecture (PLTW)		VC	VC	C		C				R			
Post Secondary Courses													
NDSCS													
Electrical Classes													
ECAL 101 DC Fundamentals										R	R	C	
ECAL 102 AC Fundamentals										R	R	C	
MFG 110 Industrial Shop Practices										C-R	R	C	
Plumbing Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
MSYS 101 Safety for Mech Syst Tech										R	R	C	
Architectural Drafting Classes													
ARCT 120 AutoCAD for Architecture										R	R	C	
ARCT 121 Revit Architecture										R	R	C	
UAS 111 Intro to UAS										R	R	C	
UAS 112 UAS Pilot Certification										R	R	C	
Building Construction Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
BCT 102 Core Curriculum for Construction										R	R		
BCT 222 Construction Safety										R	R	C	
Construction Management Classes													
ARCT 121 Revit Architecture										R	R	C	
CAD 120 Intro to AutoCAD										R	R	C	
BCT 222 Construction Safety										R	R	C	
UAS 111 Intro to UAS										R	R	C	
UAS 112 UAS Pilot Certification										R	R	C	
Land Surveying Classes													
CAD 120 Introduction to AUTOCAD										R	R	C	
CT 113 Introduction to Civil Design Applications										R	R	C	
UAS 111 Intro to UAS										R	R	C	
M/State Moorhead													
CADD 1000 AutoCAD Basics													C
COMM 1120 Introduction to Public Speaking													C
COMM 1130 Small Group Communication													C
CONM 1101 Construction Documents and Codes													C
CONM 1102 Site/Building Layout													C
CONM 1104 Construction Management Principles													C
CONM 1108 Principles of Estimating													C

Preliminary
Recommendations

Academic Offerings													
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)													
	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
CONM 1124 Building Systems													C
CONM 2204 Materials Testing													C
CONM 2210 Construction Scheduling													C
CONM 2212 Site Management													C
CONM 2213 Safety Management													C
CONM 2217 Computer Estimating and Bidding													C
CONM 2222 Construction Management Internship													C
ELEC 1100 Electrical Safety													C
ELEC 1102 Introduction to Electric Circuit Theory													C
ELEC 1104 Introduction to National Electrical Code													C
ELEC 1107 Introduction to Residential Wiring													C
ELEC 1108 Electrical Circuit Theory													C
ELEC 1110 Electric Motors and Generators													C
ELEC 1112 Residential Wiring													C
ELEC 1114 National Electrical Code													C
ELEC 1116 Conduit/Tool Applications													C
ELEC 1118 Electrical Services													C
ELEC 1122 Introduction to Electrical Materials													C
ELEC 1124 Introduction to Electrical Blueprint Reading													C
ELEC 1130 Electrical Blueprints													C
ELEC 2202 Heating/Cooling Controls													C
ELEC 2205 Introduction to Commercial Wiring													C
ELEC 2206 Introduction to Motor Control Applications													C
ELEC 2208 Programmable Logic Controllers													C
ELEC 2211 Electronic Motor Control													C
ELEC 2212 Commercial Wiring													C
ELEC 2214 Industrial Wiring													C
ELEC 2216 Motor Control Application													C
ELEC 2225 Transformers													C
ELEC 2248 Code Applications													C
ENGT 1126 Engineering Graphics													C
FIRE 1100 Introduction to Fire Service													C
FIRE 1106 Firefighter I and II													C
FIRE 1108 Firefighter I and II Skills													C
FIRE 1130 Technical Rescue													C
FIRE 1140 Fire Inspection and Code Enforcement													C
FIRE 1150 HazMat Operational													C
FIRE 1152 Building Construction													C
HVAC 1102 Duct Fitting Construction													C
HVAC 1103 Electricity for Heating, Ventilating and Air Conditioning													C
HVAC 1104 Heating, Ventilating, and Air Conditioning Electrical													C
HVAC 1128 Heating, Ventilating, and Air Conditioning Design													C
HVAC 1224 Gas and Oil Heating													C
HVAC 2202 Air Handling													C
HVAC 2212 Hot Water Heating													C
HVAC 2221 Heat Pump Theory and Operation													C
HVAC 2290 Heating, Ventilating, and Air Conditioning Internship													C
MCDD 2220 Mechanical Engineering Drawing IV													C
PLBG 1101 Piping and Job Safety													C
PLBG 1103 Plumbing Trade Tools													C
PLBG 1115 Faucets and Fixtures													C
PLBG 1119 Materials and Fittings													C

Preliminary
Recommendations

Academic Offerings													
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)													
E = Expanded offering (future) R = Recommended offering	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
PLBG 1123 Plumbing Code I													C
PLBG 1125 Plumbing Lab I													C
PLBG 1131 Grade and Elevation													C
PLBG 1133 Blueprint Reading													C
PLBG 1135 Drainage, Waste and Venting													C
PLBG 1137 Water Distribution													C
PLBG 1139 Backflow Basics													C
PLBG 1141 Plumbing Code II													C
PLBG 145 Plumbing Lab II													C
REFR 1110 Refrigeration, Air Conditioning and Heating Principles													C
REFR 1112 Refrigeration, Air Conditioning and Heating Lab													C
REFR 2202 Commercial Refrig & A/C Principles													C
REFR 2204 Commercial Refrig & A/C Lab													C
REFR 2206 Commercial Electrical Principles													C
REFR 2208 Commercial Electrical Lab													C
REFR 2211 Advanced Refrigeration Principles													C
REFR 2212 Advanced Refrigeration Lab													C
REFR 2213 Advanced Electrical Theory													C
REFR 2215 Advanced Electrical Applications													C
REFR 2216 Refrigeration Internship													C
REFR 2217 Commercial Grocery Store Refrigeration													C
Post-Secondary Programs													
NDSCS													
Architectural Drafting & Estimating Technology - AAS													C
Building Construction Technology - AAS													C
Construction Management Technology - AAS													C
Land Surveying & Civil Engineering Technology - AAS													C
Electrical Technology - Electrical Construction - AAS													C
Electrical Technology - Industrial Electrical - AAS													C
HVAC/R Technology - Certificate & AAS													C
Plumbing - Certificate													C
Technical Studies - Certificate, Diploma, AAS										C-R			C
Technical Studies - Journeyworker Track - AAS										C-R			C
M/State Moorhead													
Construction Management - AAS													C
Electrical Technology: Electrician - Diploma													C
Fire Service Preparation - Certificate													C
Heating, Ventilation and Air Conditioning/Refrigeration - Diploma													C
Plumbing Technology - Diploma													C

Preliminary
Recommendations

Health Science Cluster

03/28/2019

Career Workforce Academy by Location

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Secondary Courses													
Health Science I	VCE	C	C	C	VCE	VCE	VCE	C	C	R			
Health Science II	VCE	VCE	VCE	VCE	VCE	VCE	VCE	VCE	VCE	R			
Medical Terminology	VC	C	C	C	VCE	VCE	VC	C	C	R			
Certified Nursing Assistant	VC	C	C	C	VCE	C	VC	C	C	R			
Prevention & Care of Athletic Injuries	VC	C-PE	C-PE	C-PE	VCE	VCE	VC	C	C	R			
Post-Secondary Courses													
NDSCS													
Emergency Medical Services (EMS) Classes													
EMS 100 Emergency Medical Responder										C-R			
EMS 101 Introduction into EMS										C-R			
EMS 110 EMT Fundamentals										C-R			
EMS 110L EMT Fundamentals Lab										C-R			
EMS 110P EMT Practicum										C-R			
EMS 150 AEMT Fundamentals										C-R			
EMS 150L AEMT Fundamentals Lab										C-R			
EMS 170 Trauma I										C-R			
EMS 180 Pharmacology I										C-R			
EMS 203 Pharmacology II										C-R			
EMS 204 Medical Emergencies I										C-R			
EMS 205 Medical Emergencies II										C-R			
EMS 207 Special Populations										C-R			
EMS 215 Cardiology										C-R			
EMS 217 Pulmonology										C-R			
EMS 218 Cardio-Pulmonology										C-R			
EMS 219 Trauma II										C-R			
EMS 231 Paramedic Lab I										C-R			
EMS 232 Paramedic Simulation Lab										C-R			
EMS 234 Paramedic Assessment Lab										C-R			
EMS 241 Advanced Provider Practicum I										C-R			
EMS 242 Advanced Practicum II										C-R			
EMS 243 Capstone in Paramedicine										C-R			
EMS 255 Leadership in EMS										C-R			
Health Information Classes													
BOTE 171 Medical Terminology										R	C-R	C	
Nursing Classes													
NURS 101 Introduction to Nursing										C-R		C	
NURS 102 Introduction to Adult Nursing										C-R		C	
NURS 231 Psychiatric Mental Health Nursing										C-R		C	
NURS 232 Adult Nursing										C-R		C	
NURS 233 Adult Nursing Clinical										C-R		C	
NURS 245 Maternal Child Nursing										C-R		C	
NURS 246 Maternal Child Nursing Clinical										C-R		C	
NURS 250 Leadership in Long-Term care setting										C-R		C	
NURS 251 NCLEX-PN Review										C-R		C	
NUTR 240 Principles of Nutrition & Diet Therapy										C-R		C	
PHRM 205 Pharmacology for Nursing										C-R		C	

Preliminary Recommendations

Academic Offerings													
Key:													
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VC = Virtual Center (current)													
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	E = Expanded offering (future)												
	R = Recommended offering												
	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor-head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
M/State Moorhead													
ADMM 1104 Medical Language Applications I													C
ADMM 1110 Medical Documentation Fundamentals													C
ADMM 1122 Medical Office Procedures													C
ADMM 1150 Medical Billing/Insurance													C
ADMM 1152 Outpatient Coding													C
ADMM 1160 Beginning Medical Transcription													C
ADMM 1200 Medical Office Technology Tools													C
ADMM 2104 Medical Language Applications II													C
ADMM 2122 Medical Office Management													C
ADMM 2130 Medical Office Career Insight													C
ADMM 2150 Medicare Coding and Billing Applications													C
ADMM 2152 Advanced Coding													C
ADMM 2154 Hospital Billing													C
ADMM 2256 Certified Professional Biller Examination													C
ADMM 2258 Certified Professional Coder Examination Review													C
ADMM 2320 Medical Office Capstone													C
ADMM 2500 Human Disease Applications for Administrative H													C
ADMS 1116 Business Communications I													C
CRJU 1101 Introduction to Criminal Justice													C
CRJU 1102 Policing and Practices													C
CRJU 1108 Physical Control Tactics for Corrections													C
CRJU 1109 Law Enforcement Behavioral Science													C
CRJU 2201 Criminal Law													C
CRJU 2206 Police Report Writing													C
CVRI 1100 Cardiovascular Technology Survey													C
CVRI 1105 Introduction to Cardiovascular Technology													C
CVRI 1110 Cardiovascular Anatomy and Physiology													C
CVRI 1120 Principles of Patient Care													C
CVRI 1130 Cardiovascular Technology I													C
CVRI 1136 Cardiovascular Technology Clinical													C
CVRI 2130 Cardiovascular Technology II													C
CVRI 2141 Pharmacology for Cardiovascular Technology													C
CVRI 2145 Intravenous Therapy													C
CVRI 2250 Radiation Safety													C
CVRI 2262 Cardiovascular Technology Practicum I													C
CVRI 2263 Cardiovascular Technology Practicum II													C
CVRI 2264 Cardiovascular Technology Practicum III													C
DENT 1100 Biomaterials													C
DENT 1102 Dental Anatomy													C
DENT 1103 Introduction for Dental Health Care Providers													C
HITM 1150 Introduction to Health Care Delivery													C
HITM 1152 Health Information Systems													C
HITM 1155 Medicolegal Aspects													C
HITM 1159 Professional Practice Experience Function													C
HITM 2204 Fundamentals of Electronic Health Records													C
HITM 2216 Introduction to Procedure Coding													C
HITM 2218 Intermediate Procedure Coding													C

Preliminary
Recommendations

Academic Offerings														
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HITM 2230 Medical Science for Health Information Profession														C
HITM 2250 Supervisory Leadership in Health														C
HITM 2253 Quality Management Studies														C
HITM 2263 Reimbursement Systems														C
HITM 2272 Professional Practice Experience III														C
HITM 2282 Introduction to Diagnosis Coding														C
HITM 2283 Intermediate Diagnosis Coding														C
HITM 2290 Health Care Data Management and Analysis														C
HLTH 1110 Introduction to Anatomy and Physiology														C
HLTH 1116 Medical Terminology														C
PHRM 1100 Personal and Professional Responsibilities of the														C
PHRM 1101 Personal and Professional Responsibility Applicat														C
PHRM 1110 Medication Processing, Handling, and Safety I														C
PHRM 1111 Medication Processing, Handling and Safety Lab I														C
PHRM 1120 Pharmaceutical Calculations														C
PHRM 2010 Experiential / Hospital														C
PHRM 2012 Experiential / Retail														C
PHRM 2100 Pharmacotherapy														C
PHRM 2110 Medication Processing, Handling and Safety II														C
PHRM 2111 Medication Processing, Handling and Safety Lab II														C
PHRM 2120 Professional Preparation														C
PSYC 2226 Behavior and Environmental Management														C
SURT 1200 Introduction to Surgical Technology														C
SURT 1210 Surgical Technology I														C
SURT 1215 Surgical Pharmacology														C
SURT 1220 Surgical Technology II														C
SURT 1230 Surgical Technology III														C
SURT 1250 Surgical Clinical I														C
SURT 1255 Surgical Clinical II														C

Preliminary
Recommendations

Academic Offerings														
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)	E = Expanded offering (future) R = Recommended offering	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor- head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Post-Secondary Programs														
NDSCS														
Dental														
Dental Assisting - Certificate, AAS													C	
Dental Hygiene - AAS													C	
Emergency Medical Services														
Emergency Medical Technician (EMT) - Certificate											C-R			
Advanced EMT - Certificate											C-R			
Paramedic Technology - Certificate, AAS											C-R			
Health Information														
Medical Coding - Certificate													C	
Health Information Technician - AAS													C	
Nursing														
Practical Nursing - AAS LPN											C-R		C	
Registered Nursing - ASN RN													C	
Registered Nursing - AAS RN													C	
Occupational Therapy Assistant - AAS													C	
Pharmacy Technician - Certificate, AAS											R		C	
M/State Moorhead														
Autism Spectrum Disorder - Certificate														C
Cardiovascular Technology - Invasive - AAS														C
Childcare and Education - Certificate														C
Correctional Officer - Certificate														C
Criminal Justice - AS														C
Dental Assisting - AAS														C
Dental Assisting - Diploma														C
Dental Hygiene - AAS														C
Health Information Technology/Coding - AAS														C
Medical Administration Assistant - AAS														C
Medical Coding and Insurance - Diploma														C
Medical Office Assistant - Diploma														C
Medical Receptionist - Diploma														C
Pharmacy Technology - Diploma														C
Surgical Technology - AAS														C

Preliminary
Recommendations

Information Technology Cluster

03/28/2019

Career Workforce Academy by Location

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Secondary Courses													
Intro to Coding	VC	C	C	C	C	C	C	C	C				
Mobile Apps & Security	VC	VC	VC	VC	VCE		VC	C	VC				
Computer Programming I - Java	VC	C	C	C			VC	C	C	R	E		
Advanced Programming - Java	VC	C	C	C			VC	C	C	R			
HTML													
IT Essentials I	VC	VC	VC	C			VC	C	VC	R	E		
IT Essentials II	VC	VC	VC	C			VC	C	VC	R	E		
Cisco I	VC	VC	VC	C			VC	VC	VC	R	E		
Cisco II	VC	VC	VC	C				VC	VC	R	E		
Cisco III		VC	VC	M				C	C	R	E		
Cisco IV		VC	VC	M						R	E		
Web Design		C				C				R			
Web Development						C				R			
Security Course (Future Course)										R			
Post-Secondary Courses													
NDSCS													
CIS 101 Computer Literacy										C-R	C	C	
CIS 128 IT Essentials I										C-R			
CIS 129 IT Essentials II										C-R			
CIS 164 Networking Fundamentals I										C-R		C	
CIS 165 Networking Fundamentals II										C-R		C	
CIS 180 HTML and CSS										C-R		C	
CIS 181 Web Authoring Software										C-R		C	
CIS 182 Image Editing Software										C-R		C	
CIS 197 Internship										C-R		C	
CIS 212 Microsoft Windows Operating System Client										C-R			
CIS 215 Implementing a Microsoft Windows Server										C-R			
CIS 216 Implementing a Microsoft Windows Network										C-R			
CIS 220 Operating Systems (Unix)										C-R		C	
CIS 232 Graphics Design										C-R		C	
CIS 241 IT Forensics I										C-R			
CIS 242 IT Forensics II										C-R			
CIS 244 Web Server Management										C-R			
CIS 267 Intermediate Networking I										C-R			
CIS 268 Intermediate Networking II										C-R			
CIS 279 Security Awareness and Policy										C-R		C	
CIS 280 Fundamentals of Network Security I										C-R			
CIS 282 Computer System Security										C-R			
CSCI 116 Business Use of Computers										C-R		C	
CSCI 160 Computer Science I										C-R		C	
CSCI 230 Web Database I (ASP/PHP)										C-R		C	
M/State Moorhead													
CPTR 1001 Introduction To Programming and Scripting													C
CPTR 1106 Microcomputer Databases													C
CPTR 1108 CISCO I													C

Preliminary Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)													
E = Expanded offering (future) R = Recommended offering													
CPTR 1110 Visual Basic Program I													C
CPTR 1115 COBOL Programming													C
CPTR 1118 CISCO II													C
CPTR 1122 Microcomputer Maintenance													C
CPTR 1129 RPG Programming													C
CPTR 1170 Web Engineering I													C
CPTR 1178 Robotics													C
CPTR 2000 Mobile Application Development													C
CPTR 2200 CISCO III													C
CPTR 2208 CISCO IV													C
CPTR 2210 Database Report Generation													C
CPTR 2224 Linux I													C
CPTR 2230 Structured Query Language													C
CPTR 2234 Linux II													C
CPTR 2236 Network Security													C
CPTR 2238 Database Integration													C
CPTR 2240 Database Administration													C
CPTR 2242 Java Programming													C
CPTR 2245 Enterprise Network Technologies													C
CPTR 2250 IT Supervised Occupational Experience													C
CPTR 2260 Advanced Structured Query Language													C
CPTR 2272 Network Operating Systems													C
CPTR 2275 Data Analytics													C
CPTR 2294 Internship													C
CPTR 2296 Topics in Computers													C
CSCI 1110 Informatics													C
CSCI 1121 Computer Science I													C
CSCI 1122 Computer Science II													C
CSEC 2204 Managing Directory Services													C
CSEC 2210 Security Breaches and Countermeasures													C
CSEC 2212 Web Security													C
CSEC 2214 Topics in Network Security													C
CSEC 2228 Network Defense													C
CVNP 2212													C
Post-Secondary Programs													
NDSCS													
IT Forensics and Security - Certificate										C-R			
Information Technology Support - Certificate										C-R			
Information Systems Administrator - AAS										C-R			
Web Design - Certificate										C-R		C	
Web Developer - AAS										C-R		C	
Technical Studies													
Technical Studies - Certificate, Diploma, AAS										C-R		C	
M/State Moorhead													
Cisco Networking - Certificate													C
Computer Programming - AAS													C
Information Technology - AS													C
Information Technology - Database Administration - AAS													C
Network Administration and Security - AAS													C
Network Security - Certificate													C

Preliminary
Recommendations

Manufacturing - Engineering Cluster

03/28/2019

Career Workforce Academy by Location													
Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Secondary Course Courses													
Metals I									C				
Metals II									C				
Welding I	VC	VC	VC	VC	VCE	C	VC	VC	VC	R	E		
Welding I	VC	VC	VC	VC	VCE	C	VC	VC	VC	R	E		
Automated Manufacturing I	VC	VC	VC	C	VCE		VC	VC	VC	R	E		
Automated Manufacturing II	VC	VC	VC	C	VCE		VC	VC	VC	R	E		
Automated Manufacturing III	VC	VC	VC	C	VCE		VC	VC	VC	R			
Intro to Engineering (PLTW)		C	C	C		C		C	C	R			
Principles of Engineering (PLTW)		C	C	C		C		C	C	R			
Digital Electronics (PLTW)									C	R			
Post-Secondary Courses													
NDSCS													
Manufacturing/Welding Classes													
MFGT 101 Robotics I										C-R		C	
MFGT 110 Industrial Shop Practices										C-R	C-R	C	
MFGT 123 Fabrication Methods I										C-R	C-R	C	
MFGT 135 Basic Metallurgy										C-R		C	
MFGT 137 Print Reading I										C-R		C	
MFGT 140 Fabrication Methods II										C-R		C	
MFGT 141 Print Reading II										C-R		C	
WELD 151 Welding Theory I										C-R		C	
WELD 152 Welding Theory II										C-R		C	
WELD 153 Welding Lab I										C-R		C	
WELD 154 Welding Lab II										C-R		C	
WELD 201 Welding Theory III										C-R		C	
WELD 202 Welding Theory IV										C-R		C	
WELD 211 Welding Lab III										C-R		C	
WELD 212 Welding Lab VI										C-R		C	
Robotics Classes													
RAMT 137 Print Reading, Drafting & Safety										R		C	
MFGT 110 Industrial Shop Practices										C-R	C-R	C	
Robotics Classes - TBD													
M/State Moorhead													
ENGR 2210 Engineering Mechanics I													C
ENGR 2220 Engineering Mechanics II													C
ENGR 2230 Mechanics of Materials													C
MATH 1134 Calculus I													C
MATH 1135 Calculus II													C
MATH 2231 Calculus III													C
MATH 2259 Differential Equations													C
PHYS 1412 University Physics II													C

Preliminary Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
Post-Secondary Programs													
NDSCS													
Precision Machining - Certificate, AAS													C
Robotics, Automation & Mechatronics (RAMT) - AAS													C
Welding - Certificate, AAS													C
Technical Studies													
Technical Studies - Certificate, Diploma, AAS										C-R			C
M/State Moorhead													
Drafting and 3D Technologies - Diploma													C
Drafting and 3D Technologies - AAS													C
Engineering - AS													C

Preliminary
Recommendations

Transportation Cluster

03/28/2019

Career Workforce Academy by Location

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Secondary Courses													
Aviation IA	VC	VC	VC	VC	VCE	VCE	VC	C	VC				
Aviation IB	VC	VC	VC	VC	VCE	VCE	VC	C	VC				
Aviation II	VC	VC	VC	VC	VCE	VCE	VC	C	VC				
Automotive I	VCE	VCE	VCE	C	VCE	VCE	VCE	VCE	VCE				
Automotive II	VCE	VCE	VCE	C	VCE	VCE	VCE	VCE	VCE				
Diesel I								C-M		M	R-E		
Diesel II								C-M		M	R-E		
Recreational Engines I	VCE	VCE	VCE	VCE	VCE	C	VCE	VCE	C				
Recreational Engines II	VCE	VCE	VCE	VCE	VCE	C	VCE	VCE	C				
UAS Introduction										R	R-E		
Post-Secondary Courses													
NDSCS													
Auto Body Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
Automotive Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
AUTO 133 Power Trains I											R	C	
AUTO 134 Power Trains II											R	C	
Diesel Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
DTEC 135 Medium/Heavy Duty Brakes										R	R	C	
DTEC 125 Intro to Heavy Duty Drive Sys										R	R	C	
Powersports Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
PST - TBD											R	C	
UAS Classes													
UAS 111 Intro to UAS										R	R	C	
UAS 112 UAS Pilot Certification										R	R	C	
UAS 121 UAS Advanced Data Collection										R		C	
UAS 122 UAS Photography and Videography										R		C	
UAS 132 Advanced UAS Flight										R		C	
Technical Studies													
Technical Studies - Certificate, Diploma, AAS										C-R		C	
M/State Moorhead													
AMST 1101 Automotive Equipment Fundamentals													C
AMST 1102 Alignment and Suspension I													C
AMST 1105 Brakes I													C
AMST 1110 Batteries, Starting and Charging Systems													C
AMST 1111 Automotive Electronics													C
AMST 1122 Engines I													C
AMST 1126 Engines II													C
AMST 1132 Drivetrains I													C
AMST 1136 Drivetrains II													C

Preliminary Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor-head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
AMST 2201 Alignment and Suspension II													C
AMST 2206 Body Electrical and Mechanical I													C
AMST 2210 Body Electrical and Mechanical II													C
AMST 2211 Exhaust Analysis and Fuel Systems													C
AMST 2214 Electronic Powertrain Control I													C
AMST 2218 Electronic Powertrain Control II													C
AMST 2220 Ignition Systems													C
AMST 2225 Brakes II													C
AMST 2233 Automatic Transmissions I													C
AMST 2237 Automatic Transmissions II													C
AMST 2240 Heating, Ventilation and Air Conditioning													C
BIOL 1107 Environmental Science Issues													C
COMM 1120 Introduction to Public Speaking													C
CPTR 1100 Fund Computer Concepts													C
DCNH 2210 Mobile Hydraulics													C
DCNH 2218 CNH (Case New Holland) Supervised Occupati													C
DCNH 2238 Transmissions and Drive Systems													C
DCNH 2242 Advanced Engines and Fuel Systems													C
DCNK 1116 CNH (Case New Holland) Supervised Occupati													C
DCNK 1118 CNH (Case New Holland) Supervised Occupati													C
DSET 1100 Diesel Equipment Fundamentals													C
DSET 1101 Software Systems in Transportation													C
DSET 1106 Fuel Systems													C
DSET 1110 Power Train I													C
DSET 1112 Hydraulics I													C
DSET 1114 Vehicle Brakes													C
DSET 1124 Diesel Shop Management													C
DSET 1130 Trans Elec/Start/Charge													C
DSET 1132 Introduction to Engine Theory													C
DSET 1134 Introduction to Engines													C
DSET 1144 Electrical Troubleshooting													C
DSET 2204 Advanced Electrical and Emission Systems													C
DSET 2206 Electronic Controls													C
DSET 2210 Mobile Hydraulics													C
DSET 2214 Suspension and Alignment													C
DSET 2218 Advanced Fuels													C
DSET 2220 Internship													C
DSET 2238 Transmissions & Drive Systems													C
DSET 2242 Advanced Engines and Fuel Systems													C
ENGL 1101 College Writing													C
TRNS 1112 Heating Ventilation A/C													C

Preliminary
Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
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Post-Secondary Programs													
NDSCS													
Auto Body Repair & Refinishing Tech - AAS												C	
Automotive Technology - AAS												C	
Powersports Technology - Certificate & AAS												C	
Diesel Technology - AAS												C	
John Deere Tech - AAS												C	
Caterpillar Dealer Service Technician - AAS												C	
Unmanned Aircraft Systems (UAS) - Certificate										R		C	
M/State Moorhead													
Automotive Service Technology - AAS													C
Automotive Service Technology - Diploma													C
Diesel Equipment Technology - AAS													C
Diesel Equipment Technology - Diploma													C

Preliminary
Recommendations

Arts & Communications Cluster

03/28/2019

Career Workforce Academy by Location

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Secondary Course Courses													
Photography I		C	C	C				C	C				
Photography II		C	C	C				C	C				
DigiTools I						C							
DigiTools II						C							
Communications Tech		C	C	C									
Graphics Communication								C	C				
News Media													
Broadcasting								C	C				
TV Production						C							
Publications								C	C				
Performing Arts		C	C	C				C	C				
Visual Arts courses		C	C	C				C	C				
Post-Secondary Course Courses													
NDSCS													
Performing Arts													
MUSC 101 Music Appreciation										R		C	
MUSC 101 Fundamentals of Music										R		C	
MUSC 207 History of Rock and Roll										C-R		C	
Communication													
COMM 110 Fundamentals of Public Speaking										C-R		C	
COMM 212 Interpersonal Communication										R		C	
COMM 216 Intercultural Communication										R		C	
M/State Moorhead													
ASL 1111 American Sign Language and Deaf Culture I													C
ASL 1112 American Sign Language and Deaf Culture II													C
ASL 1113 American Sign Language and Deaf Culture III													C
ASL 1114 American Sign Language and Deaf Culture IV													C
ASLM 1110 Introduction to Medical Interpreting													C
ASLM 1111 Ethical Decision Making for Medical Interpreters													C
ASLM 1112 Medical Signs													C
ASLM 1113 Special Topics in the Field of Medical Interpretin													C
ASLM 1114 Introduction to Mental Health Interpreting													C
COMM 2230 Intercultural Communication													C
GDTC 1100 Macintosh Production Processes													C
GDTC 1105 Adobe Photoshop I													C
GDTC 1113 Design and Layout I													C
GDTC 1115 Design and Layout II													C
GDTC 1120 Adobe InDesign I													C
GDTC 1124 Interactive Design I													C
GDTC 1126 Digital Photography													C
GDTC 1135 Adobe Illustrator I													C
GDTC 1150 Process Printing Theory													C

Preliminary Recommendations

Academic Offerings													
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E = Expanded offering (future) R = Recommended offering	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor- head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
GDTC 2120 Adobe InDesign II													C
GDTC 2205 Adobe Photoshop II													C
GDTC 2212 Design and Layout III													C
GDTC 2224 Interactive Design II													C
GDTC 2230 Design Portfolio													C
GDTC 2245 Adobe Illustrator II													C
GDTC 2250 Design Campaigns													C
GDTC 2258 Graphic Design Prof Practice													C
GDTC 2278 Digital Preflight													C
HLTH 1110 Introduction to Anatomy and Physiology													C
HLTH 1116 Medical Terminology													C
Post-Secondary Programs													
NDSCS													
Liberal Arts - General - AA, AS										C-R		C	
Liberal Arts - Music - AA										R		C	
M/State Moorhead													
American Sign Language Studies - Certificate													C
Graphic Design Technology - AAS													C
Graphic Design Technology - Diploma													C
Sign Language Interpreter - Medical - Certificate													C

Preliminary
Recommendations

Liberal Arts, Transfer and General Education Cluster

03/28/2019

Career Workforce Academy by Location													
Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Secondary Course Courses													
English IV													
Foreign Language													
Psychology													
Mathematics													
Ramp Up - (Science of Success)?													
Sociology													
Sciences													
Post-Secondary Courses													
NDSCS													
Academic Services (Developmental)													
ASC 060 English Language and Grammar Skills										C-R		C	
ASC 067 English as a Second Language										C-R		C	
ASC 82 effective Reading										C-R		C	
ASC 84 Critical Reading										C-R		C	
ASC 86 College Writing Prep I										C-R		C	
ASC 87 College Writing Prep II										C-R		C	
ASC 88 Composition Lab										C-R		C	
ASC 90 Math Prep										C-R	C	C	
ASC 91 Algebra Prep I										C-R	C	C	
ASC 92 Algebra Prep II										C-R	C	C	
ASC 93 Algebra Prep III										C-R	C	C	
English, Communication, & Performing Arts													
COM 110 Fundamentals of Public Speaking										C-R	C	C	
ENGL 110 College Composition I										C-R	C	C	
ENGL 120 College Composition II										C-R	C	C	
ENGL 240 World Literature Masterpieces										C-R		C	
MUSC 207 History of Rock and Roll Music										C-R		C	
Mathematics and Science Classes													
BIOL 111 Concepts of Biology/Lab										C-R		C	
BIOL 150/L General Biology I/Lab										C-R	C	C	
BIOL 151/L General Biology II/Lab										C-R	C	C	
BIOL 220/L Anatomy & Physiology I/Lab										C-R	C	C	
BIOL 221/L Anatomy & Physiology II/Lab										C-R	C	C	
CHEM 121/L General Chemistry I/Lab										C-R	C	C	
CHEM 122/L General Chemistry II/Lab										C-R	C	C	
BOTE 108 Business Math										C-R		C	
MATH 103 College Algebra										C-R	C	C	
MATH 105 Trigonometry										C-R	C	C	
MATH 130 Technical Math										C-R		C	
MATH 132 Technical Algebra I										C-R		C	
MATH 136 Technical Trigonometry										C-R		C	
MATH 210 Elementary Statistics										C-R	C	C	
MICR 202/L Introductory Microbiology										C-R		C	
PHYS 211/L College Physics I										C-R		C	
Social & Behavioral Sciences													
CJ 160 The Legal System										C-R		C	
CJ 201 Introduction to Criminal Justice										C-R		C	
CJ 232 Administration of Justice										C-R		C	

Preliminary Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
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CJ 297 Internship: Field Studies										C-R		C	
CJ 297 CJ Internship										C-R		C	
ECON 105 Elements of Economics										C-R	C	C	
ECON 201 Principles of Microeconomics										C-R		C	
ECON 202 Principles of Macroeconomics										C-R		C	
HIST 103 United States History To 1877										C-R		C	
HIST 104 United States History Since 1877										C-R		C	
PHIL 210 Ethics										C-R		C	
POLS 115 American Government										C-R		C	
POLS 115 State and Local Government										C-R		C	
PSYC 100 Human Relations in Organizations										C-R		C	
PSYC 111 Introduction to Psychology										C-R		C	
PSYC 230 Educational Psychology										C-R		C	
PSYC 250 Developmental Psychology										C-R		C	
PSYC 270 Abnormal Psychology										C-R		C	
RELS 203 World Religions										C-R		C	
SOC 110 Introduction to Sociology										C-R		C	
SOC 115 Social Problems										C-R		C	
SOC 221 Minority Relations										C-R		C	
M/State Moorhead													
ACCT 1108 Business Math and Calculators													C
ACCT 2210 Managerial Accounting													C
ACCT 2211 Financial Accounting I													C
ACCT 2212 Financial Accounting II													C
ACCT 2213 Managerial Accounting													C
ACCT 2215 Computerized Acct App													C
ACCT 2255 Income Tax-Individual													C
ART 1107 Foundations of Art, 2-D													C
ART 1108 Foundations of Art, 3-D													C
ART 1110 Introduction to Art													C
ART 1111 Drawing I													C
ART 1112 Painting I													C
ART 1117 Printmaking I													C
ART 1118 Watercolor I													C
ART 1121 World of Art I													C
ART 1122 World of Art II													C
ART 1124 American Art													C
ART 1140 Handbuilt Ceramics													C
ART 2111 Drawing II													C
ART 2112 Painting II													C
ART 2114 Photographic Art I													C
ART 2115 Introduction to Digital Photography													C
ART 2116 Mixed Media I													C
ART 2201 Foundations on Digital Imaging													C
ART 2260 Art, Portfolio Design and Professional Development													C
ART 2261 Art, Portfolio Design and Professional Development Internsh													C
ART 2999 AFA-Visual Art Capstone Exhibition													C
BIOL 1107 Environmental Science Issues													C
BIOL 1108 Environmental Science Issues Lab													C
BIOL 1115 Introduction to Biotechnology													C
BIOL 1122 General Biology I													C
BIOL 1123 General Biology II													C

Preliminary Recommendations

Academic Offerings													
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BIOL 1152 Food Science													C
BIOL 1170 Essentials of Human Anatomy and Physiology													C
BIOL 2010 General Ecology													C
BIOL 2202 Principles of Nutrition													C
BIOL 2220 General Microbiology													C
BIOL 2240 Genetics													C
BIOL 2260 Human Anatomy and Physiology I													C
BIOL 2261 Human Anatomy and Physiology I Lab													C
BIOL 2262 Human Anatomy and Physiology II													C
BIOL 2263 Human Anatomy and Physiology II Lab													C
BIOL 2267 Medical Microbiology													C
BIOL 2268 Medical Microbiology Lab													C
BIOL 1104 Biology of Human Concerns													C
BUS 1120 Spreadsheet & Database Concepts													C
BUS 1146 Personal Finance													C
BUS 2150 Legal Environment of Business													C
BUS 2204 Principles of Management													C
BUS 2206 Principles of Marketing													C
CHEM 1100 Fundamental Concepts of Chemistry													C
CHEM 1101 Principles of General Chemistry													C
CHEM 1111 General Inorganic Chemistry I													C
CHEM 1112 General Inorganic Chemistry II													C
CHEM 1115 Introduction to Organic and Biochemistry													C
CHIN 1101 Introduction to Chinese													C
COMM 1100 Power and Communications in Human Relations													C
COMM 1120 Introduction to Public Speaking													C
COMM 1130 Small Group Communication													C
COMM 1140 Interpersonal Communication													C
COMM 2220 Oral Interpretation													C
COMM 2230 Intercultural Communication													C
COMM 2240 Family Communication													C
COMM 2250 Gender Communication													C
COMM 2260 Computer-Mediated Communication													C
CPTR 1104 Introduction to Computer Technology													C
ECON 1150 Essentials of Economics													C
ECON 2210 Macroeconomics													C
ECON 2222 Microeconomics													C
ENGL 1101 College Writing													C
ENGL 1205 Writing About Literature													C
ENGL 1210 Writing About Current Issues													C
ENGL 1215 Professional and Technical Writing													C
ENGL 2234 Introduction to Literature: Short Stories													C
ENGL 2236 Introduction to Literature: Novel													C
ENGL 2238 Literature, Illness and the Human Condition													C
ENGL 2310 Introduction to Mythology													C
ENGL 2321 Women in Literature													C
ENGL 2325 Contemporary World Literature													C
ENGL 2372 Children's Literature													C
GEOG 1160 Global Physical Geography													C
HIST 1101 Western Civilization: Ancient to 1600s													C
HIST 1102 Western Civilization: 1600's to the Present													C
HIST 1113 Western Civilization: 20th Century													C
HIST 1201 American History to 1877													C

Preliminary
Recommendations

Academic Offerings													
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HIST 1202 American History since 1877													C
HIST 1600 History of Baseball													C
HIST 1700 The History of America's National Parks													C
HIST 2212 American History 19th Century													C
HIST 2213 American History: 20th Century													C
HIST 2220 Minnesota and Northern Plains History													C
HUM 1101 Introduction to the Humanities													C
HUM 1105 Religion in the Humanities													C
HUM 1201 Religion and the American Experience													C
HUM 2236 Technology in the Humanities													C
HUM 2301 Heroes, Moral and Cultural													C
MATH 1100 World of Math													C
MATH 1102 Finite Math													C
MATH 1114 College Algebra													C
MATH 1115 Functions/Trigonometry													C
MATH 1116 College Trigonometry													C
MATH 1118 Precalculus													C
MATH 1122 Applied Calculus and Linear Algebra													C
MATH 1134 Calculus I													C
MATH 1135 Calculus II													C
MATH 1207 Elementary Statistics													C
MATH 1213 Introduction to Statistics													C
MATH 2200 Principles of Arithmetic													C
MATH 2231 Calculus III													C
MATH 2257 Linear Algebra													C
MCOM 1122 Introduction to Mass Communication													C
MCOM 1142 Popular Culture and Social Media													C
MCS 2230 Multicultural America													C
MIS 1100 Business Computers													C
MUSC 1117 Beginning Class Guitar													C
MUSC 1160 Music Business: Creating and Promoting Music													C
MUSC 1191 Individual Piano Lessons													C
MUSC 2214 Class Piano II													C
PHIL 1130 Critical Thinking													C
PHIL 1200 Applied and Professional Ethics													C
PHIL 1201 Ethics													C
PHIL 1211 Introduction to Philosophy													C
PHIL 2220 Environmental Ethics													C
PHIL 2225 Bioethics													C
PHIL 2230 Existentialism													C
PHIL 2235 Symbolic Logic													C
PHIL 2240 Non-Western Philosophical Perspectives													C
PHIL 2300 Political and Social Philosophy													C
PHYS 1105 Fundamental Concepts in Physics													C
PHYS 1106 Fund of Physics - Mechanics													C
PHYS 1107 Physics of Music													C
PHYS 1108 Physics of Flight													C
PHYS 1120 Introduction to Astronomy													C
PHYS 1401 College Physics I													C
PHYS 1402 College Physics II													C
PHYS 1411 University Physics I													C
PHYS 1412 University Physics II													C
POLS 1120 American National Government													C

Preliminary
Recommendations

Academic Offerings														
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POLS 1130 State and Local Government														C
POLS 2204 Comparative Government														C
POLS 2206 Global Politics														C
POLS 2220 Introduction to Constitutional Theory														C
POLS 2310 Ideas and Ideologies														C
POLS 2950 Introduction to Social Research														C
PSYC 1101 Human Interaction														C
PSYC 1200 General Psychology														C
PSYC 1202 Introduction to Autism Spectrum Disorders														C
PSYC 1500 Positive Psychology														C
PSYC 2220 Abnormal Psychology														C
PSYC 2222 Lifespan Development														C
PSYC 2224 Social Psychology														C
PSYC 2226 Behavior and Environmental Management														C
PSYC 2230 Personality Psychology														C
PSYC 2302 Cross-Cultural Psychology														C
PSYC 2900 Statistics for Behavioral and Social Sciences														C
PSYC 2950 Introduction to Social Research														C
SOC 1111 Introduction to Sociology														C
SOC 1113 Social Problems														C
SOC 1114 Sociology Service Learning														C
SOC 2210 Social Deviance														C
SOC 2950 Introduction to Social Research														C
SPAN 2211 Intermediate Spanish I														C
SPAN 2212 Intermediate Spanish II														C
SW 2250 Introduction to Social Work/Social Welfare														C
THTR 1100 Introduction to Theatre														C
THTR 1105 Acting I														C
THTR 1120 Theatre Performance Practicum														C
THTR 1125 Theatre Technical Practicum														C
THTR 1130 Stage Make-up														C
THTR 1140 Stagecraft														C
THTR 2120 Script Analysis														C
THTR 2130 Design for the Stage														C
WMST 1136 Global Perspectives of Women														C

Preliminary
Recommendations

Academic Offerings														
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Post-Secondary Programs														
NDSCS														
Liberal Arts - AA, AS														
Agriculture Transfer													C	
Biotechnology Transfer													C	
Business Administration Transfer													C	
Chemistry Transfer													C	
Chiropractic Transfer													C	
Clinical Laboratory Science Transfer													C	
Computer Science Transfer											C-R		C	
Criminal Justice Transfer											C-R		C	
Dental Transfer													C	
Early Childhood Education Transfer													C	
Education Transfer													C	
Engineering Transfer													C	
General Liberal Arts Transfer											C-R		C	
Health, Physical Ed & Recreation Transfer													C	
Law Transfer													C	
Management Information Systems Transfer											C-R		C	
Mathematics Transfer													C	
Medical Transfer													C	
Music Transfer													C	
Natural Science Transfer													C	
Nursing Transfer													C	
Optometry Transfer													C	
Paralegal Transfer													C	
Pharmacy Transfer													C	
Physical Science Transfer													C	
Psychology Transfer													C	
Social Work Transfer													C	
Wildlife Management Transfer													C	
M/State Moorhead														
Accounting Transfer Pathway - AS														C
Associate of Arts (AA) Degree														C
Associate of Arts Degree: Social Science Emphasis - AA														C
Biology Transfer Pathway - AS														C
Business Transfer Pathway - AS														C
History Transfer Pathway - AA														C
Individualized Studies - AAS														C
Political Science Transfer Pathway - AA														C
Psychology Transfer Pathway - AA														C
Theatre Transfer Pathway														C

Preliminary
Recommendations

THE CAREER WORKFORCE ACADEMY

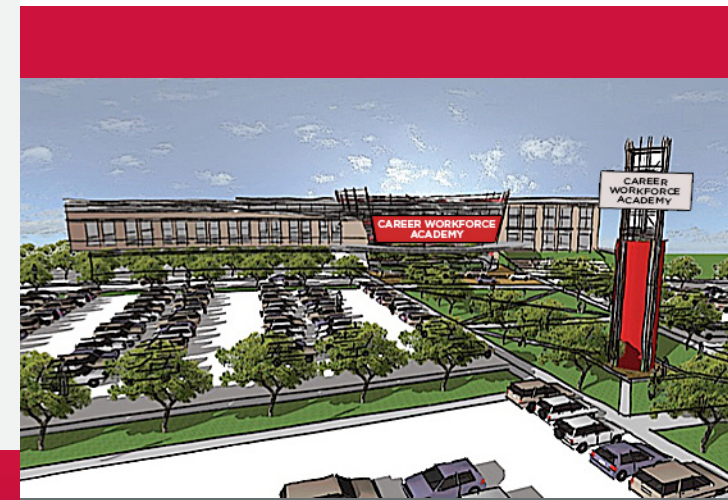
Designed as a public private/partnership that will provide all Cass County K-14 students, incumbent workforce and new immigrants a curriculum to prepare them for successful careers. The Academy will help alleviate long-term workforce shortage in our region to help our communities continue to grow and thrive.



Central Cass School District



CAREER WORKFORCE ACADEMY



THE WHY

- ◆ The Fargo-Moorhead metropolitan area is the largest and fastest growing area in North Dakota.
- ◆ K-12 enrollment projections indicate significant increases in the near future.
- ◆ The workforce in the region is the largest and most diverse. There is a consistent demand for trained and educated employees.

CONTACT INFORMATION:

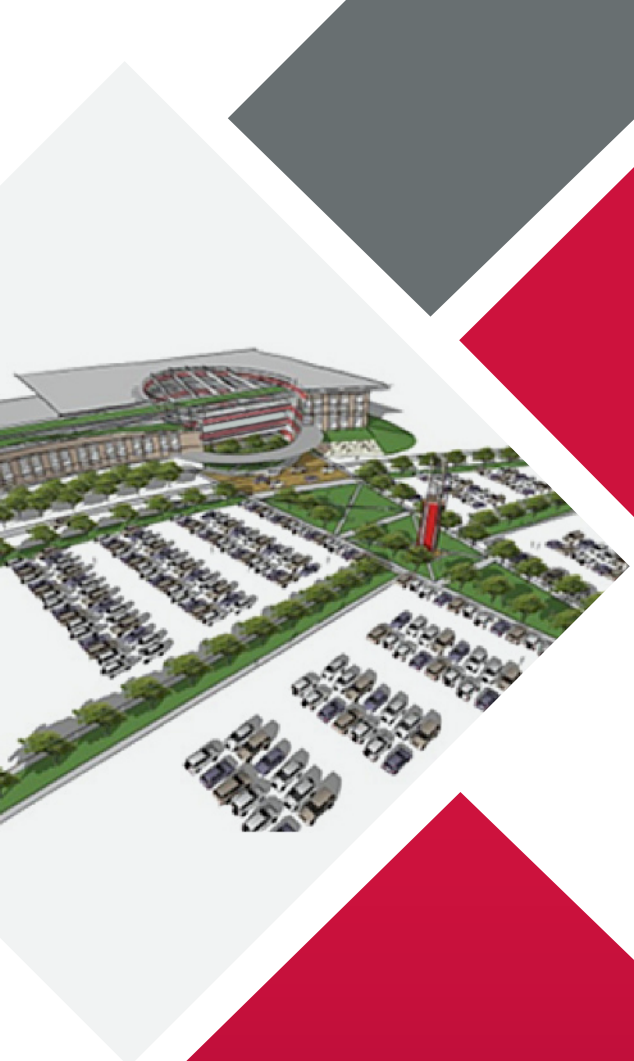
Denise Jonas

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Fargo Public Schools
West Fargo Public Schools
Central Cass School District
Northern Cass School District
North Dakota State College of Science



THE WHAT

The Career Workforce Academy will:

- ◆ Provide exposure to multiple career paths for all levels of K-14 students.
- ◆ Present more opportunities for students to sample and experiment with a variety of careers.
- ◆ Create opportunity for those interested in a technical degree.
- ◆ Create a path for incumbent workers and new Americans for a new career.
- ◆ Provide appropriate facilities and equipment for hands-on career training.
- ◆ Focus on the region's workforce and employer needs.

The Career Workforce Academy will provide opportunities for the following demographic groups:

- ◆ Career Awareness – Elementary Students
- ◆ Career Exploration – Junior High Students
- ◆ Career Pathways – High School Students
- ◆ Career Development – College Students
- ◆ Career Training – Incumbent Workforce and New Americans

THE HOW

How will we serve those students attending the Career Workforce Academy? By developing curriculum for levels K-14 that will ultimately lead to additional associate degrees in the region. There will be an initial focus on these sectors: allied health, manufacturing, agriculture, information technology, construction, transportation, business, arts and communication. In addition, emphasis will be placed on project-based learning, specialized student support and services, identifying the unique needs of students, and continual support for student success.

THE WHO


A consortium was formed including K-12 school districts, two-year colleges, and business and industry with a common goal to combine resources to pursue the Career Workforce Academy. The K-12 members are, Fargo, West Fargo, Northern Cass, Central Cass, NDSCS, business and industry partners from sectors such as allied health, manufacturing, agriculture, information technology, construction, transportation, business, arts and communication.

PROJECT BUDGET & LOCATION

The project is designed as a public private/partnership with a \$30 million capital budget. (\$15 million private and \$15 million public) The academy will offer programs that will provide K-14 students, the incumbent workforce and new immigrants a curriculum to prepare them for successful careers. The program is also dependent on strong partnerships with business/industry leaders from the region that work together to enhance curriculum with relevant learning for successful outcomes.

SITE LOCATION PREFERENCE:

- ◆ 15 acres are available (10 acres donated) which will provide room phased growth.
- ◆ Investment in new facility will allow opportunity for "world-class" programming.
- ◆ The stature of CTE in Cass County will enhance visibility and identity.
- ◆ Allows ease of access and proximity of for K-12 schools.
- ◆ Provides neutral ground for K-12 district students.
- ◆ Positions communities for long-term economic growth.
- ◆ Garners support from business.



CAREER WORKFORCE ACADEMY

STRATEGIC PLAN

MAY 9, 2018

CAREER WORKFORCE ACADEMY

The Career Workforce Academy is a program initiated by the North Dakota State College of Science (NDSCS) and the school districts of Fargo, West Fargo, Northern Cass, Central Cass, Kindred and Moorhead. It is designed to deliver workforce training and education that is more responsive to changing employer and student needs. This plan will expand and enhance our ability to attract, retain and grow businesses and develop opportunities for student success in the workforce.

What Is An Academy?

A career academy is a type of school that can provide K-14 students, incumbent workers* and new Americans a curriculum to prepare them for a successful career through:

- Career path education.
- Curriculum that matches their identified career path.
- Strong partnerships that work together to enhance curriculum with relevant learning for successful outcomes.

Academy Vision Statement

The Academy will build the awareness of multiple career clusters and the skills necessary to be career ready through experiential education, classroom training, student connection to business and industry, and career path counseling. It will present real-time opportunities and real-life experiences by responding and adapting quickly to industry demands and student interest. Success will depend on engaged student interest and on the collaboration of all stakeholders.

*For the purpose of this report, an incumbent worker is defined as a person who was previously employed and is seeking training for a new job or is currently employed and is seeking further training.

ACADEMIES

What Experts Say About Career Academies

“The number of career academies has been expanding rapidly, in part because academies have been found to be effective, and in part because they embody ideas promoted by several major high school reform movements. ... [R]igorous evaluations have found that individual career academies within larger high schools help improve students’ academic performance, prepare them for postsecondary education, and boost earnings after high school.”¹

Career Academies Supported By Research

The number of career academies nationwide has grown dramatically, one reason being a conceptual grounding in strong research and evaluation. In 2008, MDRC, a prominent education policy research organization, released a study entitled, “Career Academies: Long Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood.”² The researchers employed a random assignment research design in a group of nine high schools across the United States to determine the effect of attending a career academy. Their findings included the following:

- An average increase in earnings of 11 percent. The effect was concentrated among young men; in fact, an increase of 17 percent was seen in this demographic.
- An increase in the percentage of individuals living independently with children and a spouse or partner after leaving secondary education.
- An improvement in attendance, increased academic course taking, and an increased likelihood of graduating on time.
- An increase in the level of interpersonal support students experienced during high school from career academy staff.
- An increase in student participation in career awareness and work-based learning.

Very recent academic literature on career technical education (CTE) continues to highlight the many positive outcomes from CTE offerings. A research report in the April 2018 American Educational Research Journal concludes, “By providing CTE coursework, especially later in a student’s high school career, relevance between coursework and long-term goals is potentially increased, thereby increasing the odds of high school graduation. ... This lends support to the idea of further expansion of CTE coursework in high school.”³

What Students Say About Career Academies

“The academy has taught me a lot of life skills. Before, it was about me coming home just to do homework and now it’s about me working towards something.”¹

“It really helps us figure out our future and what we want to do.”

“The job shadow experience has really given me a better perspective on what I want to achieve in life. [With] the academy you take that extra step to see if it’s really something you might want to do.”¹

¹“Career Academies: A Proven Strategy to Prepare High School Students for College and Careers.” Career Academy Support Network, 2010, University of California, Berkeley, Graduate School of Education.

²“Career Academies: Investing in Students, the Workforce and Career Technical Education,” May 2013, National Association of State Directors of Career Technical Education (NASDCTEc).

³“Linking the Timing of Career and Technical Education Course taking With High School Dropout and College-Going Behavior,” April 2018, American Educational Research Journal, M. Gottfried & J. Plasman, University of California, Santa Barbara.

STRATEGIC PLANNING PROCESS

In order to gain vital information for the development of the Cass-Clay Career Workforce Academy (Academy) strategic plan, a planning committee commissioned Flint Group to take the lead in developing a strategic plan for the Academy. Flint personnel conducted several discovery sessions with Academy stakeholders and reviewed documents from other programs around the United States. During the review of other programs, a wide variety of approaches were found in how strategic plans were developed and in what they included. Each had objectives tied to local needs; there were significant differences in the number of stakeholders, and the size of the region and the number of districts they serve. In other words, no two plans were alike. Despite the differences, a number of best practices were discovered and utilized in this plan.

Discovery Methodology:

- Reviewed documents from prior meetings pertaining to the Academy.
- Conducted and facilitated input sessions including members of the following stakeholder groups around the theme “pathways to success”:
 - K-12 counselors, career advisors and administrators
 - NDSCS faculty
 - Business and industry representatives

Note: Two sessions were held with K-12 group and two with the NDSCS group. Business and industry representatives were interviewed one on one. After these separate sessions, a combined session was held with representatives from all three stakeholder groups.
- Interviewed select directors of other academies across the country.
- Researched and reviewed documents relevant to effective academies in other states.
- Researched best practices at national associations and centers focused on career academies.
- Met with Academy steering committee to review findings and present directional draft of plan and garner further comment and input.
- Considerable time was spent discussing the challenges involving curriculum development and scheduling, two areas that will be the most challenging due to the number of school districts participating in the Academy.

Planning participants

“Students don’t know what they don’t know.”

“We always want more exposure for students to explore careers ... whether it’s diesel, auto or tech careers. We want more people to know what’s available because we want to see if there is interest in our industry.”

“We have craft workers who have a Bachelor of Science or a Bachelor of Fine Arts in the field making \$80,000-85,000 a year, or \$130,000 if they’re an operator; they went to four years of college and they’re not using their degree the way they thought they were going to, but they’re in a career they enjoy. So, if we can eliminate the cost and time of a four-year degree – where people end up in a career that doesn’t require a four-year degree – that would be success.”

KEY DISCUSSION POINTS

Stakeholders identified essential elements that will be prevalent throughout the strategic plan. These elements are vital in understanding stakeholders' needs and maintaining strong partnerships.

- Collaboration – between all stakeholders on each initiative of the plan.
- Communication – ongoing discussion on all aspects of the Academy, including changing perceptions, outcome assessments, stakeholder issues and successes.
- Transparency – full disclosure to all stakeholders.
- Resources – upfront disclosure on resources needed to achieve goals.

KEY ELEMENTS

As part of the input sessions, stakeholders identified essential elements that will serve as the cornerstones of the strategic plan. These elements are vital in understanding stakeholders' needs and maintaining strong partnerships. They include the following:

- Collaboration – between all stakeholders on each initiative of the plan.
- Communication – ongoing discussion on all aspects of the Academy, including changing perceptions, outcome assessments, stakeholder issues and successes.
- Transparency – full disclosure to all stakeholders.
- Resources – upfront disclosure on resources needed to achieve goals

During the discovery process a vision statement, value statements and expected outcomes for the Academy were developed. It was also agreed there should be assessment and evaluation standards to determine gain toward desired outcomes.

Academy Value Statements

The Academy concept is:

- A proven model in responding to the needs of industries and students.
- Effective in improving outcomes for students during and after high school.

The Academy will:

- Provide exposure to multiple career paths for all levels of K-14 students.
- Present more opportunities for students to sample and experiment within a variety of careers.
- Create opportunity for those interested in a technical degree.
- Create a path for incumbent workers and new Americans for a new career.
- Provide appropriate facilities and equipment for hands-on career training.
- Focus on the region's workforce and employer needs.

Stakeholders identified 10 critical issues that must be addressed for realizing the vision for the Academy:

1. Changing perceptions
2. Buy-in at all levels
3. Ownership/governance/decision-making process
4. Curriculum development
5. Synchronized calendars and schedules between all schools
6. Trained instructors/qualifications for HS staff/teachers
7. Grow too fast/start too small
8. Who's paying for this? Taxpayers' response
9. Transportation
10. Safety

The Academy Will Help Gain Respect For Multiple Career Pathways

- Parents will be informed about diverse careers and be encouraged to start having earlier conversations with their children about career path options.
- We will inspire a change in the mindset of parents currently working in technical and trade careers who in the past might have said to their children, “I don’t want you to do what I do; I don’t want you to work with your hands,” and push them into “white-collar work” and getting a four-year college education.
- Students will want to learn about and develop skills in technical and trade careers and will gain respect for having a career in these high-demand, high-wage fields.
- Counselors, teachers and parents will not just be focused on, “Where are you going to college?” but instead, “What are you interested in going to college for?”

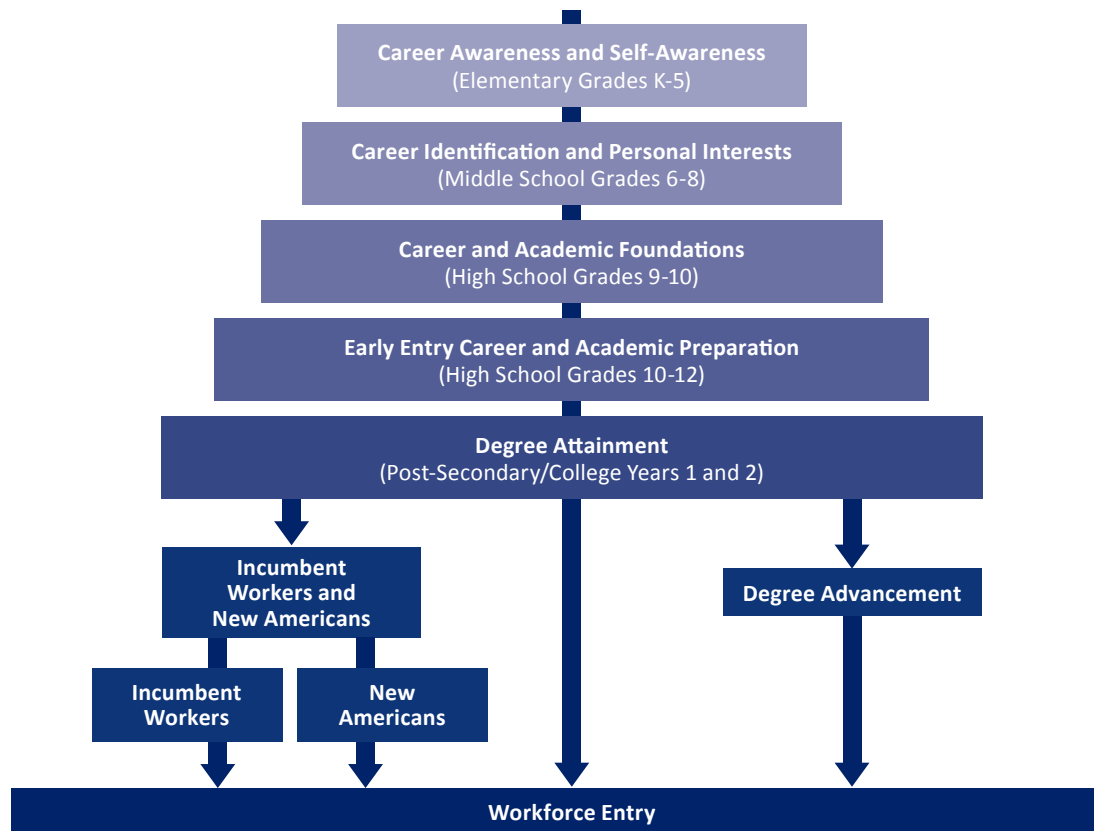
CAREER PATHWAY MODEL

The following graphic illustrates the collaborative career pathway model that guided the initial development of the Academy. In this model, K-12 schools promote comprehensive career awareness in elementary grades, a career exploration component that includes a four-year rolling career path planning that begins in middle school, and applied/hands-on career preparation in high school. Post-secondary schools collaborate with the high schools to facilitate classes focused on preparation for technical and trade careers; college credit is available for high school students taking these classes. Business partners are an integral part of the Academy by working with K-12 schools to provide career awareness and exploration opportunities in the elementary and middle school grades, and work/learning opportunities for high school students. Business and industry are sectors of the community that anticipate seeing trained workers exiting the Academy prepared to either join the workforce or continue their education.



Initial Academy Concept

The idea of an academy began with a plan that has evolved over the past two years. Career awareness, exploration and preparation were initially included and are still included as key elements guiding the framing of the academy concept, as illustrated in the following graphic. These components have been associated with more or less distinct periods of learning: elementary school, middle school and high school/post-secondary, as illustrated in the graphic below. Career awareness and self-awareness in grades kindergarten through five; career identification and personal interests in middle school (grades six through eight); career and academic foundations in grades nine through 10 of high school; early entry career and academic preparation in grades 10 through 12; and attainment of a two-year or associate degree in post-secondary education. Incumbent workers and new Americans would also be given the same opportunity for career preparation/training as Academy high school students.

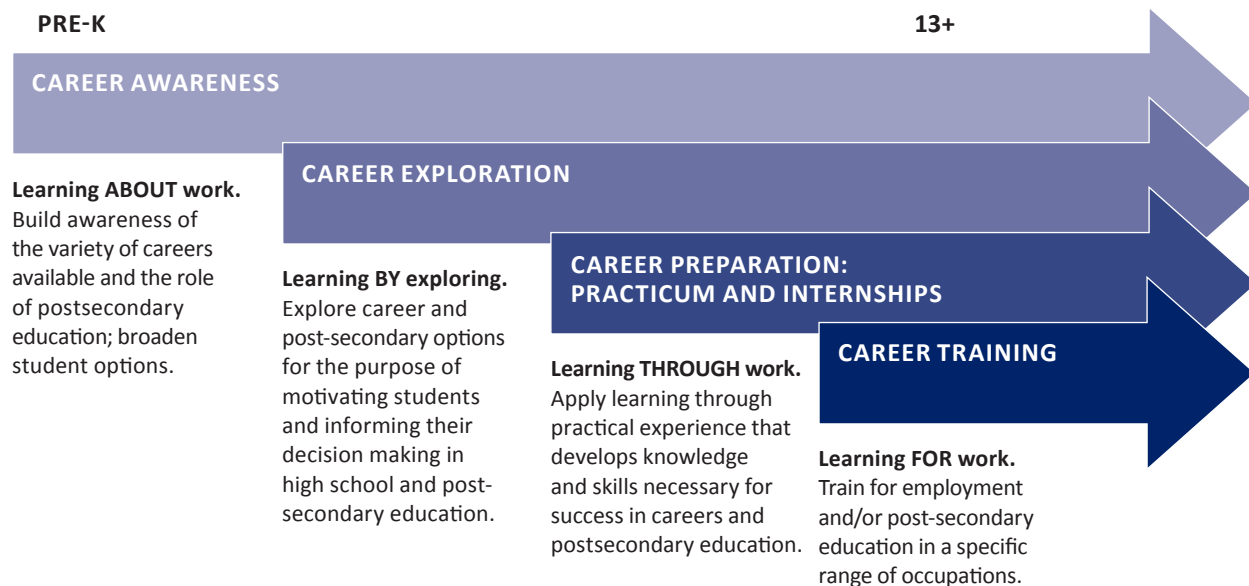


Academy Conceptual Framework

The Academy’s conceptual framework can be depicted with a diagram showing a continuum of career awareness and career exploration taking place throughout the K-12 educational experience. Developed by Linked Learning, the diagram below⁴ illustrates this continuum stretching from kindergarten into adulthood in four areas:

- Career awareness, where “Learning ABOUT work” begins at kindergarten and continues into adulthood. This aspect of the continuum is focused on broadening student career options by building awareness of the variety of careers available and the role of post-secondary education in the learning process.
- Career exploration, where middle school students are given “Learning ABOUT work” opportunities to explore career and post-secondary options. The purpose of career exploration is to motivate students and inform their decision-making through high school and beyond. This exploration component of the Academy will continue at every level of student participation and involvement.
- Career preparation, or “Learning THROUGH work,” begins in high school, where students apply what they are learning through practical experience. This hands-on experience helps them develop the knowledge and skills necessary for them to be successful in careers and post-secondary education. In addition to serving high school students, incumbent workers and new Americans are given the same opportunities in career preparation within the academy setting.
- Career training, where the Academy offers high school and post-secondary students “Learning FOR work” opportunities that might include classroom and non-classroom training, such as apprenticeships, internships and clinical experiences. These opportunities will also be available to incumbent workers and new Americans.

Academy Learning Continuum



⁴“Work-Based Learning in Linked Learning: Definitions, Outcomes, and Quality Criteria, Field Review Draft,” Nov. 2012, Linked Learning, Sacramento, CA.

Conceptual Framework: K-14 Focus

The K-14 aspect of the Academy will be centered on the concept of workplace- or experience-based learning, similar to work-based learning defined by Linked Learning as follows:

“An instructional strategy that is essential in preparing all students for success in postsecondary education and careers ... The primary purposes of work-based learning are to expose students to future options and provide opportunities for skill development and mastery over time. All work-based learning experiences involve interactions with industry or community professionals that are linked to school-based instruction. These learning experiences are intentionally designed to help students extend and deepen classroom work and to make progress toward learning outcomes that are difficult to achieve through classroom or standard project-based learning alone. The term ‘work-based’ does not mean the experience must occur at a workplace or during the standard ‘work day.’”⁵

Conceptual Framework: Incumbent Workers and New Americans Focus

We will follow an experience-based learning concept for K-14 students but will include an additional component focused on incumbent workers and new Americans. This aspect of the Academy will have access to the same instructional opportunities in a true multi-use educational facility.

While incumbent workers and new Americans may not have benefited from career awareness and exploration offered in their elementary and middle school experience, they will be given these opportunities during their career preparation and training offered by the Academy.

Plan Purpose

- Provide clarity for all partners
- Increase alignment among all partners
- Identify and define strategic initiatives and goals to accomplish desired outcomes
- Determine key performance indicators

Focus Areas

- Employer engagement
- Student (motivation, interest, value-added)
- Perceptions of technical and trade careers
- Educational system

Major Benefactors

- Students
- Business and industry

Enablers/Facilitators

- K-12
- Two-year colleges
- Business and industry
- Other secondary educational institutions

⁵“Work-Based Learning in Linked Learning: Definitions, Outcomes, and Quality Criteria, Field Review Draft,” Nov. 2012, Linked Learning, Sacramento, CA.

ACADEMY STRATEGIC PLAN

The strategic planning process was designed to elevate our region in the complementary fields of workforce training and education, hoping to become ever more responsive to changing employer and student needs. This plan will expand and enhance the community's ability to attract, retain, and grow businesses and develop educational opportunities to support student success in the workforce. It will also enhance the region's ability to address the economic and workforce shifts well into the future.

Specifically, the strategic plan for the Academy will:

- Ensure education and economic competitiveness.
 - Strengthen business and industry relationships with K-14.
 - Maximize employer engagement in the development of career clusters and relevant programs that will lead to jobs and careers.
 - Enhance education and training at all levels.
 - Provide multiple options for students to move into a career pathway.
 - Provide Choice Ready opportunities for K-12 students to assist students to be workforce ready.*
-

IN SUMMARY

The academy concept has a proven track record of effectiveness for introducing students to multiple career paths – matching their skill sets and interests to job opportunities. It has become the best-tested strategy and accepted principles to prepare students for life after high school. Additionally, by including incumbent workers and new Americans, the Academy will benefit the business and industry community by having these groups access the same career preparation and training opportunities as Academy high school students.

*https://www.nd.gov/dpi/uploads/1494/ND_ConsolidatedStatePlan_4302018.pdf

Strategic Plan and Goal Statements

Strategic Initiative 1

Identify and implement an academy governance and management structure to ensure long-term success. Setting the proper structure from the start will be critical. Letting the numerous stakeholders have representation and a voice will be important, but having a defined organizational structure and a strong management team will give clear direction and help avoid conflicts.

Goal 1. Career Workforce Academy facility ownership will require appropriate approvals and will be determined in the future.

Goal 2. Academy will be operated and managed by NDSCS.

Goal 3. Develop leadership model.

Goal 4. Develop model for oversight of strategic initiatives; include assessment and evaluation plan.

Goal 5. Academy will be responsive to stakeholders' needs.

Goal 6. Engage parents.

Strategic Initiative 2

Increase early childhood career awareness. An important finding in recent research on career decision-making is that young people have a limited view of many of the careers not requiring a four-year college degree. A central underpinning of our strategic plan is that young people need to be introduced to a variety of careers and learn about work much earlier in their education. This starts at the elementary level through educational programs and direct exposure and interaction with real jobs.

Goal 1. Create engaged exposure to a variety of careers.

Goal 2. Develop well-rounded career awareness education.

Goal 3. Engage business and industry.

Goal 4. Gain teacher support.

Goal 5. Engage parents of elementary school students.

Strategic Initiative 3

Prepare middle school students for career pathway decisions through exploration. Students will be given the opportunity to explore career options that will motivate them to learn about careers, the skills needed in each field of work and the educational options to fulfill a career path. This level gives students a more active role in selecting a career pathway that matches their interests through interaction.

Goal 1. Identify student strengths and interests.

Goal 2. Begin five-year career path planning.

Goal 3. Engage business and industry.

Goal 4. Gain teacher support.

Goal 5. Engage parents of middle school students.

Strategic Initiative 4

Invest high school students in career path preparation and participation. Career preparation marks a shift in the continuum, moving students into more active experiential programs for career readiness. It includes more interaction with professionals from businesses and the community and is designed to give students supervised, practical hands-on application through the Academy. This will assist students to be workforce ready, as described in the North Dakota Every Student Succeeds Act (ESSA) State Plan.

Goal 1. Match curriculum with skill set.

Goal 2. Provide direct exposure to chosen career(s), i.e., doing, internships, hands-on (Career Ready Practices).

Goal 3. Engage business and industry, i.e., technical assessment/industry credentialing, workplace learning experience, co-curricular activities, 21st century skills, dual-credit courses.

Goal 4. Gain teacher support.

Goal 5. Engage parents of high school students.

Strategic Initiative 5

Create opportunity for incumbent workers and new Americans to enter workforce.

The Academy will provide an additional way to increase the Cass-Clay workforce and help meet the employee recruitment needs of business and industry. The Academy will be active in training and retraining individuals looking to enter the workforce in specific job skill areas. This will not be a separate program, but one that is combined with regular classes.

Goal 1. Determine skill sets and interests.

Goal 2. Assess gaps in learning and skills.

Goal 3. Align training/education to meet employer needs.

Goal 4. Provide training, curriculum, etc.

Strategic Initiative 6

Curriculum development and implementation. Critical to achieving the outcomes of the Academy is alignment of the curriculum to the interests of the students and the skill sets necessary to fulfill the needs of business and industry. Curriculum will be designed around identified cluster groups and must meet state educational and/or certification requirements. It will also need to be fluid and have the ability to adjust to changing skill sets and career shifts.

Goal 1. In collaboration with business and industry, identify clusters and skills required.

Goal 2. Match curriculum with cluster group needs.

Goal 3. Align to North Dakota and Minnesota school standards.

Goal 4. Meet accreditation requirements.

Goal 5. Teacher professional development and certification.

Goal 6. Align with North Dakota and Minnesota CTE objectives.

Goal 7. Create new programs or utilize existing program for expanding curriculum needs.

Goal 8. Identify faculty to teach curriculum.

Goal 9. Determine location of course offerings (what is going to be offered where).

Goal 10. Increase support for dual credit/early college models.

Goal 11. Imbed “soft skills” across curriculum.

Strategic Initiative 7

Align scheduling. Due to the number of school districts, this is one of the most difficult initiatives to administer. Flexibility and willingness to alter current set practices will be needed to accommodate the needs of students and the availability of instructors and classrooms. Many elements will have to be considered at the high school level to achieve success, including transportation, extracurricular activities and maintaining graduation standards. For incumbent workers and new Americans, language and current employment could be obstacles.

Goal 1. Influence policy for more K-12 hands-on training.

Goal 2. Hire scheduling coordinator to facilitate Academy class schedules.

Goal 3. Identify existing class schedules for CTE-related courses at participating high schools and post-secondary institutions.

Goal 4. Align and coordinate schedules of high schools and Academy.

Goal 5. Develop transportation plan for class and extracurricular activities.

Goal 6. Streamline and facilitate process for registration, credits, etc.

Goal 7. Engage parents at all levels.

Strategic Initiative 8

Strengthen connections. A key intention of the Academy is to strengthen the connections between businesses and the education stakeholders, and among districts, two-year colleges and other institutions. Stronger relationships will help develop seamless transitions through the continuum and help align the desired outcomes. They will also help increase the confidence level of all stakeholders.

Goal 1. Build relationships of and assurances for state and local educational systems on value and outcomes of Academy.

Goal 2. Become true partners with business and industry in mission and vision of Academy by sector-based engagement and development efforts in order to identify with and respond to workforce challenges and needs.

Goal 3. Participate in local economic development planning, workforce activities and initiatives to understand and communicate role of Academy and build trust.

Goal 4. Better understand and identify the roles of K-12 districts, adult education, CTE, NDSCS and other contributing entities as a way to build stronger relationships.

Goal 5. Engage with students at appropriate level, allowing them to be a “partner” in the development of programs.

Goal 6. Engage parents, allowing them to be a “partner” in giving feedback to the Academy.

Strategic Initiative 9

Educate stakeholders, partners, influencers and community of the value of the Academy. Creating an atmosphere of support for our role in developing careers in technical and trade careers will be an important objective for us. This includes changing perceptions apparent at multiple levels; parents, students, and even counselors and teachers themselves have been found to promote the four-year degree as the “ideal” career choice, discounting a two-year degree mostly due to lack of awareness of its benefits. To realize desired Academy outcomes, intentional efforts will be developed and implemented to change inaccurate or limited perceptions of technical and trade careers. In addition, education of policy makers will help in changing and developing policy that allows the Academy build successful programs.

Goal 1. Review current perceptions and raise awareness of career opportunities.

Goal 2. Change policies and regulations that are roadblocks in developing a smooth path for students to receive necessary education from career awareness through training and degree and/or certificate achievement.

Goal 3. Develop and implement comprehensive communications plan to build awareness of Academy and influence perceptions of technical and trade degrees.

Goal 4. Identify and engage community and state partners, organizations, and networks in support of Academy.

Strategic Initiatives and Action Steps

Strategic Initiative 1

Identify and implement an academy governance and management structure to ensure longterm success. Setting the proper structure from the start will be critical. Letting the numerous stakeholders have representation and a voice will be important, but having a defined organizational structure and a strong management team will give clear direction and help avoid conflicts.

Goal 1. Career Workforce Academy facility ownership will require appropriate approvals and will be determined in the future.

- 1.1 The intent of ownership will be a private non-profit that has full responsibility for differed maintenance.
- 1.2 Funding for the facility will consist of participation from stakeholders.

Goal 2. Academy will be operated and managed by NDSCS.

- 2.1 A fiscal agent will be appointed to oversee financial aspects of Academy operations.
- 2.2 NDSCS will reach out to other institutions for input and advisement on all aspects of operations.
- 2.3 Operational funding will come from revenue generated by the Academy.
 - Student and user fees.
 - Participation in operational funding from other educational entities may come through different sources and in different forms (fees, equipment, personnel).

Goal 3. Develop leadership model.

- 3.1 Appoint Academy leadership team under NDSCS (dean, program director, financial manager, etc.) to implement strategic plan.
 - Seek input and approval from SBHE, North Dakota Department for Career and Technical Education and local school districts.
- 3.2 Create an advisory board made up of K-12, two-year colleges, and business and industry representatives from workforce partner program to help guide the Academy.

Goal 4. Develop model for oversight of strategic initiatives; include assessment and evaluation plan.

- 4.1 Implement coordinator position to oversee the interaction among the Academy program models at all levels including K-12 and post-secondary.
 - Initiate proper training; set goals and timeline.
- 4.2 Develop plan for continual review and update of plan, allowing to address improvements, new initiatives and needs as they change.
 - Set up yearly strategic planning review.
 - Utilize advisory board for feedback and input.

Goal 5. Academy will be responsive to stakeholders' needs.

- 5.1 Implement evaluation system of intended Academy outcomes.
- 5.2 Conduct annual community review.
- 5.3 Conduct student exit reviews.

Goal 6. Engage parents.

- 6.1 Provide regular opportunities for Academy personnel to meet with parents.

Strategic Initiative 2

Increase early childhood career awareness.

An important finding in recent research on career decision-making is that young people have a limited view of many of the careers not requiring a four-year college degree. A central underpinning of our strategic plan is that young people need to be introduced to a variety of careers and learn about work much earlier in their education. This starts at the elementary level through educational programs and direct exposure and interaction with real jobs.



All elementary students will receive a well-rounded career awareness education, through hands-on activity, in which they will be exposed to the different career clusters and be able to identify personal careers of interest while demonstrating a mindset of curiosity and reasoning.

Goal 1. Create engaged exposure to a variety of careers.

- 1.1 Appoint and train career awareness coordinator.
- 1.2 Introduce Academy concepts at teacher meetings.
- 1.3 Academy career awareness coordinator and staff facilitate professional development for teachers.

Goal 2. Develop well-rounded career awareness education.

- 2.1 Organize K-8 task force of teachers/administrators to develop program components for career awareness education.
 - Identify the most effective models and strategies for early career exposure and align funding.
 - Develop materials to illustrate career attributes, i.e., videos, demonstrations, class projects, hands-on activities.
- 2.2 Influence policy shifts to allow time for career education.

Goal 3. Engage business and industry.

- 3.1 Form advisory committee to include employers and teachers.
 - Prioritize opportunities for students to hear from industry, i.e., career fairs, speaker engagements, visit parents at work, workplace tours.

Goal 4. Gain teacher support.

- 4.1 Academy has regular engagement with teachers/school administrators.
- 4.2 Assess student awareness of career options.
- 4.3 Assess teacher support.
- 4.4 Teachers will have credentials required to offer professional certifications.

Goal 5. Engage parents of elementary school students.

- 5.1 Provide regular opportunities for Academy personnel to meet with parents.

Strategic Initiative 3

Prepare middle school students for career pathway decisions through exploration.

Students will be given the opportunity to explore career options that will motivate them to learn about careers, the skills needed in each field of work and the educational options to fulfill a career path. This level gives students a more active role in selecting a career pathway that matches their interests through interaction.



All middle school students will be given the opportunity to identify their strengths and skills and explore real life work experiences through planned project-based learning from industry speakers, demonstrations and field trips that culminate in the understanding of connecting classroom education with the job skills necessary to pursue real life careers.

Goal 1. Identify student strengths and interests.

- 1.1 Use testing and other academic assessments to determine strengths.
- 1.2 Relate skills and interests to careers.

Goal 2. Begin five-year career path planning.

- 2.1 Determine strategies for preparing students for college and career assessments.
- 2.2 Offer career exploration fair, field trips, videos, and speakers.

Goal 3. Engage business and industry.

- 3.1 Work with businesses to develop and keep program current.
- 3.2 Promote to other businesses and industries that might be interested.
- 3.3 Form advisory committee to include employers and teachers.

Goal 4. Gain teacher support.

- 4.1 Academy will have regular engagement with teachers/ school administrators.
- 4.2 Assess student awareness of career options.
- 4.3 Assess teacher support.
- 4.4 Teachers have individual learning plans by grade level.
- 4.5 Need teacher assessment training (are there standards to follow?).
- 4.6 Teachers will have the required professional certifications.

Goal 5. Engage parents of middle school students.

- 5.1 Provide regular opportunities for Academy personnel to meet with parents.

Strategic Initiative 4

Invest high school students in career path preparation and participation.

Career preparation marks a shift in the continuum, moving students into more active experiential programs for career readiness. It includes more interaction with professionals from businesses and the community and is designed to give students supervised, practical hands-on application through the Academy.



All high school students will be personally invested in their career path and be able to make informed educational decisions through job shadows, internships with hands-on experience and counseling to be college and/or career ready.

Goal 1. Match curriculum with skill set.

- 1.1 Review and follow individual learning plans that were put into place.
- 1.2 Students meet with school counselor to discuss progress plan towards graduation.
- 1.3 Ninth graders participate in freshman Academy transition course.
- 1.4 Introduce Academy summer classes.

Goal 2. Provide direct exposure to chosen career(s), i.e., doing, hands-on, internships, etc.

- 2.1 Organize high school task force of teachers/administrators/counselors to develop curriculum components.
- 2.2 Offer career fairs, field trips, speakers to explore and discuss career options.
- 2.3 Look at options for internships, apprenticeships, job shadowing, mentorships.

Goal 3. Engage business and industry.

- 3.1 Continue meetings with business and industry to get their buy-in and make sure it is relevant to what their needs are.
- 3.2 Form advisory committee to include employers and teachers.

Goal 4. Gain teacher support.

- 4.1 Continue workshops and guidelines for teachers.
- 4.2 Teachers will have the required professional certifications.
- 4.3 Organize teacher round tables for learning and training.

Goal 5. Engage parents of high school students.

- 5.1 Provide regular opportunities for Academy personnel to meet with parents.

Strategic Initiative 5

Create opportunity for incumbent workers and new Americans to enter workforce.

The Academy will provide an additional way to increase the workforce in Cass and Clay counties and help meet the employee recruitment needs of business and industry. The Academy will be active in training and retraining individuals looking to enter the workforce in specific job skill areas. This will not be a separate program, but one that is combined with regular classes.

Goal 1. Determine skill sets and interests.

- 1.1 Assess skill sets by testing.
- 1.2 Assess interests by exploring options.

Goal 2. Assess gaps in learning and skills.

- 2.1 Assess student learning needs prior to attending classes.
- 2.2 Assess additional training needs at the end of classes.

Goal 3. Align training/education to meet employer needs.

- 3.1 Create plan.

Goal 4. Provide training, curriculum, etc.

Strategic Initiative 6

Curriculum development and implementation.

Critical to achieving the outcomes of the Academy is alignment of the curriculum to the interests of the students and the skill sets necessary to fulfill the needs of business and industry. Curriculum will be designed around identified cluster groups and must meet state educational and/or certification requirements. It will also need to be fluid and have the ability to adjust to changing skill sets and career shifts.

Goal 1. In collaboration with business and industry, identify clusters and skills required.

- 1.1 Confirm initial clusters.
 - Manufacturing and STEM
 - Information technology
 - Health science pathway
 - Architecture and construction
 - Ag and transportation
 - Business and hospitality
- 1.2 Set up a curriculum team from all three stakeholder groups.
 - Align curriculum to defined employer-based, student interest and career pathways.
 - Develop curriculum to attain clear pathway to graduation and/or industry third-party credentials.
- 1.3 Utilize employer-driven work-based learning to assure on-the-job competencies.
- 1.4 Understand employer skill needs and gaps to ensure proper development.
 - Conduct study to determine employer needs.
 - Identify how work-based learning may differ among industries and adjust accordingly.
 - Research current knowledge about existing industry-adopted examples to support ongoing conversation with employers.
- 1.5 Document best practices of employer-driven models.
 - Seek curriculum sharing from other programs.
- 1.6 Reduce duplication among training providers.
 - Encourage collaboration between colleges and other training providers.

Goal 2. Match curriculum with cluster group needs.

- 2.1 Review existing curriculum.
 - Determine areas where curriculum is insufficient.
- 2.2 Incorporate best practices into curriculum development efforts.
- 2.3 Identify skills deemed essential for employment by cluster.
 - Develop effective practices.
 - Provide plan for implementation of training.
 - Create a rubric to measure performance outcomes.
 - Engage student employees to assess level of effective training.

Goal 3. Align to North Dakota and Minnesota school standards.

- 3.1** Curriculum team will lead this effort, assigning tasks to groups at the three academic levels, i.e., K-6, middle school, high school.
- Work with North Dakota Department of Career and Technical Education.
 - Work with North Dakota Department of Public Instruction.
 - Work with Minnesota Department of Education.

Goal 4. Meet accreditation requirements.

- 4.1** Identify accrediting bodies for appropriate discipline, including K-12 and post-secondary.
- 4.2** Establish protocol and procedures to ensure accreditation is being monitored.

Goal 5. Teacher professional development and certification.

- 5.1** Meet credentials for professional certificates.
- 5.2** Assessment training.
- 5.3** Guidelines or workshops for working with businesses.

Goal 6. Align with North Dakota and Minnesota CTE objectives.

- 6.1** High school curriculum team will lead effort to assure CTE objectives are aligned with Academy curriculum.
- Work with North Dakota Department of Career and Technical Education.
 - Work with Minnesota Department of Education's CTE unit.

Goal 7. Create new programs or utilize existing program for expanding curriculum needs.

- 7.1** Determine what the ongoing and expanding needs are.
- 7.2** Determine if there is enough student interest to continue to expand curriculum.

Goal 8. Identify faculty to teach curriculum.

- 8.1** Identify the teacher persona that is needed for these positions.
- 8.2** Identify teachers that match the persona.

Goal 9. Determine location of course offerings (what is going to be offered where).

- 9.1** Set up committee to develop matrix on existing course offerings.
- Work with curriculum team to develop policy on distribution of courses.
 - Establish procedure to regularly review course distribution.

Goal 10. Increase support for dual credit/early college models.

10.1 Set up committee to review and monitor dual credit/early college models.

10.2 Coordinate with post-secondary institutions and governing bodies.

- Suggest policy changes as needed at K-12 and post-secondary level.
- Oversee various registration procedures.

Goal 11. Imbed “soft skills” across curriculum.

11.1 Set up committee to determine what “soft skills” are needed and feasible.

- Review best practices and academic literature.

11.2 Determine processes to implement the introduction of soft skills into curriculum.

- Monitor process in which soft skills are incorporated across curriculum.

Strategic Initiative 7

Align scheduling.

Due to the number of school districts, this is one of the most difficult initiatives to administer. Flexibility and willingness to alter current set practices will be needed to accommodate the needs of students and the availability of instructors and classrooms. Many elements will have to be considered at the high school level to achieve success, including transportation, extracurricular activities and maintaining graduation standards. For incumbent workers and new Americans, language and current employment could be obstacles.

Goal 1. Influence policy for more K-12 hands-on training.

- 1.1** Hold ongoing meetings with top leadership of the Academy, participating school districts and participating post-secondary institutions.
- 1.2** Involve all Academy-related advisory groups, curriculum committees and other groups.
- 1.3** Hold period public meetings conveying the work and goals of the Academy.

Goal 2. Hire scheduling coordinator to facilitate Academy class schedules.

- 2.1** Establish scheduling committee with representation from all participating high schools and post-secondary institutions.
- 2.2** Scheduling coordinator will maintain regular contact and interaction with classroom schedulers at all participating high schools and post-secondary institutions.
- 2.3** Scheduling coordinator will identify data sources and how to access and use data needed to develop Academy schedule.

Goal 3. Identify existing class schedules for CTE-related courses at participating high schools and post-secondary institutions.

- 3.1** Academy class scheduler will develop process and data system in collaboration with school schedulers.
- 3.2** Academy class scheduler in cooperation with scheduling committee and curriculum committees will develop a process to prioritize CTE-related courses.

Goal 4. Align and coordinate schedules of high schools and Academy.

- 4.1** Using data acquired by Academy scheduler, the scheduler and scheduling committee will develop prototype of Academy schedule that works with class schedules at high schools and post-secondary institutions.
- 4.2** Academy director and Academy scheduler will prepare/aggregate/disseminate prototype of Academy schedule and relevant data in advance of meeting focused on scheduling.
- 4.3** Curriculum committee chairs, school schedulers and school leaders (or their representatives) will meet to review prototype of Academy schedule that works with class schedules at high schools and post-secondary institutions.
- 4.4** Academy scheduler will revise/amend Academy schedule based on input from meeting.

Goal 5. Develop transportation plan for class and extracurricular activities.

- 5.1** Academy director will assign transportation planning and oversight to staff with responsibility as Academy transportation coordinator.
- 5.2** Transportation coordinator will establish transportation committee including school district staff responsible for transportation/busing.
- 5.3** Transportation coordinator, with input from transportation committee, will develop plan to transport Academy students to and from schools.

Goal 6. Streamline and facilitate process for registration, credits, etc.

- 6.1** An Academy registration task force will be established to facilitate registration procedures among participating schools and post-secondary institutions.

Goal 7. Engage parents at all levels.

- 7.1** Provide regular opportunities for Academy personnel to meet with parents.
- 7.2** Hold annual public forums on Academy scheduling, registration and transportation.

Strategic Initiative 8

Strengthen connections.

A key intention of the Academy is to strengthen the connections between businesses and the education stakeholders, and among districts, two-year colleges and other institutions. Stronger relationships will help develop seamless transitions through the continuum and help align the desired outcomes. They will also help increase the confidence level of all stakeholders.

Goal 1. Build relationships of and assurances for state and local educational systems on value and outcomes of Academy.

- 1.1** Develop training for counselors at all levels to participate together to build relationships and assure consistent content messaging.
- 1.2** Ensure ongoing and consistent communications.
 - Share data across all systems.
- 1.3** Establish and approve priorities as they impact each educational partner.

Goal 2. Become true partners with business and industry in mission and vision of Academy by sector-based engagement and development efforts in order to identify with and respond to workforce challenges and needs.

- 2.1** Hire Academy business partner coach (works with the businesses and teachers to ensure needs are being met).
- 2.2** Engage business in the design and delivery of training programs.
 - Utilize industry subject matter experts.
 - Assure the ability to meet their needs in development of curriculum and instruction.
- 2.3** Develop outreach program.
 - Conduct meetings for businesses and education stakeholders to keep communication open.
 - Establish business and industry advisory group, including workforce organizations, i.e., chamber, GFMEDC, VPP, to assess business needs.
 - Document engagement concerns, solutions.
 - Be responsive and adaptive to the changing needs of employers.

Goal 3. Participate in local economic development planning, workforce activities and initiatives to understand and communicate role of Academy and build trust.

- 3.1** Adopt joint goals that will incentivize partner collaboration.
 - Identify responsibilities so educational systems have clear objective.

Goal 4. Better understand and identify the roles of K-12 districts, adult education, CTE, NDSCS and other contributing entities as a way to build stronger relationships.

Goal 5. Engage with students at appropriate level, allowing them to be a “partner” in the development of programs.

- 5.1 Assess students’ perceptions of the Academy and where it can be improved.
- 5.2 Find out what the student needs are and if there is an interest in the proposed curriculum.

Goal 6. Engage parents, allowing them to be a “partner” in giving feedback to the Academy.

- 6.1 Provide regular opportunities for Academy personnel to meet with parents.
- 6.2 Hold open house at Academy for parents.

Strategic Initiative 9

Educate stakeholders, partners, influencers and community of the value of the Academy.

Creating an atmosphere of support for our role in developing careers in technical and trade careers will be an important objective for us. This includes changing perceptions apparent at multiple levels; parents, students, and even counselors and teachers themselves have been found to promote the four-year degree as the “ideal” career choice, discounting a two-year degree mostly due to lack of awareness of its benefits. To realize desired Academy outcomes, intentional efforts will be developed and implemented to change inaccurate or limited perceptions of technical and trade careers. In addition, education of policy makers will help in changing and developing policy that allows the Academy build successful programs.

Goal 1. Review current perceptions and raise awareness of career opportunities

- 1.1** Conduct an assessment of the current understanding and perspectives to develop a baseline of knowledge gaps and misconceptions.
 - Utilize current research where available.
 - Parents’, students’ and counselors’ current perceptions are key to determining needed messaging.
- 1.2** Build factual background on advantages of expanding perceptions of career options and the success of the Academy approach.

Goal 2. Change policies and regulations that are roadblocks in developing a smooth path for students to receive necessary education from career awareness through training and degree and/or certificate achievement.

- 2.1** Develop comprehensive policy document on policies that impact the Academy, i.e., dual credits, scheduling for awareness education, scheduling for Academy attendance.
 - Build case and messaging for updating policies.
- 2.2** Understand regulations that hinder the system’s ability to move forward quickly to meet community and business partners’ needs.
- 2.3** Partner with key partners to advocate for necessary changes.

Goal 3. Develop and implement comprehensive communications plan to build awareness of Academy and influence perceptions of technical and trade degrees.

- 3.1** Identify target audiences and build database by category.
- 3.2** Develop key messages and construct message matrix by key audience categories.
 - Review all stakeholders’ messaging and speak as one voice.
- 3.3** Determine best vehicles for delivering messages.
- 3.4** Develop materials to promote Academy.
 - Materials will be audience-based.
 - Demonstrate ROI for business, community.

Goal 4. Identify and engage community and state partners, organizations, and networks in support of Academy.

- 4.1** Encourage and secure local government support.
- 4.2** Utilize existing support from work force advocates to help tell the Academy story, i.e., local and state chamber, GFMEDC, Department of Commerce, Valley Prosperity Partnership.
 - Arm them with key messaging and materials.
- 4.3** Make ambassadors of community-based organizations that are not part of the educational system but are educational in nature, i.e., DECA, FFA, Boy/Girl Scouts.
 - Engage their leadership in delivering a broader perspective on career exposure through exploration activities.

EVALUATING PROGRESS

An important part of any venture is the evaluation of all the strategic initiatives. This will help determine progress, what is working and what can be improved. The first step in any evaluation is to set goals and determine what key performance indicators (KPIs) will be most important in moving forward. A number of areas were discussed and many of them will be used in multiple strategic areas. The following KPIs have been identified as valuable in determining the success of the Academy.

- Results of existing standardized assessment measurements that have components related to Academy goals.
- Classroom time (hours) devoted to career awareness, exploration and preparation in K-12 settings.
- The number and quality of engagements between schools and business/industry.
- The number of high school students taking Academy coursework.
- The number of teachers participating in Academy class offerings.
- High school retention and graduation rates.
- High school graduates going on to two- and four-year colleges.
- High school graduates obtaining jobs in technical and trade careers right out of high school.
- The number of incumbent workers and new Americans in the trade and technology area through the Academy.
- Employment statistics from Cass and Clay Counties.
- Satisfaction ratings from students, school teachers, college faculty, administrators, parents and employers (ratings would be on a variety of relevant topics).
- Perception of two-year degrees among stakeholders.
- Perceived value of Academy among stakeholders.
- External academic accreditation reviews for both K-12 schools and post-secondary institutions.
- The findings from regular, ongoing program evaluation of Academy.

Advisory groups/committees

An important inclusion in the Cass-Clay Career Workforce Academy Strategic Plan is the notion of participation and transparency. This is based on the idea that an organization that involves actors, administrators and stakeholders from many diverse areas will function at an optimal level if the voices of the various groups can be represented in decision-making and allocation of effort and resources. This representation of participant views is demonstrated by the numerous advisory groups and committees described in the Academy Strategic Plan. Below, the various groups and committees identified in the Strategic Plan are enumerated with their membership noted.

Academy Steering Committee

Academy Leadership Team under NDSCS

Advisory board from K-12, two-year colleges, businesses and industry representatives

K-8 task force of teachers/administrators

Advisory committee of employers and teachers for K-8

Advisory committee of employers and teachers for middle school

High school task force of teachers/administrators/counselors for curriculum

Advisory committee of employers and teachers for high school

Curriculum team from all three stakeholder groups for overall K-12

Committee to develop matrix on existing course offerings

Committee to review and monitor dual credit/early college models

Committee to determine what “soft skills” are needed

Scheduling committee with representation from all participating high schools and post-secondary institutions

Transportation committee including school district staff responsible for transportation/busing

Registration task force

References and contributors

In the development of the Cass-Clay Workforce Academy Strategic Plan, background research included reviewing relevant topical information found in academic literature and at the websites of professional associations, think tanks, universities and K-12 schools/academies. Additional information was also acquired by communicating directly with individuals knowledgeable about academies in various parts of the country. Multiple telephone interviews were also conducted with business and industry leaders in the Cass-Clay community to gain further understanding of the local dimension and interest in the Academy.

Below are those organizations included in the research conducted in the production of the Academy Strategic Plan:

Bismarck Career Academy, Bismarck, ND
 CTE Academy, Sioux Falls, SD
 Linked Learning, Sacramento, CA
 The Academies of Nashville, Nashville, TN
 National Career Academy Coalition (NCAC), Nashville, TN
 North Dakota Department of Public Instruction
 Career Academy Support Network (CASN), Berkeley, CA
 Advance CTE, Silver Springs, MD
 Association for Career & Technical Education (ACTE), Alexandria, VA
 Career and Technical Education, Lake County Schools, FL
 Illinois Community College Board, Springfield, IL
 Metro Career Academy, Oklahoma City, OK

Business leaders representing the following:

FM Area Foundation
 First International Bank
 WCCO Belting
 Cardinal IG
 Intercept Corp
 Cass County Electric
 General Equipment
 Industrial Builders
 Matrix Properties
 McNeilus Steel
 Xcel Energy
 Midco

K-12 Participants in the Strategy Planning Input Groups

NDSCS Participants in the Strategy Planning Input Groups



MARCH 5, 2021 – 10:00 AM

Members of the North Dakota
HOUSE APPROPRIATIONS – EDUCATION AND ENVIRONMENT COMMITTEE

RE: Support for SB2019 – Dr. Denise Jonas
Director of Career and Technical Education

Thank you for the opportunity to provide written testimony in support of SB2019. Your “YES” vote is critical to the Department of Career and Technical Education to sustain current programming for career education, technical training, and workforce development. I also respectfully ask that you safeguard the \$45 million earmarked for Career Workforce Academies, as there are several regions ready to launch this proven model, along with consideration to restore funding for new and expanded programming, TrainND, and Adult Farm Management, as they will serve as supports to career and technical education in North Dakota.

As Cass County Director of Career and Technical Education, I am approached almost daily by business and industry inquiring about opportunities to connect with our K12 teachers and students. These requests are not limited to high school students, but extend to elementary and middle school learners. With our State’s low unemployment, workforce demands, and natural employee attrition, K12-business partnerships are viewed as a mechanism to create company awareness, expose students to future careers, and provide experiential learning.

In Cass County, we are pleased to offer a variety of career and technical education programs and pathways in our current K12 educational systems, yet in a 2018 Career Workforce Academy Program and Curriculum study, it revealed program gaps in agriculture education, construction, manufacturing, and transportation. In our region, there is also a growing demand in medical careers, information technology, transportation, and biomedical technologies influenced by Sanford Health, Microsoft, and Aldevron. Despite K12 efforts, schools are challenged to meet local school district demands, along with workforce demands, without collaborative efforts to scale, support, and grow opportunities through a hub for coordination and expanded learning such as the CWA.

Cass County Career Workforce Academy collaborative discussions began in 2016. Sparked by a shared vision to create a systemic pipeline; the CWA is a collective network of business partners, K-12 schools, post-secondary leaders, the cities of Fargo and West Fargo, the Cass County Commission, FM Economic Development, FMWF Chamber of Commerce, and local legislators. All driven to improve education, and the local and State’s economy.

Over the past five years, concerted efforts have moved a vision to action with these committed stakeholders:

- 2017-2018 - Phase I – Career Workforce Academy Strategic Plan complete (attached)
- 2018-2019 – Phase II - K-14 Program Priorities and Curriculum audit complete (attached)
- 2019-2020 - Fundraising, operational budget and governance planning to support Strategic Plan
- 2020-2021 – Phase III - architecture selection, design input, renderings, bids, and groundbreaking
- 2021-2022 – Phase IV – Build and program development for opening Fall 2022

As one of the fastest growing communities in North Dakota and serving as a diverse economic engine for the state, workforce development is critical Cass County. Manufacturing to information technology, agriculture to medical sciences, entrepreneurship to the trades, technical training is at the forefront of our discussions. Magnifying this need is projected regional growth, along with 8,000 jobs anticipated for the Fargo Diversion and Amazon alone. With this current need and anticipated demand, I respectfully ask for your support of SB2019 to leverage career and technical education programming and Career Workforce Academies to create a systemic workforce pipeline for the state and future of North Dakota!

Appropriations Committee
 North Dakota House of Representatives
 State Capitol Building
 600 East Boulevard Avenue
 Bismarck, ND 58505

March 5, 2021

Chairman and Members of the Committee,

The Minot Association of Builders would like to write to your committee today requesting support for Senate Bill 2019, which proposes significant funding for career and technical education. Funding for career and technical education will be instrumental in supporting the building industry in Minot as well as throughout North Dakota.

The workforce in North Dakota has been evolving and has hindered our industry as we see a loss of skills and knowledge required for building, remodeling, and maintaining homes. We have seen a trend away from students interested in careers in construction and related industries, and this trend is due in part to lack of proper education and training programs. The skilled labor shortage causes an increase in construction costs, which leads to a domino effect of slowed economic activity and revenue potential in our community and throughout our state.

Plans are in place for a CTE facility in Minot, and access to funding through Senate Bill 2019 has the potential to assist in developing and growing a much-needed workforce to support our building industry. This is a critical and ever-growing need.

We urge you to support Senate Bill 2019 to stimulate the economy in our great state of North Dakota.

Respectfully,

Erika Kelly
 MAB Executive Officer

Shane Lider
 MAB Board President



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Testimony of Kyle Martin

Executive Director

Technology Council of North Dakota

In Support of SB 2019

March 5, 2021

Chairman Monson and members of the House Appropriations Education and Environment Committee:

My name is Kyle Martin, executive director of the Technology Council of North Dakota (TechND). I am writing to voice support of SB 2019.

TechND was created in 2000 by North Dakota business, government and education leaders who recognized the need to strengthen the state's information technology infrastructure and reposition the state as a national leader in IT. The organization has since expanded its focus to include members from the technology industry as a whole. TechND has over 60 member organizations, with representatives from both the public and private sector.

As North Dakota weathers the COVID-19 pandemic, our reliance on technology has never been greater, compounding the need for a high-quality workforce ready to meet the technology challenges of tomorrow. By 2028, TechND anticipates 7,500 new and replacement technology workers will be needed in North Dakota. Career and technical education centers will be paramount to filling these positions by serving as a gateway to the technology sector by

providing critical skills training and exposing students to the endless career opportunities available within the technology sector.

Although North Dakota's economy has been historically strong, it has not been immune from COVID-19's economic impact. Unemployment in North Dakota as of November 2020 was 4.5 percent (up from 2.4 percent in November 2019). Nearly every industry has been impacted to an extent, resulting in career changes and layoffs. Technology-related careers provide workers with high wages, great benefits and flexibility. Career and technical education centers play a vital role in sparking the interest of tomorrow's technology workforce and providing them with skills they will utilize throughout their careers.

TechND supports the one-time funding of \$45 million for career and technical education centers through a competitive matching grant program. This is an opportunity for North Dakota to invest dollars today to build tomorrow's information technology workforce. Additionally, TechND would also ask the Senate Appropriations Committee to consider supporting the long-term costs of career and technical education centers through additional funding — the \$45 million bonding proposal does not include dollars to support operational costs for new centers. TechND also supports CTE's \$2 million request to restore funding back to TrainND. This program is critical to providing training for businesses and employees across North Dakota.

Since the launch of TechND's IT Career Awareness Program in 2009, CTE has been a strong partner in promoting careers to students and educators through the program. TechND and CTE have worked together to reach tens of thousands of students in dozens of communities statewide with technology education and career information.

We thank you for your support of technology education opportunities in the past and urge your support of SB 2019.



2400 47th Avenue South, Grand Forks, ND 58201 [Phone 701-787-4872](tel:701-787-4872) [Fax 701-787-4351](tel:701-787-4351) [Email gfactc@mygfschools.org](mailto:gfactc@mygfschools.org) [Website www.gfareactc.org](http://www.gfareactc.org)

March 3, 2021

Members of the House Appropriations Committee:

I correspond to share the impact that Career and Technical Education is having within the state of North Dakota and Grand Forks region. According to the 2020 Consolidated Annual Report, 23,007 students were enrolled in secondary CTE programs across the state (this compares to 21,880 in 2018). CTE students are completing coursework in program areas that are designed to meet our state's workforce needs in areas such as agriculture, health science, information technology, engineering, trades, and many others. Conversations with industries across the state continually highlight the pipeline shortage of future talent, and CTE programs is education's best example of working to meet that pipeline challenge.

Today's CTE has evolved from a limited number of vocational programs into a broad system that is constantly evolving due to the changing global economy and emerging workforce needs. Today's CTE provides students with core academic skills, job-specific technical skills, employability workplace values, career pathways, and career advancement. CTE is makes a positive impact for both the Grand Forks Public Schools and member schools of the Grand Forks Area Career & Technology Center by providing relevant learning experiences for students that align with their future career goals.

Our students are developing leadership skills through their active involvement in Career Technical Student Organizations such as FFA, DECA, Skills-USA, HOSA, FBLA, FCCLA, and TSA. CTE is partnering with post-secondary to align program offerings and expand dual credit opportunities for students. Through work-based learning opportunities, industry certifications, and collaboration with industry, students are provided a competitive advantage in preparing for their future career pathway.

SB2019 provides the critical financial support to support, and expand the availability of high-quality CTE programs to students across the state. The additions of dollars to support district's new and expanding programs, along with the cost to continue existing programs, is paramount to the enhancement of CTE within North Dakota. Now is the time to invest in our state's future workforce. I respectfully ask your support of SB2019, which supports the goals and objectives of Career & Technical Education, so we can continue to provide these important programs for our students.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eric Ripley".

Eric Ripley
Executive Director of CTE & Technology
Grand Forks Public Schools
Grand Forks Area Career & Technology Center

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March 5, 2021

Appropriations Committee – Education and Environment Division
North Dakota House of Representatives
State Capitol Building
600 East Boulevard Avenue
Bismarck, ND 58505

Chairman Monson and Members of the Committee,

Thank you for the opportunity to provide this written testimony. My name is Kim Schneider and I represent the North Dakota Association of Builders. Our home building industry is proud to support a growing North Dakota and we are fueled by the talents of workers including electricians, plumbers, masons, carpenters, and the many trades that make up the construction industry. Career and technical education is critical not only to our industry, but also provides a career path for our citizens that includes job security and high wages. Despite this, almost every one of our members struggles with attracting and retaining a skilled workforce.

North Dakotans are raised with a strong work ethic and we are grateful for the partnership with the state of North Dakota to provide more opportunities for career and technical education. We strongly believe this partnership not only provides the necessary skills for our workforce, but also a wonderful career opportunity that contributes to the high quality of life in North Dakota. SB 2019 supports our future workforce through the funding of career academy grants. These academies potentially would benefit students located in our local associations of Fargo, Grand Forks, Bismarck-Mandan, Minot, Dickinson, and Williston areas.

On behalf of the North Dakota Association of Builders and our 2,000 members across the state, we urge a Do Pass recommendation on SB 2019.

We appreciate the support and continued partnership,

Kim Schneider
Chief Executive Officer
North Dakota Association of Builders



SB 2019 Testimony

Specific to Discussions Regarding the Proposed Cass County Career Academy

Thomas D. Shorma – March 5th, 2021

Mr. Chairman and Members of the Committee, my name is Tom Shorma, and I am the CEO and President of WCCO Belting, Inc. We are a 66-yr old primary sector, family-owned, manufacturing company that today employs 300+ people at two locations. We manufacture custom rubber products and sell them annually to customers located in more than 20 countries.

I provide this written testimony for your consideration while representing many different private sector businesses in the Red River Valley who strongly support the creation of the Cass County Career Workforce Academy. This project is designed as a public / private partnership to assist with workforce challenges in crucial industries in ND. In fact, millions of dollars have already been pledged and paid by those private sector companies in support of its creation.

It should be noted that WCCO Belting, Inc., the business which I currently lead is in *Richland County*. Also, that I currently reside in Fargo which of course is in Cass County. Yes, I make the drive down from Fargo to our business in Wahpeton nearly every day. I do so while my children attend middle school and high school in Cass County.

WCCO Belting and the Shorma family support for the Career Workforce Academy is provided under unique circumstances of which I feel allows me to give a perspective that many others simply do not have. I say this because I speak from first-hand experience. Our various family-owned companies all located in Wahpeton have directly benefited by having a version of this same initiative in our community for the past 40+ years. Every year, NDSCS offers high school students' in Richland County exposure to and training for technical careers that are here in our state even before they graduate...just as is being proposed for Cass County. And ultimately, isn't that what this is all about -- helping the students better understand what kinds of careers exist here so that they can stay? Don't we all want to keep more of our own from leaving the state?

The proposed Career Academy for Cass County would offer programs for K-14 students, to the incumbent workforce and to new immigrants with a curriculum to prepare them for success. In the wake of the coronavirus pandemic and other current economic factors, retraining a workforce for careers in high demand sectors is increasingly important. It is also why we – as a family – have agreed to financially support the private / public partnership that has been established to create such a facility -- even though our business is not located in Cass County! This is because we know first-hand that it WORKS!

Since the business that I lead is a manufacturing company, please bear with me as I take just a minute to look at the need for a Career Training Academy in Cass County from another perspective. For many years we have all heard and have been talking about the national and regional shortage of a HIGH DEMAND / TECHNICALLY SKILLED workforce.

- What do you think of when you hear the term HIGH DEMAND / TECHNICALLY SKILLED workforce?
 - 2 yr. Trade Schools?
 - Jobs like electricians, plumbers, auto mechanics, diesel mechanics?

It is certainly true that there is a major shortage of workforce to fill those types of jobs. However, there is an often-forgotten category – at least with high school students -- that includes a wide assortment of excellent, high demand career positions in manufacturing!

- What do you think about when you hear the term MANUFACTURING jobs? Are your first thoughts that this is just a dark and dirty place with machine operators, welders, assemblers? Do you think to yourself, that is great for others, but I do not want my kid in a technical career, in manufacturing?

That may have been in the past, but it is NOT today.

TODAY's High Demand Manufacturing Careers include: Engineering technicians, Robotics and Automation developers, product development specialists, quality technicians, computer technicians, Accounting and Human Resource Generalists, Product and National Account Specialists, Direct and Indirect materials buyers, Production scheduling specialists – also known as Master Schedulers, Shipping Expeditors – including exporting coordinators and regulation coordinators, Inventory Control Managers...and many more!

- There are more than 700 manufacturing companies in North Dakota who account for nearly 8% of the total revenue output of the state, employing 6% of the total workforce. State revenue from manufacturing was over \$4 billion. There was an average of 26,000 manufacturing employees in North Dakota last year with an average annual compensation of more than \$60k.
- By the way, the non-farm income average in ND is less than \$50k.

As you consider support of the proposed Cass County Career Academy, I suggest there is no better way to inform our students and our under-employed population and our new Americans of the multiple high demand skilled careers that are in ND in the mfg. sector of our economy.

THIS is where I personally see the greatest value of the proposed Cass County CAREER WORKFORCE ACADEMY! To serve as a “A college-prep sequential curriculum with a focus on EXPOSING students to HIGH DEMAND TECHNICAL CAREERS before they leave high school – and then letting them pursue their area of interest.

To me, what is a bit ironic is that many people that I have spoken too – including many in the media, still consider the proposed Cass County Career Workforce Academy a new concept, experimental, an unproven model – when in fact there are more than 7000 career academies in the United States with more than a million students “annually”. One successful academy just happens to be located in Bismarck. The fact that Cass County does NOT have one is the exception.

What IS also very unique – especially to this area and even nationally -- is how the four different school districts of Cass County have COLLABORATIVELY, in the best interest of the students, have put aside rivalries and have joined the private sector to try to provide a SINGLE PLACE for Cass County k-14 students, incumbent workforce and new immigrants to go to learn about and to help prepare them for successful technical careers.

Of course, the alternative would be for each school district to fund / tax and to build its own – which I think that we can all agree is a far less financially efficient alternative.

In consideration of this unique opportunity to enhance workforce development in North Dakota, diversify our economy, and to offset the challenges we are still dealing with on the pandemic, we highly support the proposal to develop the Cass County Career Workforce Academy.

Thomas D. Shorma

CEO / President

WCCO Belting, Inc.

**Testimony of Dr. Cory Steiner
Northern Cass Superintendent
SB 2019: Support of Funding for the Department of Career and Technical
Education
Friday, March 5th, 2021**

Good afternoon Chairman Monson and members of the committee. It is my privilege to stand before you today and testify in support of a SB 2019 and the \$45,000,000 of funding for Career Workforce Academies within the Department of Career and Technical Education budget. My name is Dr. Cory J. Steiner and I'm the Superintendent of Schools at Northern Cass School District in Hunter, North Dakota. Northern Cass is a PK-12 district with 660 learners located 25 miles northwest of Fargo. We are an innovative school district which is in the midst of a transformation to personalized, competency-based learning.

The issues in education are profound, but more importantly, they are urgent. The structure and function of our schools today must change to meet the needs of a world which is changing at an exponential rate. Every system is designed to get the results it gets. Our system is getting the results it is supposed to get. Unfortunately, what is being asked of schools has changed dramatically since the design of the system. In schools, we have been tasked to prepare learners to be productive members of society. We have been asked to prepare learners for college, career, and military. We are asked to prepare learners of today for jobs that don't exist while also making sure learners have the skills for jobs in the workplace now. We must develop academic, social, and emotional skills while developing long-lasting relationships in a safe environment. In other words, we must prepare learners to be choice ready for the future. The list of important things to do and accomplish is never-ending. However, it is the job of K-12 to transform our system of education. It must be our mission moving forward.

I testify today in support of funding for Career Workforce Academies. The Career Workforce Academy concept will allow us to accomplish the goals of creating choice ready learners. The Career Workforce Academy will challenge us to think differently and reframe the abilities learners need while also changing the roles learners play in our society. It is my belief we have the most gifted generation of learners in the history of our great state. It is why we must act with a sense of urgency and cannot afford to let this opportunity pass. By not supporting funding for Career Workforce Academies, our state will miss a chance to take advantage of our learners and allow them to change the future of North Dakota.

Today, I would like to share with you five advantages of the academy concept. First, it expands opportunities for learners. At Northern Cass, we have an agriculture, marketing, and FACS program which provide Career and Technical Education options for our learners. We are fortunate to have a supportive board, strong financial standing, and highly qualified and effective educators in our district for these areas. Many districts in our state don't have the ability to offer a variety of options for CTE on-site. An academy will reduce this barrier for learners while increasing the opportunities for them to engage in passion areas before they graduate from high school. It is essential we provide more opportunities for learners so they can be ready to enter the workforce with a well-rounded skill set.

The academy model will be a collaborative approach enhancing everyone's effectiveness and efficiencies. In Cass County, we have been engaging in this work for the past four years. This includes collaborative discussions and planning among the districts of Central Cass, Northern Cass, Fargo, and West Fargo. The conversations have also included North Dakota State College of Science (NDSCS), the Fargo-Moorhead Chamber of Commerce, and many businesses in the metro area. With a commitment of funding and human capital from local school districts, local government agencies, and the private sector, our academy will be public-private funded and support not only K-12 education but also the business community as a whole. For the academies to become a reality, both private and public interests must have a stake. Imagine the future collaborative efforts that are possible with this and other academies across the state. It will be a model for what we strive for which is the private and public sector working together for a better tomorrow.

The third reason the academy model is important is because it will provide a workforce development solution. Throughout the state of North Dakota, we have issues with lack of qualified applicants for job openings. Each region of our state has their own workforce issues which need a different approach. However, the academy model is proven to address these concerns by being flexible enough to meet the specific needs of the various regions throughout our state. It will allow for multiple career clusters to be established regionally which will meet the diverse needs throughout our state. Although I represent PK-12 education, the academy model will also provide training for those already in the workforce. This will provide opportunities for adults to develop new skills that can better serve our changing workforce needs.

The next reason to support funding for academies is to increase career exploration and skill development. Learners in our districts are exposed to career exploration and skill development. However, it is not done with fidelity across our state due to a lack of resources. Through the expertise of those involved in the academy, districts will be able to develop a career program which begins with career awareness at the primary levels followed by purposeful career exploration at the middle level which leads to career preparation through job shadows, internships, and career training at the secondary level. Through a partnership with the private sector, the academies will make sure every learner, no matter the school they attend, will have the opportunity to be exposed to authentic career exploration at all levels.

Finally, the academy is a proven model that has been utilized not only across the country but right here in Bismarck. The Bismarck Career Academy and Technical Center is a model for other academies in our state. This model has been implemented throughout the country from Sioux Falls, SD to Alexandria, MN to Nashville, TN. Each model has elements necessary to meet the unique conditions of their region. However, the common theme is the model works. It benefits communities, schools, and the workforce.

Let me share a short story with you to reiterate why the academy is so important. They wanted to be an architect and had wanted this since they could remember. They attended a job shadow. They spent three hours in this experience and realized this was not the career path they wanted. What if they never had that experience? What if they could have taken a course in architecture at an academy? Think of the money saved for the learner and the potential benefit. All of this would be possible if we can implement the academy model throughout our state. This is one story, but it is so common in our schools right now. The academy model will provide authentic experiences to prepare learners to make informed choices about their future.

Our schools and higher education produce a high-quality product due to the dedicated and passionate leaders, educators, parents, and learners throughout our state. I'm proud of our state, our educational system, and our learners, but I worry about our future. We have boards, administrators, businesses, and colleges ready to change the model into one which promotes learning through authentic experiences. I understand the financial commitment for this aspect of the bill is significant. However, I believe the negative impact by not doing this is far greater. By supporting funding for career and technical education programming, the legislature will make a statement it stands in support of doing what must be done for the

state's future success. You have the power to create a different version of tomorrow by supporting this funding. You have an opportunity to change our future and allow us to do it together through a collaborative effort which will make North Dakota the educational and economic leader in our great nation. I ask for a 'do pass' on SB 2019.

I am Mark Wagner, I am in support of SB 2019, and am available for any questions.



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March 5, 2021

Appropriations Committee
North Dakota House of Representatives
State Capitol Building
600 East Boulevard Avenue
Bismarck, ND 58505

Dear Chairman,

I am writing to you on behalf of the Bismarck-Mandan Home Builders Association to support Senate Bill 2019.

Continued career and technical education is important and vital to the home building industry. They are the premiere college-and career readiness programs, that provide both technical training and hands-on learning experiences for students to practice and develop cross-cutting skills that all employers value. These grants and funds will provide education for our trades so that our economy and the building industry in the Bismarck-Mandan market can continue to thrive.

Providing financial support and resources for trade education is crucial to a successful building industry. We currently have 300 members that are part of our local association in Burleigh and Morton counties that support career and trade education. We have also started a professional women in building council with over 40 women that make up the building industry here in Bismarck/Mandan. These women come from all different backgrounds in building. Some are electricians, builders, remodelers and designers. Trade education has provided the tools and resources that they need to succeed in their current careers.

In order for our industry to keep moving in the right direction, we need SB 2019 to pass so that we can continue to strengthen our career and technical education so that our economy and our building industry in ND can continue to be successful.

We urge you to support SB 2019.

Dawn Watson

Dawn Watson

Chief Executive Officer
Bismarck-Mandan Home Builders Association
2600 Gateway Ave., Suite 1 Bismarck, ND 58503
T: 701-222-2400/ M: 701-390-5049/ F: 701-250-9730



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March 5, 2021

Appropriations Committee
North Dakota House of Representatives
State Capitol Building
600 East Boulevard Avenue
Bismarck, ND 58505

Dear Chairperson and Members of the Committee,

Thank you for the opportunity to submit this letter. The Forx Builders Association represent approximately 200 builders and associated businesses throughout the Greater Grand Forks area and we urge you to support Senate Bill 2019.

Workforce shortage is a chronic, nation-wide issue that threatens our communities by pushing labor costs and purchase prices to a point that forces potential home buyers out of the market. Senate Bill 2019 can provide the critical funding needed for career and technical education to directly impact this crippling issue.

Please support Senate Bill 2019 and help rebuild our workforce of contractors, plumbers, electricians, HVAC technicians and other skilled workers. Help support our communities by increasing revenue potential. Help "bring housing home" and make housing affordable again. Join us in correcting the workforce shortage by supporting Senate Bill 2019.

Thank you for your time,

Respectfully,

Stacy Hanson
Executive Officer

Affiliated With



2021 HOUSE STANDING COMMITTEE MINUTES

Appropriations - Education and Environment Division Prairie Room, State Capitol

SB 2019
3/11/2021

House Appropriations Committee - Education and Environment

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Chairman David Monson called the meeting to order at 2:21 p.m.

Representative	Present	Absent
Chairman Monson	P	
Vice Chairman Schmidt	P	
Representative Martinson	P	
Representative Nathe	P	
Representative Sanford	P	
Representative Schatz	P	
Representative Boe	P	

Discussion Topics:

- Base level funding changes
- Grants
- Bonding bill
- Esser funds
- ND Farm and Ranch Business Management Education
- Career Workforce Academy (CWA)
- Minot Public School (MPS) Career and Technical Education (CTE)

Wayde Sick (2:23 p.m.) testified in favor. Testimony #8804 and #8798

Craig Kleven (3:10 p.m.) testified in favor. Testimony #8923

Denise Jonas (3:33 p.m.) testified in favor. Testimony #8812, #8813 and #8814

Mark Vollmer (3:41 p.m.) testified in favor. Testimony #8811

Pam Stroklund (3:47 p.m.) testified in favor. Testimony #8811 submitted by Mark Vollmer.

Robert Keitkamp (4:03 p.m.) testified in favor. Testimony #8797

Additional written testimony: #8361, #8510, #8651, #8687, #8805, #8844, #8878

Chairman David Monson adjourned the meeting at 4:03 p.m.

Klarissa Pudwill, Committee Clerk

2021-2023 Biennium Workforce Projects/Programs

Bill #	Program Name	Administrator	Funding Amount	Type
2016	JobsND.com Spidering	Job Service ND	\$300,000	E
2016	JobsND.com Mobile Accessibility	Job Service ND	\$56,179	E
2018	Operation Intern	Commerce	\$755,000	D
2018	Technical Skills Training Grant	Commerce	\$1 million	F
2018	Relocation Program	Commerce		E R
2018	Non-resident Nurse Employment Recruitment Program	Commerce	\$320,000	E R
2018	AmeriCorps	Commerce	\$2,236,652 Federal: \$2,130,704.14 State: \$105,947.86	D
2018	Tribal College Grant	Commerce		D
1142	Area Health Education Center (AHEC)	Commerce	LR: \$400,000	E D R
2019	TrainND	CTE	\$2 million	T
2003	Academic and Technical Education Scholarships	NDUS	\$12,016,749 +4,200,000 = 16,216,749 (Senate Version)	I
2003	Student Financial Assistance Grants	NDUS	\$23,917,306 +2,400,000 = 26,317,306 (Senate Version)	I
2003	Scholars Program	NDUS	\$1,807,115	I
2003	Native American Indian Scholarships	NDUS	\$555,323	I
2003	ND Professional Student Exchange Program (PSEP)	NDUS	\$3,699,342	I
2003	ND Career Builders Scholarship	NDUS	State: \$3,000,000 Private Sector: \$3,000,000	I
2003	ND Career Builders Loan Repayment	NDUS	State: \$3,000,000 Private Sector:\$3,000,000	E

Available Tax Credits			
Program Name	Administrator	Available Amount	Type
Work Opportunity Tax Credit (WOTC)	Job Service ND	\$132,000 (administration)	I
New Jobs Training	Job Service ND	\$1,500,000: Est. from state tax	I F
57-38-01.16. Income tax credit for employment of developmentally disabled or chronically mentally ill persons	Taxation		I
57-38-01.24. Internship employment tax credit	Taxation		I
57-38-01.25. Workforce recruitment credit for hard-to-fill employment positions	Taxation		I

Federally Funded Programs			
Program Name	Administrator	Funding Amount	Type
<u>Workforce Innovation and Opportunity Act (WIOA)</u>	Job Service ND	\$5,200,806	F D E
<u>Trade Adjustment Assistance (TAA)</u>	Job Service ND	Requested as needed based on petitions filed	F
<u>Training for Regional Energy North Dakota (TREND)</u>	Trade Adjustment Assistance Community College and Career Training	\$9.9 million: Federal	T D

LR = Legislative Request versus the Governor's Budget Recommendation Program Goal Type Basic Definitions

T - Training: Refers to providers offering training to incumbent workers, currently or previously engaged in workforce

F - Training Funds: Refers to programs designed to provide dollars for skillset training

D - Development: Refers to students, typically applicable for credit

E - Employment: Refers to situations of connecting job seekers with available employment options

R - Recruiting: Refers to situations where workforce from out-of-state are approached regarding in-state opportunities

I - Incentive: Refers to workforce options rewarding individuals or employers

Biennium Workforce Project Descriptions

SB 2016: Job Service North Dakota (JSND) – Provides an online labor exchange system and access to state and local labor market information; assistance from experts on employer and job seeker services. Job Service also administers federal programs that provide training assistance to individual job seekers.

Applicants: Job Seekers, Employers, General Public

Direct Beneficiaries: Job Seekers – receive information on jobs and if registered will access application instructions, Employers, General Public – can access labor market information (LMI) information via the website

Program Goal Type: Employment

SB 2016: JobsND.com Spidering – utilized by Job Service North Dakota’s website, an online tool that searches the Internet for job postings and automatically posts them to the job lists. These postings are captured from several sites including employer job boards/websites, CareerBuilder.com, Government job boards, Indeed.com and Monster.com.

Applicants: NA

Direct Beneficiaries: Job seekers and employers who aren’t able to designate specific time to list individual positions

2019-2021 Biennium: \$300,000

2021-2023 Biennium: \$300,000

Program Goal Type: Employment

SB 2016: JobsND.com Mobile Accessibility – updating Job Service North Dakota’s website to enhance usability for users searching for jobs on mobile devices. Acknowledges a trend in technology changes and site usability.

Applicants: NA

Direct Beneficiaries: Job seekers and employers

2019-2021 Biennium: \$77,710

2021-2023 Biennium: \$56,179

Program Goal Type: Employment

SB 2016: New Jobs Training – State-funded training program which helps new or expanding primary-sector employers secure funding for worker education and training. Funds are generated by capturing employee income tax withholdings to repay loans, grants, or self-financing options.

Applicants: Employers

Direct Beneficiaries: Employees and Employers

2017-2019 Biennium: \$1,262,695

2019-2021 Biennium: \$1,463,524 in state individual income tax allocated as of 3/1/2021

2021-2023 Biennium: Estimated \$1,500,000 state individual income tax collected and redistributed to employers

Program Goal Type: Training Funds

SB 2018: Operation Intern – A state funded program available to North Dakota employers through the Department of Commerce. Provides employers up to \$4,000 in matching funds per intern/apprentice per program year. Employers may receive matching funds for up to five students per year. Employers may be eligible for up to \$20,000/year or \$40,000/biennium.

Applicants: Employers who have an intern program

Direct Beneficiaries: Employers who match dollars for interns

2019-2021 Biennium: \$855,000

2021-2023 Biennium: \$755,000

Program Goal Type: Development

SB 2018: Non-resident Nursing Employment Recruitment Program (NNERP) – Created in the 2019 Legislative Session and designed to attract and retain highly-qualified nurses to North Dakota. Provides up to \$4,000 in matching funds to incentivize recruitment of out-of-state nurses, in return for a four-year contract with a licensed healthcare facility in North Dakota. Administered by the Department of Commerce.

2019-2021 Biennium: \$500,000

2021-2023 Biennium: \$320,000

Program Goal Type: Employment, Recruitment

SB 2018: Technical Skills Training Grant – Designed to support the creation and/or expansion of accelerated skilled workforce training programs to help displaced workers prepare for new jobs. This was a state program created through \$1M in CARES Act funds and approved by the Emergency Commission and Budget Section in June 2020. Moving forward, the goal of this program is to continue providing matching funds to public and private sector training providers who are serving a broader audience, not limited to displaced workers.

Applicants: Public and private sector workforce training providers

Direct Beneficiaries: Training providers and training program participants

2019-2021 Interim: \$1,000,000 (Federal CARES Act funds)

2021-2023 Biennium: \$1,000,000

Program Goal Type: Training Funds

SB 2018: AmeriCorps – Grant program which supports volunteerism to fill unmet community needs, while keeping individuals connected to their communities and providing them with educational assistance. The Department of Commerce provides administrative support to the North Dakota State Commission on National and Community Service who governs the program.

Applicants: Nonprofits, school systems, government entities

Direct Beneficiaries: Individuals that are volunteering, qualified applicants, and the communities where both are located

2019-2021 Biennium: \$2,197,994 (\$2,089,135 Federal + \$108,859 State Match)

HB 1142: Area Health Education Center (AHEC) – A community-driven, nonprofit organization whose goal is to improve access to health care in rural and medically underserved areas. This is accomplished by forming academic and community partnerships that link the resources to address the health care work force needs of rural communities. A key AHEC goal is to interest North Dakota's youth in healthcare occupations. ND AHEC reaches K-12 students through R-COOL Health Scrubs Camps and Academies, Marketplace for Kids, HOSA-Future Health Professionals, and related career enrichment activities.

2019-2021 Biennium: \$200,000

2021-2023 Biennium: \$400,000 (introduced independently as HB 1142)

Program Goal Type: Development, Employment, Recruitment

SB 2018: Tribal College Grants - Established during the 2013 Legislative Session and codified in 54-60.2 to assist tribally controlled community colleges in preparing students for the state's high demand jobs. The grant also allows the community colleges to assist students in establishing in-state businesses.

Applicants: Cankdeska Cikana Community College in Fort Totten, Fort Berthold Community College, Sitting Bull College, Turtle Mountain Community College, United Tribes Technical College

Direct Beneficiaries: Tribal Colleges- expanding classrooms, program offerings, and technology;
Students- accessing technology to take to their future employment or assisting in the establishment of business

2019-2021 Biennium: \$500,000

Program Goal Type: Development

SB 2018: Relocation Program – Non-financial assistance to individuals interested in relocating to North Dakota. Seeks to connect out-of-state jobseekers with work opportunities through outreach with Recruiter Network and by providing an additional resource for employers to post positions. Administered by the Department of Commerce.

Applicants: Out-of-State Job Seekers, Employers listing positions in North Dakota

Direct Beneficiaries: Job Seekers, Employers

Funding: No specified allocation in the Department of Commerce budget

Program Goal Type: Employment, Recruitment

SB 2019: TrainND – State supported program for the four designated training institutions of higher education (Lake Region State College, North Dakota State College of Science, Bismarck State College and Williston State College). Provides comprehensive, customized worker training to meet employer-defined needs. Designed to help North Dakota's employers maximize productivity and excel in global competition. Cost of training varies depending on employer needs. Focus on small businesses across the state.

Applicants: Employers looking for specific training that will be completed by TrainND

Direct Beneficiaries: Employers/Employees skills upgrade, technical schools offering specific training, individuals who can receive additional training

2019-2021 Biennium: LR: \$2 million, Governor's budget recommendation: \$2 million

2021-2023 Biennium: LR: \$2 million, Governor's budget recommendation: \$1.9 million

Program Goal Type: Training

HB 1012: Department of Human Services, Vocational Rehabilitation – Rehabilitation to include counseling and guidance, mental and physical restoration, and training to include academic and on-the-job supports, such as job coaching and OJT.

Applicants: Persons with a physical or mental impairment that creates an impediment to employment

Direct Beneficiaries: Both employers and applicants

2019-2021 Biennium: \$31,853,039 (Federal = \$22,370,770 + State = \$9,482,269)

2021-2023 Biennium: \$32,420,755 (Federal = \$23,163,890 + State = \$9,256,865)

Program Goal Type: Development

HB 1013: Department of Public Instruction, Adult Education – Promotes and supports free programs that serve adults who are at least 16 years of age; are not enrolled or required to be enrolled in a secondary school under State Law; and who lack sufficient mastery of basic educational skills; do not have a secondary school diploma or its recognized equivalent; or cannot speak, read, or write the English language. Services available in each Adult Learning Center include: reading/writing, science, social studies, math, computer literacy and other basic academic skills, English Language acquisition for adults who are unable to read, speak or write English, workplace and career planning and readiness, digital literacy, various academic assessments, and GED test preparation.

Direct Beneficiaries: Students needing GED or remediation for employment, post-secondary; ESL services; citizenship; employment assistance

2019-2021 Biennium: \$6.5 million (Federal = \$1,994,000, State = \$4,400,000, DHP = \$156,000)

2021-2023 Biennium: TBD

Sources: Federal funds under the Workforce Investment and Opportunity Act - Title II, state funds, special funds

Program Goal Type: Development

Scholarships and Loan Forgiveness Programs

SB 2003: Academic and Technical Education Scholarships – Administered by the North Dakota University System and created to encourage and reward high school students for taking challenging coursework in preparation for attending an accredited public, private or tribal college, or university. Total value is \$6,000; \$750 per semester.

Applicants: Scholarships are renewable for full-time students who maintain GPAs of 2.75 or higher.

2019-2021 Biennium: \$12,016,749

2021-2023 Biennium: \$16,216,749 - Senate Version (+\$4,200,000)

<http://ndus.edu/students/paying-for-college/grants-scholarships/>

SB 2003: Student Financial Assistance Grants (State Grant Program) – Administered by the North Dakota University System and provides non-repayable grants to first-time undergraduate students who attend state public, private or tribal colleges. Awards up to \$1,650 per academic year, based on enrollment status.

Applicants: North Dakota high school graduates or GED recipients who meet campus admission requirements and enroll in ND colleges or universities. Programs of study must be for at least one year.

2019-2021 Biennium: \$23,917,306

2021-2023 Biennium: \$26,317,306 – Senate Version (+\$2,400,000)

<http://ndus.edu/students/paying-for-college/grants-scholarships/>

SB 2003: Scholars Program – This program administered by the North Dakota University System provides merit-based, full-tuition scholarships to North Dakota high school graduates who choose to earn undergraduate degrees in North Dakota. This full-tuition scholarship is renewable for up to three years to any tribal or private college or University System college or university. Scholarships for students who attend private institutions equal the average tuition at a University System research university.

Applicants: High school juniors who score in the upper fifth percentile of all North Dakota ACT test takers will be considered as a candidate for the Scholars award. Due to limited appropriation, not all students in the upper fifth percentile will be funded. Recipients must maintain cumulative GPAs of 3.5.

2019-2021 Biennium: \$1,807,115

2021-2023 Biennium: \$1,807,115

<http://ndus.edu/students/paying-for-college/grants-scholarships/>

SB 2003: Native American Scholarships – Based on scholastic ability and financial need, this program administered by the North Dakota University System grants between 150 and 175 scholarships to enrolled members of North Dakota Indian tribes. Scholarships range from \$800 to \$2,000 per academic year.

Applicants: Applicants must be North Dakota residents and enrolled members of federally recognized Indian tribe. They must be accepted for admission by a North Dakota institution of higher learning or state vocational education program and be enrolled as a full-time student. Recipients must maintain GPAs of 2.0 or higher.

2019-2021 Biennium: \$555,323

2021-2023 Biennium: \$555,323

<http://ndus.edu/students/paying-for-college/grants-scholarships/>

SB 2003: Medical Personnel Loan Repayment Program – Administered by the State Health Council to encourage nurse practitioners, physical assistants and certified nurse midwives to practice in North Dakota. Funding recipients are eligible to receive \$10,000 to repay acquired loans, half of which comes from the community with the remainder coming from the state. Five applications are selected each year.

Applicants: nurse practitioners, physical assistants and certified nurse midwives who will graduate one year after submitting application and have graduated from an accredited training program in US or Canada and have not practiced full-time in North Dakota within three years of application date.

<http://www.ndhealth.gov/oca/Mid%20Loan%20Repayment%20Program.pdf>

Available Tax Credits

Work Opportunity Tax Credit – Federally funded tax credit program, administered by Job Service North Dakota, for private sector employers when hiring certain target groups of job seekers who face employment barriers. The requirements of this program are set by the IRS and USDOL.

Applicants: Employers hiring specific workers.

Direct Beneficiaries: Employers, Employees

Program Goal Type: Incentive

<http://www.jobsnd.com/wotc>

New Jobs Training – State-funded training program which helps new or expanding primary-sector employers secure funding for worker education and training. Funds are generated by capturing employee income tax withholdings to repay loans, grants, or self-financing options.

Applicants: Employers

Direct Beneficiaries: Employees and Employers

2017-2019 Biennium: \$1,262,695

2019-2021 Biennium: \$1,463,524 in state individual income tax allocated as of 3/1/2021

2021-2023 Biennium: Estimated \$1,500,000 state individual income tax collected and redistributed to employers

Program Goal Type: Training Funds

<http://www.jobsnd.com/business/business-related-resources>

57-38-01.16. Income tax credit for employment of developmentally disabled or chronically mentally ill persons

Employers can qualify for tax credit for wages paid to a developmentally disabled or chronically mentally ill employee.

Under section: 57-38-30

Credit Amount: 5% of up to \$6,000 in wages paid during the first year for each employee

Limitations: Credits cannot exceed 50% of employer's liability

Program Goal Type: Incentive

57-38-01.24. Internship employment tax credit

Employers can qualify for tax credit if they have an internship in ND, where the supervised applicant is enrolled in a college/tech school and is receiving credit for the experience.

Under section: 57-38-30 or 57-38-30.3

Applicants: Qualifying employers with qualifying interns

Direct Beneficiaries: Employers

Credit Amount: 10% of the stipend/salary paid to the intern

Limitations: No more than \$3,000 for all taxable years combined, cannot exceed 5 interns at the same time

Program Goal Type: Incentive

<http://www.nd.gov/tax/business/pubs/2014corpincometaxcreditbooklet.pdf?20150428132807>

57-38-01.25. Workforce recruitment credit for hard-to-fill employment positions

Employers can receive credit for costs to recruit/hire hard-to-fill positions that require extraordinary recruitment methods for positions that have not been filled, yet promoted for 6 months. These salaries must meet or exceed the state average wage as determined by Job Service North Dakota.

Under section 57-38-30 or 57-38-30.3

Applicants: Qualifying positions include hiring a recruiter, posting on recruiting sites, advertising in professional publications, listing on a website, and using hiring incentives (relocation costs, sign-on bonus).

Recruiting efforts must be unsuccessful for 6 consecutive months.

Credit Amount: 5% of the salary paid for the first year

Limitations: The credit may not exceed an employer's liability for the taxable year. Any amount of unused credit may be carried forward for up to 4 years after initially claim year.

Program Goal Type: Incentive, Employment, Recruiting

Federally Funded Workforce Programs

Workforce Innovation and Opportunity Act (WIOA) – Training, support, other assistance, including funding, administered by Job Service North Dakota, are provided to applicants for employment preparation.

Applicants: Economically disadvantaged youth, economically disadvantaged adults, and dislocated workers

Direct Beneficiaries: Eligible applicants

Current Federal Allocation: \$5,200,806

Program Goal Type: Training Funds, Development, Employment

<http://www.jobsnd.com/individuals/training>

Trade Adjustment Assistance (TAA) – Federal Program/funding based on number of petitions filed during the year. Training, support, other assistance, administered by Job Service North Dakota, for reemployment. Funding is determined on an as needed basis from the US Department of Labor.

Applicants: Employees who are being laid off due to foreign competition

Direct Beneficiaries: Employees

Program Goal Type: Training Funds

<http://www.jobsnd.com/individuals/training>

**House Appropriations
Education and Environment
SB2019**

March 11, 2021

Chairman Monson and members of the committee, for the record, my name is Wayde Sick, State Director for the Department of Career and Technical Education. I am here to provide testimony for SB2019 or the Department of Career and Technical Education appropriations bill.

My testimony today will include responses to questions the Appropriations Committee had during the March 5, 2021 Hearing. I also have several individuals in the room or connected virtually to fill in any details.

The Committee expressed an interest in the proposed James Valley Aviation Program. Unfortunately, a representative from Jamestown is unable to join us, so I will discuss the project on their behalf. As I mentioned at our initial committee hearing, this is an application that has been submitted for consideration. The request is earlier than normal, as the intent is to use ESSER funds to support the purchase of start-up equipment. To do so, it needs to be an approved program by the Department of Career and Technical Education.

James Valley Area Career and Technical Center has applied to the State Board for Career and Technical Education to develop an aviation program. The plan is to purchase a full motion, fully enclosed simulator, desktop simulators and three screen simulators. The simulators will be housed in existing space in the Center, which was not being used for instructional space.

Programs like this is the reason why the New and Expanding funds in SB2019 are important. The ESSER funds could help get the program started, but the Department supports the long-term operations of the programs. These types of programs are supported by the Department of Career and Technical Education annually through a reimbursement of a portion of their operating dollars, such as staffing. Applications for new programs like this are submitted to us for consideration every year. The Department requires programs to meet standards such as qualified instructor, sufficient equipment and space, leadership opportunities, such as a Career and Technical Student Organization. The programs are offered at both our high schools and our area career and technology centers and can be offered virtually, face-to-face and hybrid. As I mentioned last week, programs must meet a workforce need to be approved. This is determined by using labor market information and local industry input.

New Program Requests

I have attached a document, listing the new and expanding requests we are currently aware of. These have either been collected through direct inquiries to the agency or programs that were identified in the Comprehensive Local Needs Assessment process. These proposed programs will need to go through the application process, will need to secure equipment and an instructor to come to fruition. There also may be programs we are still unaware of.

It was requested if the Department of Public Instruction can provide ESSER funds directly to the Department of Career and Technical Education.

I visited with Superintendent Baesler and was informed that if there is a specific program set up that addresses a need "caused by" or "is in response to" a COVID-19 related impact, that program could be considered as a possible use of discretionary funding.

As requested, I have included an updated slide, that includes the 2019-21 biennium budget, with the 2021-23 requested budget, the Executive Budget and the Senate Approved Budget. We can discuss this if there are additional questions.

Next you asked about access to dual credit and Career and Technical Education courses for homeschooled and private school students.

Centers and community colleges alike provide many online and dual credit courses and to all students. Any public, private, or homeschool student can take a dual credit class. What is commonly seen is most homeschooled students focus on general education classes, but there are still homeschooled students who enroll in dual credit CTE classes.

Homeschooled and private school students can also enroll in CTE courses through Area Career and Technical Centers. The courses are typically paid by the home school they are associated with for homeschooled students and by the schools for private school students.

Now I would like to discuss the funding for the STEM Network.

In the 2015 Legislative Session, \$100,000 was appropriated to the Department of Career and Technical Education, for the purpose of providing a science, technology, engineering, and mathematics advancement initiative. This was done with HB 1393 of the Sixty-fourth Legislative Assembly. This funding and the STEM Network were managed by the Department of Career and Technical Education, as the agency waited for the STEM Network to become a 501 c3. This funding has been retained in the Agency's base budget ever since. Now that the STEM Network has successfully

attained 501 c3 status, the Department would like to set this funding up as a separate line item. This would serve as a grant, not as an operating expense.

The intent is to grant the dollars to the North Dakota STEM Ecosystem. The Ecosystem's mission is as follows:

Mission Statement: Advance all students as problem solvers and lifelong learners through STEM

The North Dakota STEM Ecosystem is guided by the following Design Principles:

1. The ND STEM Ecosystem will be the statewide resource to improve STEM access for all North Dakotans.
2. The ND STEM Ecosystem will engage industry, community, and education systems to address workforce challenges and STEM literacy.
3. The ND STEM Ecosystem promotes a lifelong learning environment to develop employability and life skills and connect passion with opportunity.
4. The ND STEM Ecosystem will be accountable by addressing the STEM education needs of North Dakota and disseminating results through NDSTEM.org website and social media outlets on a regular basis

In addition to the STEM Days for Students Grants, the Ecosystem has provided:

1. Speaker for the statewide NDCEL Conference - Executive Director – Iowa Governor's STEM Advisory Council
2. Sponsorship for IgniteND – Innovation Education Week

Recently the ND STEM Ecosystem entered into a partnership with the Praxis Strategy Group for the purpose of developing a statewide STEM Asset Map. The map will identify and map assets in the following areas:

1. K-12 schools
2. Industry
3. Higher education
4. Public sector
5. Non-governmental organizations, the civic sector and professional organizations

This project will be completed by the end of the fiscal year.

Attached in your packet is a report showing the various STEM Day events that were funded through this program.

As it is currently an operating expense, any unused funds have been and will be turned back to the General Fund. This will continue, even if it is a grant, as the Department of Career and Technical Education reimburses expenses. It does not provide funds up front. If the STEM Network has left over funds at the end of the biennium, they would be returned to the General Fund.

TrainND Allocation amounts

Below are the 2019-2021 biennium allocations for the four TrainND Regions and process of how it is calculated. This is done through the covered employment of the regions, a model that was developed when TrainND was created.

NUMBER OF EMPLOYERS & EMPLOYMENT BY TRAINING REGION						
Quadrant		Number of Employers		Covered Employment		
		Total	Percent	Number	Percent	
1	Northwest	7,384	22.244%	84,770	20.428%	
2	Northeast	4,889	14.728%	64,547	15.555%	
3	Southeast	12,021	36.212%	159,963	38.548%	
4	Southwest	8,902	26.816%	105,688	25.469%	
Totals		33,196	100.0%	414,968	100.0%	
INA's *		873		2,610		
Grand Totals		34,069		417,578		

Allocation - 2,000,000							
		1,000,000		1,000,000		Biennium	
		Year 1		Year 2		Total	
2019-21	Base	Demand	Total Allocation	Base	Demand	Total Allocation	
20.428%	125,000	79,280	204,280	125,000	79,280	204,280	408,560
15.555%	125,000	30,550	155,550	125,000	30,550	155,550	311,100
38.548%	125,000	260,480	385,480	125,000	260,480	385,480	770,960
25.469%	125,000	129,690	254,690	125,000	129,690	254,690	509,380
							2,000,000

Sara Vollmer, with TrainND SW is in attendance to answer any questions specific to TrainND.

Farm Management Education Program

Primarily, the questions that arose concerning the Farm Management Education Program concerned the years the producers were in the program. In your packet that was handed out last week, there are results of a survey that asked, not only overall satisfaction of the program, but also years in the program and age of the producer.

Looking at the data from the 2019-20 year, the enrollment breakdown is as follows:

Years in Program	0-3 years	4-6 years	7-9 years	10+ years	Total
Enrollment	169	81	63	355	668

Craig Kleven, Agriculture Education Supervisor, who focuses on Post-Secondary and Farm Management Education, is here to address any additional questions concerning the Farm Management Program.

New Career and Technology Center Funding

There was some discussion concerning funding to expand CTE Centers. I believe you heard from many of them during the House Appropriations hearing on HB1431, but I ask that communities could present to the subcommittee, if you see it beneficial. I believe there may be a few them connected virtually. The Department of Career and Technical Education supports the expansion of all Career and Technical Education programs and sees a place in the state for additional Career and Technology Centers. Additional centers, strategically placed in various parts of the state, can supplement what member high schools are offering in CTE, bring in workforce training and post-secondary offerings and potentially serve populations with barriers to employment, such as English Language Learners, Adult Education, etc.

This concludes my prepared testimony and will stand for questions or pass the podium on.

Program Needs Per CLNA

Beach	Information Technology	\$4,383.72
Bottineau	Health Sciences	\$26,436.06
	T & I - Electronics	\$16,517.00
Center	Family & Consumer Sciences	\$9,477.12
Dickinson	Information Technology	\$4,383.72
	T & I - Diesel Technology	\$12,465.25
	T & I - Maintenance Technology	\$15,506.00
	T & I - Welding	\$14,782.44
Edgeley	Information Technology	\$4,383.72
Finley	Family & Consumer Sciences	\$9,477.12
Hope	Agriculture	\$18,229.44
Mandan	Information Technology	\$4,383.72
McClusky	Family & Consumer Sciences	\$9,477.12
Minto	Marketing	\$13,421.16
New Rockford	Health Sciences	\$26,436.06
Northwood	Health Sciences	\$26,436.06
Williston	T & I - Petroleum	<u>\$12,465.25</u>
		\$228,660.96

Program Needs Per Emails

Fort Yates	Building Trades	\$12,465.25
Grenora	Family & Consumer Sciences	\$9,477.12
JVACTC	Aviation	\$31,315.00
Wahpeton	Welding	\$14,782.44
SRCTC	Agriculture	\$67,068.40
	Family & Consumer Sciences	\$9,477.12
	Family & Consumer Sciences OCC	\$27,873.46
	Welding	\$34,960.00
Mandaree	Automotive Technology	\$25,204.40
	Agriculture	\$18,229.44
	Information Technology	\$4,383.72
	Facilities Management	\$15,506.00
	Culinary Arts	\$5,437.60
	Family & Consumer Sciences	\$9,477.12
	Welding	\$14,782.44
	Business	\$3,562.13
Washburn	Marketing	\$9,063.44
Wishek	Business	<u>\$3,562.13</u>
		\$316,627.21
		\$545,288.17

Agency vs. Executive vs. Senate Budget

Budget Line Items	Agency Base	Agency Request	Executive Budget	Senate Budget
Salaries	\$4,812,765	\$4,539,287	\$4,686,234	\$4,654,641
Operating Expenses	\$2,357,796	\$2,195,589	\$2,367,766	\$2,198,453
Grants - Secondary	\$24,587,780	\$72,687,780	\$25,687,780	27,187,780
Grants – Postsecondary	\$256,982	0.00	0.00	0.00
Grants	\$9,207,349	\$9,507,349	\$54,507,349	\$54,507,349
ND Farm Mgmt Education	\$1,894,249	\$1,756,138	\$1,756,138	\$1,756,138
Workforce Training	\$2,000,000	\$1,900,000	\$1,900,000	\$1,900,000
Marketplace for Kids	\$300,000	\$250,000	\$250,000	\$250,000
Center for Distance Education	\$9,351,188	\$9,750,000	\$8,842,998	\$9,464,653
Total Funds	\$54,768,109	\$102,586,143	\$99,998,265	\$101,919,014
General Funds	\$40,064,988	\$47,568,716	\$39,978,448	\$41,899,197
Federal Funds	\$11,498,147	\$11,812,453	\$11,814,843	\$11,814,843
Special Funds	\$3,204,974	\$43,204,974	\$48,204,974	\$48,204,974
Total Funding	\$54,768,109	\$102,586,143	\$99,998,265	\$101,919,014
FTE Count	52.30	50.30	50.30	50.30



GRANTS AWARDED for the 2019-2020 School Year (Not all were completed due to COVID-19)

Grant Title	Fiscal Agent	Schools involved	Students	Partners	Funding	Spent
Let's Do STEM	Gateway to Science	Bismarck & Mandan elementaries	1000	Basin Electric, Great River, KLJ, MDU, BSC	\$3,500	\$376
Tech Savvy/STEMtastic	Jamestown Public School	Jamestown, Medina, Pingree-Buchannan, Montpelier, Litchville-Marion, Gackle-Streeter, Edgeley, Barnes County North, Hillcrest	500	AAUW-Jamestown, University of Jamestown, NDSU Extension-Stutsman County, NDSU, UTC Aerospace Engineering, ND Farmers Union-IT	\$3,500	\$3,414
Regional STEM Days for Students	Gateway to Science	Medora, Halliday, Trinity West, Beulah, Selfridge, Lidgerwood, Freedom-West Fargo, Lincoln-Jamestown, Carrington, Warwick, Ray, New Town, Minnewauken	1700	Bartlet & West, Bill Barth Ford, Indigo Signworks, MDU Resources Foundation, ONEOK	\$10,500	\$1,611
Regional STEM Days for Students	Mayville State University	Central Cass, Central Valley, Griggs County Central, Finley-Sharon, Hatton, Hillsboro, Hope-Page, Larimore, May-Port CG, Northern Cass, Northwood, Thompson	2000	UND Society of Women Engineers, UND Division of Atmospheric Science, UND Aerospace, MSU Science Club, MSU Student Education Association	\$3,500	\$0
Regional STEM Days for Students	Dakota College at Bottineau	Drake-Anamoose, Harvey, Rugby, Towner, Granville, Mohall, Newberg, Westhope, Bottineau, Dunseith, Dunseith Day School, Ojibwa Indian School, Turtle Mountain MS, Rollette, St Johns	400	ND Energy Education, Bottineau Ambulatory Services, ND Forest Service, USDA, NDSU Extension Service, ND Space Grant Consortium, ND Water Commission, UND School of Medicine and Aeronautics, WOLD Engineering, NCEC	\$3,500	\$1,481

GRANTS AWARDED for the 2020-2021 School Year

Grant Title	Fiscal Agent	Schools involved	Students	Partners	Funding	Spent
Stutsman County STEM Day	Montpelier Public School	Montpelier, Pingree-Buchanan, Medina, Litchville-Marion, Hillcress, Edgeley, Gackle-Streeter	146	AAUW-Jamestown, University of Jamestown, Gateway to Science, Microsoft, Apex Engineering, Lifetime Eyecar, Ducks Unlimited-Great Plains Region	\$1,904	

STEM Day for North-Central ND MS Students	Dakota College at Bottineau	Drake-Anamoose, Harvey, Rugby, Towner, Granville, Mohall, Newberg, Westhope, Bottineau, Dunseith, Dunseith Day School, Ojibwa Indian School, Turtle Mountain MS, Rollette, St Johns	500	ND Energy Education, Bottineau Ambulatory Services, ND Forest Service, USDA, NDSU Extension Service, ND Space Grant Consortium, ND Water Commission, UND School of Medicine and Aeronautics, WOLD Engineering, NCEC	\$4,500
Personalized STEM Carnival	Mayville State University	Central Valley, Emerado, Griggs County Central, Finley-Sharon, Hatton, Hillsboro, Hope-Page, Larimore, May-Port CG, Northern Cass, Northwood, Thompson	180	UND Society of Women Engineers, UND Division of Atmospheric Science, UND Aerospace, MSU Science Club, MSU Student Education Association	\$4,500
NESC Virtual Scrubs Camp	Northeast Education Services Cooperative (NESC)	Dakota Prairie, Devils Lake, Edmore, Lakota, Langdon, Leeds, Maddock, Minnewaukan, Mount Pleasant-Rolla, Pingree-Buchanan, St Alphonsus-Langdon, St Joeseeph's-Devils Lake, Starkweather, Tate Topa-Fort Totten	630	UND Rural Health, UND Nursing, MSU Nursing Be More Colorful-Fargo, Forward Devils Lake, Devils Lake Dental Office	\$3,500
Gateway to Science STEM Days	Gateway to Science	Tioga, Bowbells, Hebron, Selfridge, Liberty-Bismarck	350	Bartlet & West, Bill Barth Ford, Indigo Signworks, MDU Resources Foundation, ONEOK	\$6,150
E-Sports Pilot Programs	Grand Forks Area CTC, James Valley CTC, New Rockford-Sheyenne Public School, Hazelton-Moffit-Braddock Public School	Central Valley, Hatton, Hillsboro, Northwood, Thompson, Larimore, May-Port CG, Grand Forks, Jamestown, Gackle-Streeter, Montpelier, Pingree-Buchanan, New Rockford-Sheyenne, Cavalier, Midway, Hazelton-Moffit, Braddock, Wilton, Beulah, Hazen	120	Fenworks	\$14,000

2019 ANNUAL REPORT

State Averages

North Dakota Farm and Ranch Business

Management Education





North Dakota Department of Career
and Technical Education

Mr. Wayde Sick, State Director

Board Members

Dr. Brian Duchscherer, Chairperson	Carrington
Ms. Sonia Meehl, Vice Chairperson	Oakes
Ms. Kirsten Baesler	Bismarck
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Dr. Mark Hagerott	Bismarck
Mr. Josh Johnson	Valley City
Mr. Bryan Klipfel	Bismarck

The N.D. Farm Management Education Association recognizes the listed organizations for their contribution toward the production and distribution of the N.D. Farm and Ranch Business Management Regional and State Averages for 2019.

THANK YOU TO ALL OF OUR STARS for sponsoring the averages:

DISTINGUISHED STAR PARTNER (\$25,000) – Twin Cities Region Northland Ford Dealers

5 STAR PARTNER (\$20,000) – CHS Foundation

4 STAR PARTNER (\$15,000) – BAYER, Asgrow, DEKALB, Channel, Rea, Monsanto

3 STAR PARTNER (\$10,000) – Farmers Union Insurance, ND Farmers Union, ND Farm Credit Services

2 STAR PARTNER (\$6,000) – ADM, Agtegra Cooperative, International Certification Services, Inc., Nodak Insurance Company, Zacharias Family

1 STAR PARTNERS (\$3,000) -- CF Industries, First International Bank & Trust, International Brotherhood of Electrical Workers, IRONCLAD Marketing, ND Building Trades Unions, ND Ethanol Council, North Central States Regional Council of Carpenters, North Dakota Farm Bureau, Pioneer Seeds a brand of Corteva, Agriscience, Lynnes Welding Training, Inc., ProSeed, RDO Equipment, Wilbur-Ellis Company, Gooseneck Implement, Titan Machinery, Plains Ag

NORTH DAKOTA FARM BUSINESS MANAGEMENT EDUCATION

2019 ANNUAL REPORT

<u>School</u>	<u>Instructor</u>
Bismarck State College	Kyle Olson
Bismarck State College – Dickinson	Jeff Dragseth
Dakota College at Bottineau	Rodney Armstrong
Dakota College at Bottineau – Minot.....	Lynsey Aberle
Dakota College at Bottineau – Rugby	Sheila Braaten
Devils Lake State College – Carrington	Joel Lemer
	Steve Metzger
Fargo (NDSCS).....	Kelcey Hoffmann
	Ron Smithberg
Glen Ullin High School	Ron Egli
Jamestown (NDSCS).....	Jason Fewell
	Virgil Dagman
Lake Region State College – Devils Lake.....	Darren Wilcox
Lake Region State College – Langdon	Jeremiah Halley
Wahpeton (NDSCS).....	Kara Wulfekuhle

This report was made possible by the farm families who cooperated with their farm management instructors in getting the records for 2019 closed out on a timely basis. The farm management instructors cited above generated the Finpack year-end farm analyses. Andrew Swenson, NDSU Extension Service, databased the Finpack analyses of farms and generated the comparative tables for this report.



2019 State Report
North Dakota Farm Business Management Education

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INTRODUCTION

This report summarizes the individual farm records of the specific region or the whole state as identified on the acknowledgement page. The current financial status of farm operators and net returns from each crop and livestock enterprise is reported. In addition to the average of all farms, the averages for the high, middle, and low-income groups are also presented. All participating farm/ranch families are provided a copy of the regional averages report. They can compare their own Finan business analysis to the regional and/or state averages report and study the areas that may need management improvement. A review of the comparative information may reveal how certain aspects of the business or enterprises excel and help answer why they are profitable.

The regional and state averages reports are divided into three major sections; farm operators' reports, crop reports and livestock reports. Explanatory notes precede each section. The first section contains 15 tables with whole farm financial and operator information. The last three tables of this section are financial summaries in which farms are categorized by gross revenue, age of operator and farm type, respectively. The second section provides performance information on crop enterprises. The third section provides performance results on livestock enterprises. Lastly, figures 1 through 10 provide trend information for various measures of finance and/or production.

The 2019 summary reports are based upon data generated by the Finan individual farm analysis completed by farm/ranch families enrolled in the statewide Adult Farm and Ranch Business Management Education program in North Dakota. Instructors pooled the individual business analysis and submitted the combined school data to the FINPACK Center located at North Dakota State University. The FINPACK Center did provide schools with local averages in order to assist instructors with obtaining relevant local management trends.

Farm/ranch families enrolled in the statewide program are encouraged to request assistance from their instructors to determine short-term cash flow and long-term projections. Each instructor has access to FINPACK computer programs, which can be used to generate annual or multi-year (cash flow) farm plans and/or long term alternative projections.

This is the 31st year that the regional averages have been generated in North Dakota based upon the four regions shown in the state map on the cover of this publication. A regional report has been generated and published for Regions 2 – North Central, 3 – South Central and 4 - Western identified on the North Dakota map. Farms in Region 1 – Red River Valley are located within the Red River Valley. Those farms are contained in a combined Minnesota-North Dakota Red River Valley report. The state averages report includes all farms participating in the North Dakota Farm Business Management Education Program that were represented in the regional averages and also those farms which were processed and submitted after the March deadline date. All of these reports may be ordered from Farm Business Management, P.O. Box 6022, Bismarck, ND, 58506-6022 for \$5 per copy. The reports are available online at www.ndfarmmanagement.com.

EXPLANATORY NOTES FOR THE FARM OPERATORS' REPORTS

The tables include the same number of farms, which were all of the farms whose records were judged to be of sufficient quality to be included in the overall report. However, the balance sheets include only sole proprietors. Partnerships and corporations are excluded because some debt is held outside of the business causing potential misinterpretations of the financial statement. The number of farms included in each of the crop tables varies because all farms do not have the same enterprises. Also, some farmers' records were complete enough to be included in the whole-farm tables, but at times, these same farmers' crop records were not complete enough to include in the respective crop and livestock tables.

Rounding of individual items for the report may have caused minor discrepancies with the printed totals which are calculated before rounding.

Farm Income Statement

This statement is a summary of income, expenses, or resultant profit or loss from farming operations during the calendar year.

The first section of the income statement is a table which lists cash farm income. There are several sources of cash farm income. Cash sales of crops are listed first followed by cash sales of livestock.

Government payments are categorized. "Crop government payments" are Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC) payments. "LDP payments" are loan deficiency payments that may be received on production when local prices are below the county loan rate for the crop. "Livestock government payments" include dairy MPP payments and other livestock related payments. "CRP payments" are funds received for land enrolled in the Conservation Reserve Program. "Other government payments" refers to all other government payments such as disaster payments, EQIP, CSP, and Market Facilitation Payments (MFP).

Lastly, cash income is categorized by sources such as custom work, cash patronage dividends, crop and property insurance indemnities, sale of resale items, and other.

The second section of the income statement lists cash expenses. "Hired labor" includes only labor which was hired and paid. "Interest" includes only interest actually paid. No opportunity charges on farm equity capital or unpaid labor are included.

The difference between "Gross Cash Farm Income" and "Total cash expense" is the "Net cash farm income." This is net farm income on a cash basis.

The last two sections of the income statement deal with the non-cash changes in the farm business. The "Inventory Changes" and "Depreciation" sections are used to convert the cash income statement (Net Cash Farm Income) derived from the first two sections into an accrual income statement. The final adjustment is for "Gain or loss on capital sales." The bottom line, labeled "Net farm income," represents the return to the operators and family's unpaid labor, management, and equity capital (net worth). In other words, it represents the return to all of the resources that are owned by the farm family and hence, not purchased or paid a wage. However, it does not include any debt forgiveness or asset repossessions.

Inventory Changes

This is the detailed statement of inventory changes that is summarized in the income statement. It includes beginning and ending inventories and the calculated changes.

Depreciation

This is the detailed statement of depreciation and other capital adjustments that is summarized in the income statement. It includes beginning and ending inventories, and capital sales and purchases.

Profitability Measures

This table shows profitability when capital assets are valued at cost. Various measures of performance are calculated. In the previous tables no opportunity costs are used. In this table, opportunity costs for labor, capital, and management are used. The measures and their components are described below.

"Rate of return on assets" is the "Return on farm assets" divided by "Average farm assets."

"Rate of return on equity" is the "Return of farm equity" divided by "Average farm equity."

"Operating profit margin" is the "Return on farm assets" divided by "Value of farm production."

"Asset turnover rate" is the "Value of farm production" divided by "Average farm assets."

"Farm interest expense" is the accrual interest cost, usually it will be different from the cash interest expense.

"Value of operator's labor and management" is an opportunity cost for unpaid operators labor and management that is used in the calculation of several financial performance measures. A value of \$25,000 per full time operator plus 5% of value of farm production is used.

"Return of farm assets" is calculated by adding "Farm interest expense" to "Net farm income" and then subtracting the "Value of operator's labor and management."

"Average farm assets" is the average of beginning and ending total farm assets.

"Return on farm equity" is calculated by subtracting the "Value of operator's labor and management" from "Net farm income."

"Average farm equity" is the average of beginning and ending farm net worth.

"Value of farm production" is gross cash farm income minus purchased feed and feeder livestock and adjusted for inventory changes in crops, market livestock, accounts receivable and breeding livestock.

Liquidity & Repayment Capacity Measures

The table shows several measures of liquidity and repayment capacity. Calculation of repayment capacity starts with net farm income from operations and adds back the non-cash expense of depreciation. Personal income is also added. Family living expenses, personal debt payments and income taxes paid are subtracted to determine the capital debt repayment capacity.

Balance Sheets

The ending balance sheet statements and solvency measures are presented for sole proprietors only. Current assets are valued at market price at the time of the inventory which is December 31. In balance sheet at cost values, intermediate and long-term assets that are depreciable are valued at cost remaining (amount remaining to be depreciated, plus salvage value). Raised breeding livestock is valued at conservative market replacement costs. Land is valued at cost or conservative market value. In balance sheet at market values, the intermediate and long term assets are listed at market value, and deferred income tax liabilities are estimated.

Statement of Cash Flows

This statement organizes cash inflows and outflows by the following three categories: Operating activities, investing activities, and financing activities.

Financial Standards Measures

The Farm Financial Standards Task Force recommended the use of these financial measures to evaluate a farm's financial position and financial performance. These measures are grouped by: Liquidity, Solvency, Profitability, Repayment Capacity, and Efficiency.

Liquidity

Liquidity is the ability of the farm business to meet financial obligations in a timely manner, without disrupting normal business operations.

Current Ratio: The current ratio shows the value of current assets relative to current liabilities. It measures the extent current farm assets, if liquidated, would cover liabilities that are due during the next 12 months. The higher the ratio, the safer the short term position.

Working Capital: Working capital shows the dollar amount that current assets can or cannot cover current liabilities. It approximates the amount of capital available to purchase crop and livestock inputs and equipment necessary to produce farm products. The amount of working capital considered adequate must be related to the size of the farm business.

Working Capital to Gross Revenues: Measures operating capital available against the size of the business.

Solvency

Solvency is important in evaluating the risk position of the farm and family and in considering future borrowing capacity. Solvency measures the ability of the business to pay off all debts if liquidated.

Farm Debt To Asset Ratio: The farm debt to asset ratio measures the financial position or solvency of the farm or ranch by comparing the total liabilities to the total assets. It measures the portion of the farm assets that have debt against them. A higher ratio is considered an indicator of greater financial risk.

Farm Equity To Asset Ratio: The farm equity to asset ratio measures the farm equity relative to the value of the farm assets. It measures the proportion of the farm assets financed by the owner's equity whereas the debt to asset ratio measured the proportion of farm assets financed by debt.

Farm Debt To Equity Ratio: The farm debt to equity ratio measures the amount of farm debt relative to the amount of farm equity. It measures the amount of debt the farm has for every dollar of equity.

Profitability

Profitability is the measure of the value of goods produced by the business in relation to the cost of resources used in the production. Profitability calculated on a cost basis does not consider changes in market valuation of capital assets such as machinery and breeding livestock.

Rate of Return on Assets: Rate of return on assets is, in effect, the interest rate your farm earned in the past year on all money invested in the business. If assets are valued at market value, the rate of return on investment can be looked at as the "opportunity cost" of investing money in the farm instead of alternative investments. If assets are valued at cost (cost less depreciation), the rate of return represents the actual return on the average dollar invested in the business.

Rate of Return on Equity: Rate of return on equity is, in effect, the interest rate your investment in the business earned in the past year. If assets are valued at market value, this return can be compared with returns available if the assets were liquidated and invested in alternative investments. If assets are valued at cost, this represents the actual return to the amount of equity capital you have invested in the farm business.

If your return on assets is higher than your average interest rate, your return on equity will be still higher, reflecting the fact that there are residual returns to equity capital after paying all interest expense. This is positive use of financial leverage. If your return on assets is lower than your average interest rate, your return on equity will be still lower, reflecting the fact that borrowed capital did not earn enough to pay its interest cost. This is negative financial leverage. Profitability becomes a key concern when substantial debt capital is used in the business.

Operating Profit Margin: The operating profit margin is a measure of the profit margin from the employment of assets. It measures how effectively you are employing assets relative to the value of output produced. Low prices, high operating expenses, or production problems are all possible causes of a low operating profit margin.

Net Farm Income: Net farm income represents the returns to labor, management, and equity capital invested in the business. Without income from other sources, or appreciation of capital asset values, net farm income must cover family living expenses and taxes, or net worth will decrease.

EBITDA: This factor stands for: Earnings Before Interest, Taxes, Depreciation and Amortization. This represents a measure of earnings available for debt repayment.

Repayment Capacity

Repayment capacity shows the borrower's ability to repay term debts (longer than one year) on time. This includes non-farm income, and is therefore not a measure of business performance alone.

Capital Debt Repayment Capacity: Measures the amount generated from farm and non-farm sources, to cover debt repayment and capital replacement.

Capital Debt Repayment Margin: The amount of money remaining after all operating expenses, taxes, family living costs, and scheduled debt payments have been made. It is the money left, after paying all expenses, which is available for purchasing/financing new machinery, equipment, land or livestock.

Replacement Margin: The replacement margin is the amount of income remaining after paying principal and interest on term loans and unfunded (cash) capital purchases.

Term Debt Coverage Ratio: The term debt coverage ratio measures the ability of the business to cover all term debt payments. A number less than 100 percent indicates that the business, plus non-farm income, is not generating sufficient cash to meet all of the debt payments, after family living expenses and taxes have been paid. A number greater than 100 indicates the business is generating sufficient cash to pay all term debt obligations with some surplus margin remaining.

Replacement Margin Coverage Ratio: This represents the ability to term debt and unfunded capital purchases. A ratio under 1.0 indicated that you did not generate enough income to cover term debt payments and unfunded capital purchases.

Efficiency

These measures reflect the relationships between expense and income items to revenue and the efficiency of the farm business with regard to the use of cash and capital assets.

Asset Turnover: Asset turnover is a measure of how efficiently assets are used in the business. A farm with good operating profit margin and asset turnover will show a strong rate of return on farm assets. If operating profit margin is low, the asset turnover rate must be strong, or vice versa, to maintain the rate of return on assets.

Operating Expense Ratio: This ratio indicates the percent of the gross farm income, which is used to pay the operating expenses. Operating expenses do not include interest or depreciation expense.

Depreciation Expense Ratio: This ratio indicates the percent of the gross farm income, which is used to cover the depreciation expense.

Interest Expense Ratio: This ratio indicates the percent of the gross farm income, which is used to pay farm interest expenses.

Net Farm Income Ratio: The ratio indicates the percent of the gross farm income, which remains after all expenses.

Crop Production and Marketing Summary

This table contains three sections. The first section reports averages for total acres owned, crop land by tenure and total pasture acres. The next two sections show average price received and average yields for major crops. These tables are sorted on the basis of "Net farm income."

Household and Personal Expenses

For those farms that keep records, the household and personal expenses are summarized. The farms are grouped in the same ranking as in the Income Statement. Since not all farms keep these records, the number of farms in the low profit and high profit groups may be different. Averages are determined by the number of farms keeping these records. The Statement of Cash Flows presents calculated family living and includes all farms. Income tax paid is also shown in the Statement of Cash Flows and includes all farms.

Operator and Labor Information

This table reports the average for the number of operators per farm, the operator's age, and the number of years farming.

Nonfarm Summary

This table also reports nonfarm income. The figure reported is the average over all farms not just those reporting nonfarm income.

Farm Income Statement
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Cash Farm Income				
Barley	20,962	11,294	5,023	66,221
Beans, Black Turtle	633	-	1,370	1,779
Beans, Faba	85	176	-	-
Beans, Garbonzo	1,152	4,734	-	325
Beans, Light Red Kidney	115	-	578	-
Beans, Navy	1,650	2,074	-	802
Beans, Pinto	17,830	16,520	10,983	53,335
Buckwheat	79	395	-	-
Canola	30,933	15,696	14,122	71,565
Corn	143,129	120,416	107,139	247,719
Corn Silage	1,351	-	-	-
Hay, Alfalfa	570	71	-	79
Hay, Mixed	1,229	5,924	33	-
Hay, Small Grain	640	2,607	224	-
Lentils	431	67	-	2,065
Oats	682	-	1,626	515
Peas, Field	4,644	2,870	7,318	6,647
Potatoes	1,326	6,301	-	-
Rye	460	85	1,351	-
Soybeans	178,029	141,766	123,199	318,055
Sugar Beets	9,228	9,705	5,706	6,122
Sunflowers	12,162	21,996	1,314	28,570
Sunflowers, Confectionary	2,863	2,455	-	4,208
Wheat, Durum	7,727	6,574	-	26,796
Wheat, Spring	122,998	129,620	71,749	258,235
Wheat, Winter	1,157	3,590	-	906
Rented Out	289	642	64	732
Soybeans, Natto	539	-	-	1,528
User Added Crop	346	1,465	-	266
Miscellaneous crop income	6,499	2,444	1,066	8,055
Beef Bulls	1,058	306	22	179
Beef Cow-Calf, Beef Calves	27,754	41,359	28,788	29,194
Beef Replacement Heifers	1,216	386	3,843	1,415
Beef Backgrounding	7,529	9,352	12,525	5,608
Beef Finishing	20,116	99,185	68	1,579
Beef Finish Yearlings	1,628	2,985	1,469	47
Beef Stockers	683	-	-	3,376
Dairy, Milk	23,248	49,675	-	55,339
Dairy, Dairy Calves	445	236	-	1,468
Horses, Breeding Mares, Foals	57	-	281	-
Sheep, Feeder Lamb Prod, Fdr Lambs	39	194	-	-
Bison Cow-Calf, Bison Calves	315	-	-	-
Cull breeding livestock	6,566	8,209	6,499	7,925
Misc. livestock income	98	140	176	36
Crop government payments	16,943	13,808	7,367	38,279
CRP payments	1,222	527	1,044	3,102
Other government payments	68,404	63,903	43,275	127,817
Conservation govt payment	3,450	2,068	2,749	6,466
Custom work income	20,439	61,483	5,973	20,059
Patronage dividends, cash	5,022	6,284	3,853	6,471
Crop insurance income	46,600	64,788	20,072	92,870
Property insurance income	2,776	4,771	2,177	3,956
Sale of resale items	297	-	-	909
Livestock insurance inc	27	14	114	-
Other farm income	20,854	15,734	21,835	23,929
Gross Cash Farm Income	846,523	954,899	514,996	1,534,550

Farm Income Statement (continued)
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Cash Farm Expense				
Seed and plants	88,356	81,194	52,413	165,957
Fertilizer	102,154	118,338	57,573	187,136
Crop chemicals	64,094	68,580	34,810	123,884
Crop insurance	26,784	33,446	16,148	48,242
Drying expense	3,703	3,534	2,559	6,540
Storage	954	729	295	1,708
Irrigation energy	243	-	296	349
Crop miscellaneous	1,280	1,607	438	1,692
Crop consultants	2,268	1,393	824	4,863
Feeder livestock purchase	11,779	47,513	4,425	6,872
Purchased feed	18,294	41,712	7,375	28,768
Breeding fees	525	1,006	199	917
Veterinary	3,072	7,111	1,848	3,358
Supplies	7,597	31,878	874	2,991
Livestock leases	235	1,018	78	63
Livestock consultants	64	-	-	316
Interest	42,962	67,986	25,329	58,333
Fuel & oil	33,289	43,000	19,664	53,097
Repairs	64,348	85,655	39,546	93,899
Custom hire	17,101	20,711	10,176	25,170
Hired labor	32,449	54,398	15,289	56,187
Land rent	118,371	121,387	67,739	202,009
Stock/quota lease	136	64	-	-
Machinery leases	11,035	14,564	6,074	19,535
Building leases	1,517	3,452	826	2,063
Real estate taxes	5,524	4,769	4,598	8,538
Farm insurance	12,184	15,780	8,408	18,927
Utilities	10,477	12,822	6,284	16,936
Hauling and trucking	775	3,886	-	-
Marketing	1,869	3,382	1,346	2,742
Dues & professional fees	4,527	5,785	2,837	8,188
Purchase of resale items	3,727	2,882	1,194	3,789
Miscellaneous	11,912	10,394	6,128	22,764
Total cash expense	703,605	909,976	395,593	1,175,833
Net cash farm income	142,917	44,923	119,402	358,717
Inventory Changes				
Prepays and supplies	-2,359	-2,977	-7,691	4,899
Accounts receivable	10,604	20,099	4,956	12,982
Hedging accounts	2,381	3,031	144	6,013
Other current assets	4,934	5,898	243	-382
Crops and feed	3,383	-34,958	-25,690	78,299
Market livestock	-6,418	-41,528	4,166	7,143
Breeding livestock	-3,166	-8,215	-8,100	-615
Other assets	-392	-236	2,484	-5,563
Accounts payable	-4,407	2,065	-1,804	-9,020
Accrued interest	-3,301	-5,344	-1,416	-6,627
Total inventory change	1,260	-62,166	-32,707	87,129
Net operating profit	144,178	-17,243	86,695	445,846
Depreciation				
Machinery and equipment	-59,783	-62,304	-38,348	-116,009
Titled vehicles	-6,694	-6,663	-4,182	-11,042
Buildings and improvements	-6,690	-9,122	-3,907	-14,860
Total depreciation	-73,167	-78,088	-46,437	-141,911
Net farm income from operations	71,010	-95,331	40,258	303,935
Gain or loss on capital sales	3,090	-825	-1,256	13,543
Net farm income	74,100	-96,157	39,002	317,478

Inventory Changes
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Net cash farm income	142,917	44,923	119,402	358,717
Crops and Feed				
Ending inventory	503,122	407,768	277,932	1,158,636
Beginning inventory	499,739	442,726	303,622	1,080,337
Inventory change	3,383	-34,958	-25,690	78,299
Market Livestock				
Ending inventory	40,183	66,117	42,222	36,937
Beginning inventory	46,601	107,645	38,056	29,793
Inventory change	-6,418	-41,528	4,166	7,143
Accts Receivable				
Ending inventory	67,058	81,819	28,660	126,301
Beginning inventory	56,453	61,720	23,704	113,320
Inventory change	10,604	20,099	4,956	12,982
Prepaid Expenses and Supplies				
Ending inventory	61,352	35,422	31,832	169,770
Beginning inventory	63,711	38,399	39,523	164,871
Inventory change	-2,359	-2,977	-7,691	4,899
Hedging Activities				
Ending inventory	6,701	4,353	3,386	19,297
Withdrawals	5,264	4,488	4,713	13,467
Beginning inventory	5,621	3,808	3,935	16,363
Deposits	3,962	2,001	4,020	10,389
Gain or loss	2,381	3,031	144	6,013
Other Current Assets				
Ending inventory	7,454	10,721	1,424	1,270
Beginning inventory	2,520	4,823	1,180	1,652
Inventory change	4,934	5,898	243	-382
Breeding Livestock				
Ending inventory	80,040	109,861	59,720	97,785
Capital sales	1,187	1,281	1,376	2,001
Beginning inventory	77,501	110,157	55,314	97,446
Capital purchases	6,892	9,200	13,882	2,955
Depreciation, capital adjust	-3,166	-8,215	-8,100	-615
Other Capital Assets				
Ending inventory	120,550	82,612	89,298	242,647
Capital sales	1,971	1,209	5,774	2,139
Beginning inventory	112,507	80,072	91,647	210,253
Capital purchases	10,406	3,985	941	40,096
Depreciation, capital adjust	-392	-236	2,484	-5,563
Accounts Payable				
Beginning inventory	26,803	47,395	10,061	38,627
Ending inventory	31,209	45,330	11,864	47,647
Inventory change	-4,407	2,065	-1,804	-9,020
Accrued Interest				
Beginning inventory	17,887	26,916	10,263	24,396
Ending inventory	21,188	32,261	11,679	31,022
Inventory change	-3,301	-5,344	-1,416	-6,627
Total inventory change	1,260	-62,166	-32,707	87,129
Net operating profit	144,178	-17,243	86,695	445,846

Depreciation
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Net operating profit	144,178	-17,243	86,695	445,846
Machinery and Equipment				
Ending inventory	626,227	606,586	438,455	1,181,152
Capital sales	22,699	22,830	12,994	60,801
Beginning inventory	615,803	623,064	426,721	1,132,115
Capital purchases	92,906	68,656	63,075	225,847
Depreciation, capital adjust.	-59,783	-62,304	-38,348	-116,009
Titled Vehicles				
Ending inventory	54,824	51,757	37,089	93,029
Capital sales	1,727	1,669	957	2,512
Beginning inventory	53,318	53,600	37,039	87,196
Capital purchases	9,927	6,489	5,188	19,388
Depreciation, capital adjust.	-6,694	-6,663	-4,182	-11,042
Buildings and Improvements				
Ending inventory	204,247	229,650	133,393	410,054
Capital sales	832	2,119	70	1,949
Beginning inventory	197,072	224,758	133,889	393,528
Capital purchases	14,697	16,133	3,481	33,336
Depreciation, capital adjust.	-6,690	-9,122	-3,907	-14,860
Total depreciation, capital adj.	-73,167	-78,088	-46,437	-141,911
Net farm income from operations	71,010	-95,331	40,258	303,935
Gain or loss on capital sales	3,090	-825	-1,256	13,543
Net farm income	74,100	-96,157	39,002	317,478

Profitability Measures
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Profitability (assets valued at cost)				
Net farm income from operations	71,010	-95,331	40,258	303,935
Rate of return on assets	2.3 %	-3.7 %	1.2 %	5.9 %
Rate of return on equity	0.6 %	-16.0 %	-0.6 %	6.7 %
Operating profit margin	6.6 %	-10.4 %	4.3 %	16.7 %
Asset turnover rate	34.6 %	35.2 %	28.9 %	35.3 %
Farm interest expense	46,262	73,330	26,744	64,960
Value of operator lbr and mgmt.	62,966	61,883	46,571	102,794
Return on farm assets	54,307	-83,884	20,432	266,101
Average farm assets	2,373,670	2,287,496	1,662,490	4,516,704
Return on farm equity	8,045	-157,214	-6,313	201,141
Average farm equity	1,403,253	980,933	1,081,974	3,018,952
Value of farm production	820,674	805,899	480,339	1,593,803

Liquidity & Repayment Capacity Measures
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Liquidity				
Current ratio	1.59	1.01	2.09	1.97
Working capital	221,878	5,509	193,502	576,711
Working capital to gross inc	30.7%	0.7%	48.2%	42.0%
Current assets	595,318	580,280	370,690	1,171,633
Current liabilities	373,440	574,770	177,189	594,922
Gross revenues (accrual)	722,808	804,908	401,803	1,373,971
Repayment capacity				
Net farm income from operations	71,010	-95,331	40,258	303,935
Depreciation	73,167	78,088	46,437	141,911
Personal income	37,433	38,011	33,712	45,065
Family living/owner withdrawals	-69,107	-73,551	-52,914	-92,189
Cash discrepancy	118	-22	-6	338
Payments on personal debt	-4,701	-4,647	-4,067	-6,067
Income taxes paid	-14,166	-8,768	-11,275	-30,187
Interest on term debt	26,513	33,546	16,302	39,179
Capital debt repayment capacity	120,267	-32,673	68,448	401,984
Scheduled term debt payments	-88,928	-106,610	-55,067	-141,087
Capital debt repayment margin	31,338	-139,284	13,382	260,897
Cash replacement allowance	-41,885	-34,519	-32,643	-81,279
Replacement margin	-10,546	-173,802	-19,261	179,618
Term debt coverage ratio	1.35	-0.31	1.24	2.85
Replacement coverage ratio	0.92	-0.23	0.78	1.81

Balance Sheet at Cost Values
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	330	65	66	58
Assets				
Current Farm Assets				
Cash and checking balance	52,595	23,298	71,873	74,880
Prepaid expenses & supplies	43,277	33,862	25,512	101,251
Growing crops	4,389	2,286	184	393
Accounts receivable	52,428	71,877	28,274	85,982
Hedging accounts	5,137	4,609	1,376	17,158
Crops held for sale or feed	396,853	371,483	198,010	871,005
Market livestock held for sale	39,134	72,342	44,458	20,912
Other current assets	1,506	524	1,003	52
Total current farm assets	595,318	580,280	370,690	1,171,633
Intermediate Farm Assets				
Breeding livestock	69,097	85,351	62,760	59,188
Machinery and equipment	529,800	577,152	350,436	954,228
Titled vehicles	49,581	49,687	31,776	80,757
Other intermediate assets	48,075	43,095	45,703	77,092
Total intermediate farm assets	696,553	755,286	490,675	1,171,266
Long Term Farm Assets				
Farm land	560,697	552,962	434,098	1,100,885
Buildings and improvements	156,400	192,778	92,966	298,959
Other long-term assets	42,160	28,374	19,199	80,947
Total long-term farm assets	759,257	774,114	546,262	1,480,791
Total Farm Assets	2,051,129	2,109,680	1,407,627	3,823,690
Total Nonfarm Assets	330,250	330,435	250,084	464,201
Total Assets	2,381,379	2,440,115	1,657,712	4,287,890
Liabilities				
Current Farm Liabilities				
Accrued interest	19,248	30,076	8,918	30,200
Accounts payable	24,534	39,371	8,847	38,240
Current notes	270,866	434,450	126,169	428,199
Government crop loans	-	-	-	-
Principal due on term debt	58,791	70,873	33,255	98,283
Total current farm liabilities	373,440	574,770	177,189	594,922
Total intermediate farm liabs	166,639	236,879	82,783	231,523
Total long term farm liabilities	359,261	457,837	216,498	636,468
Total farm liabilities	899,340	1,269,486	476,470	1,462,912
Total nonfarm liabilities	64,501	76,497	49,314	98,280
Total liabilities	963,841	1,345,983	525,783	1,561,192
Net worth (farm and nonfarm)	1,417,537	1,094,132	1,131,928	2,726,698
Net worth change	39,680	-114,663	62,201	216,298
Percent net worth change	3 %	-9 %	6 %	9 %
Ratio Analysis				
Current farm liabilities / assets	63 %	99 %	48 %	51 %
Intermediate farm liab. / assets	24 %	31 %	17 %	20 %
Long term farm liab. / assets	47 %	59 %	40 %	43 %
Total debt to asset ratio	40 %	55 %	32 %	36 %

Statement Of Cash Flows
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Beginning cash (farm & nonfarm)	71,108	49,902	76,617	97,720
Cash Provided By Operating Activities				
Gross cash farm income	846,523	954,899	514,996	1,534,550
Total cash farm expense	-703,605	-909,976	-395,593	-1,175,833
Net cash from hedging transactions	1,302	2,486	693	3,079
Cash provided by operating	144,219	47,409	120,095	361,795
Cash Provided By Investing Activities				
Sale of breeding livestock	1,062	1,281	1,376	1,555
Sale of machinery & equipment	22,539	21,271	11,704	63,154
Sale of titled vehicles	1,772	1,354	991	2,802
Sale of farm land	6,214	3,342	-	19,723
Sale of farm buildings	847	2,187	70	1,946
Sale of other farm assets	2,185	2,283	5,774	2,139
Sale of nonfarm assets	8,033	4,789	661	5,511
Purchase of breeding livestock	-6,892	-9,200	-13,882	-2,955
Purchase of machinery & equip.	-92,906	-68,656	-63,075	-225,847
Purchase of titled vehicles	-9,927	-6,489	-5,188	-19,388
Purchase of farm land	-58,968	-43,088	-61,874	-148,241
Purchase of farm buildings	-14,697	-16,133	-3,481	-33,336
Purchase of other farm assets	-10,406	-3,985	-941	-40,096
Purchase of nonfarm assets	-19,526	-6,165	-24,598	-21,369
Cash provided by investing	-170,669	-117,207	-152,464	-394,401
Cash Provided By Financing Activities				
Money borrowed	697,779	969,380	389,063	1,184,676
Principal payments	-633,710	-867,862	-347,738	-1,082,617
Personal income	37,433	38,011	33,712	45,065
Family living/owner withdrawals	-69,106	-73,551	-52,911	-92,189
Income and social security tax	-14,753	-8,929	-12,164	-27,488
Capital contributions	343	33	-	1,665
Capital distributions	-1,329	-75	-3,979	-446
Dividends paid	-1	-	-3	-
Cash gifts and inheritances	15,961	4,212	39,604	28,433
Gifts given	-1,395	-1,132	-2,253	-2,660
Other cash flows	-	-	-	-
Cash provided by financing	31,221	60,088	43,331	54,439
Net change in cash balance	4,772	-9,710	10,962	21,833
Ending cash (farm & nonfarm)	75,998	40,170	87,574	119,891
Discrepancy	-118	22	6	-338

Financial Standards Measures
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Liquidity				
Current ratio	1.59	1.01	2.09	1.97
Working capital	221,878	5,509	193,502	576,711
Working capital to gross inc	30.7%	0.7%	48.2%	42.0%
Solvency (cost)				
Farm debt to asset ratio	44%	60%	34%	38%
Farm equity to asset ratio	56%	40%	66%	62%
Farm debt to equity ratio	0.78	1.51	0.51	0.62
Profitability (cost)				
Rate of return on farm assets	2.3%	-3.7%	1.2%	5.9%
Rate of return on farm equity	0.6%	-16.0%	-0.6%	6.7%
Operating profit margin	6.6%	-10.4%	4.3%	16.7%
Net farm income	74,100	-96,157	39,002	317,478
EBITDA	190,440	56,087	113,439	510,806
Repayment Capacity				
Capital debt repayment capacity	120,267	-32,673	68,448	401,984
Capital debt repayment margin	31,338	-139,284	13,382	260,897
Replacement margin	-10,546	-173,802	-19,261	179,618
Term debt coverage ratio	1.35	-0.31	1.24	2.85
Replacement coverage ratio	0.92	-0.23	0.78	1.81
Efficiency				
Asset turnover rate (cost)	34.6%	35.2%	28.9%	35.3%
Operating expense ratio	77.7%	93.8%	77.0%	68.7%
Depreciation expense ratio	8.6%	8.7%	9.4%	8.7%
Interest expense ratio	5.4%	8.2%	5.4%	4.0%
Net farm income ratio	8.3%	-10.6%	8.2%	18.6%

Crop Production and Marketing Summary
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Acreage Summary				
Total acres owned	733	641	656	1,175
Total crop acres	2,147	2,387	1,256	3,894
Crop acres owned	458	381	383	813
Crop acres cash rented	1,608	1,927	821	2,921
Crop acres share rented	81	79	52	160
Total pasture acres	426	495	404	478
Percent crop acres owned	21%	16%	30%	21%
Mach invest/crop acre cost	313	280	372	319
Average Price Received (Cash Sales Only)				
Soybeans per bushel	8.02	7.96	7.97	8.11
Wheat, Spring per bushel	4.85	4.60	4.88	5.03
Corn per bushel	3.31	3.28	3.55	3.24
Canola per cwt	14.99	13.62	13.83	15.51
Barley per bushel	4.31	4.03	4.17	4.45
Beans, Pinto per cwt	23.02	23.00	22.67	23.09
Sunflowers per cwt	18.00	18.68	-	18.29
Peas, Field per bushel	6.15	5.07	7.32	6.24
Wheat, Durum per bushel	6.51	-	-	7.15
Flax per bushel	9.88	-	-	9.89
Hay, Grass per ton	46.59	-	-	-
Oats per bushel	2.31	-	-	-
Wheat, Winter per bushel	3.68	-	-	-
Average Yield Per Acre				
Wheat, Spring (bushel)	54.86	48.30	50.28	57.86
Soybeans (bushel)	35.33	32.82	33.88	36.15
Corn (bushel)	148.97	137.79	144.18	153.97
Canola (cwt)	18.78	18.42	18.79	18.60
Barley (bushel)	78.04	67.22	53.59	84.92
Hay, Mixed Alfalfa/Grass (ton)	1.35	1.72	1.22	1.20
Hay, Grass (ton)	1.11	0.883	0.977	1.37
Hay, Small Grain (ton)	2.36	2.91	2.08	2.57
Sunflowers (cwt)	15.72	16.34	-	16.37
Sugar Beets (ton)	18.79	18.72	23.47	14.15
Peas, Field (bushel)	43.62	43.95	-	40.71
Beans, Pinto (cwt)	15.12	13.78	14.70	15.66
Hay, Alfalfa (ton)	2.13	-	-	2.73
Flax (bushel)	23.29	-	-	22.84
Corn Silage (ton)	17.10	-	16.62	-
Wheat, Durum (bushel)	59.43	-	-	60.06
Oats (bushel)	80.08	-	-	-
Beans, Black Turtle (cwt)	16.33	-	-	17.20
Soybeans, Food (bushel)	31.42	-	-	-
Beans, Navy (cwt)	18.80	-	-	-
Hay, Summer Annual Grass (ton)	2.07	-	-	-

Household and Personal Expenses
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	94	16	22	15
Average family size	2.8	3.0	2.5	2.9
Family Living Expenses				
Food and meals expense	8,752	9,429	7,172	9,112
Medical care	4,563	4,589	3,632	4,306
Health insurance	7,784	8,721	6,255	11,578
Cash donations	2,099	1,884	2,094	4,572
Household supplies	5,865	6,184	5,804	5,944
Clothing	2,202	2,076	1,426	2,960
Personal care	5,018	4,538	4,748	6,706
Child / Dependent care	857	462	1,273	557
Alimony and child support	81	-	307	-
Gifts	1,734	3,056	1,485	2,094
Education	739	1,435	267	771
Recreation	5,148	6,002	5,232	5,257
Utilities (household share)	3,925	4,475	3,053	5,590
Personal vehicle operating exp	3,565	6,172	2,204	2,640
Household real estate taxes	320	239	482	566
Dwelling rent	126	-	5	-
Household repairs	2,021	1,340	1,845	1,790
Personal interest	1,574	2,122	1,896	514
Disability / Long term care ins	236	149	222	450
Life insurance payments	2,702	3,054	2,569	4,782
Personal property insurance	621	1,085	631	674
Miscellaneous	5,721	7,893	4,484	5,588
Total cash family living expense	65,653	74,905	57,076	76,449
Family living from the farm	314	57	913	436
Total family living	65,967	74,962	57,989	76,885
Other Nonfarm Expenditures				
Income taxes	13,667	6,248	18,170	33,145
Furnishing & appliance purchases	45	-	-	-
Nonfarm vehicle purchases	2,673	3,082	1,343	3,082
Nonfarm real estate purchases	3,288	-	3,115	-
Other nonfarm capital purchases	841	-	-369	686
Nonfarm savings & investments	-905	-16,990	1,207	5,915
Total other nonfarm expenditures	19,608	-7,660	23,466	42,828
Total cash family living investment & nonfarm capital purch	85,261	67,245	80,541	119,277

Operator and Labor Information
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Operator Information				
Average number of operators	1.1	1.1	1.1	1.3
Average age of operators	46.6	49.7	46.9	46.0
Average number of years farming	21.7	24.5	21.4	22.2
Results Per Operator				
Working capital	269,924	12,610	208,303	665,819
Total assets (cost)	2,487,582	2,260,469	1,902,503	3,943,211
Total liabilities	962,724	1,259,221	618,936	1,255,187
Net worth (cost)	1,524,858	1,001,248	1,283,568	2,688,024
Gross farm income	764,640	789,812	461,710	1,233,257
Total farm expense	701,095	873,657	424,032	1,003,755
Net farm income from operations	63,545	-83,846	37,677	229,502
Net nonfarm income	33,497	33,432	31,551	34,028
Family living & tax withdrawals	74,412	72,420	60,080	92,151
Total acres owned	655.6	563.4	614.1	887.4
Total crop acres	1,920.9	2,099.4	1,175.5	2,940.7
Crop acres owned	409.5	335.3	358.3	614.2
Crop acres cash rented	1,438.8	1,695.0	768.7	2,205.6
Crop acres share rented	72.7	69.1	48.5	120.9
Total pasture acres	381.5	435.2	378.0	360.8
Labor Analysis				
Number of farms	366	73	73	74
Total unpaid labor hours	2,065	2,101	1,853	2,617
Total hired labor hours	1,123	2,151	550	1,878
Total labor hours per farm	3,188	4,252	2,403	4,495
Unpaid hours per operator	1,848	1,848	1,735	1,976

Nonfarm Summary
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Farm Income)

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	366	73	73	74
Nonfarm Income				
Personal wages & salary	24,943	29,985	25,988	20,670
Net nonfarm business income	4,075	910	1,625	10,261
Personal rental income	1,285	767	1,467	3,719
Personal interest income	568	109	342	1,936
Personal cash dividends	52	13	119	118
Tax refunds	1,431	1,790	923	966
Other nonfarm income	5,079	4,437	3,248	7,396
Total nonfarm income	37,433	38,011	33,712	45,065
Gifts and inheritances	15,961	4,212	39,604	28,433

Financial Summary
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Gross Farm Income)

	<u>Avg. Of All Farms</u>	<u>Less than 100,000</u>	<u>100,001 - 250,000</u>	<u>250,001 - 500,000</u>	<u>500,001 - 1,000,000</u>	<u>1,000,001- 2,000,000</u>	<u>Over 2,000,000</u>
Number of farms	366	30	54	63	125	67	27
Income Statement							
Gross cash farm income	846,523	59,677	182,297	369,547	720,920	1,422,444	3,314,547
Total cash farm expense	703,605	61,241	165,209	312,314	583,399	1,159,570	2,832,194
Net cash farm income	142,917	-1,564	17,088	57,233	137,521	262,873	482,353
Inventory change	1,260	10,706	17,958	3,484	-10,912	-5,322	24,869
Depreciation	-73,167	-6,571	-14,738	-29,142	-66,576	-133,523	-247,486
Net farm income from operations	71,010	2,571	20,309	31,575	60,033	124,028	259,736
Gain or loss on capital sales	3,090	320	4,399	1,556	1,216	4,810	11,532
Average net farm income	74,100	2,891	24,708	33,131	61,249	128,837	271,268
Median net farm income	36,319	3,691	12,510	38,202	48,464	121,077	158,582
Profitability (cost)							
Rate of return on assets	2.3%	-2.8 %	1.0%	0.9%	1.9%	2.6%	3.2%
Rate of return on equity	0.6%	-14.1%	-2.4%	-1.1%	0.0%	1.2%	1.9%
Operating profit margin	6.6%	-11.7%	3.6%	2.9%	5.9%	7.6%	8.2%
Asset turnover rate	34.6%	24.3%	27.0%	32.0%	33.0%	34.4%	39.6%
Liquidity & Repayment (end of year)							
Current assets	595,318	71,885	167,706	322,601	633,848	1,111,868	2,155,433
Current liabilities	373,440	56,662	93,144	170,275	375,309	725,297	1,583,848
Current ratio	1.59	1.27	1.80	1.89	1.69	1.53	1.36
Working capital	221,878	15,223	74,562	152,326	258,539	386,571	571,584
Change in working capital	-22,887	4,705	-8,313	-30,796	-22,256	-60,852	30,708
Working capital to gross inc	30.7%	20.1%	39.3%	41.0%	35.2%	27.7%	19.8%
Term debt coverage ratio	1.35	0.97	0.94	1.09	1.10	1.41	1.92
Replacement coverage ratio	0.92	0.83	0.76	0.74	0.75	0.95	1.24
Term debt to EBITDA	2.81	8.29	5.19	2.98	2.90	2.73	2.26
Solvency (end of year at cost)							
Number of sole proprietors	330	30	52	62	119	52	15
Total assets	2,381,379	419,727	874,561	1,400,620	2,574,814	4,608,764	6,325,926
Total liabilities	963,841	244,904	420,015	467,187	941,680	1,848,282	3,449,562
Net worth	1,417,537	174,823	454,546	933,433	1,633,134	2,760,482	2,876,364
Net worth change	39,680	19,062	14,647	19,278	48,432	46,282	159,697
Farm debt to asset ratio	44%	64%	53%	37%	40%	43%	58%
Total debt to asset ratio	40%	58%	48%	33%	37%	40%	55%
Change in earned net worth %	3%	12%	3%	2%	3%	2%	6%
Nonfarm Information							
Net nonfarm income	37,433	36,288	37,377	39,662	33,310	40,186	45,868
Farms reporting living expenses	94	10	15	18	41	9	1
Total family living expense	65,967	36,320	47,064	64,119	74,081	91,244	-
Crop Acres							
Total crop acres	2,147	270	596	1,102	1,985	3,781	6,462
Total crop acres owned	458	91	177	235	540	682	1,007
Total crop acres cash rented	1,608	146	393	777	1,355	2,987	5,349
Total crop acres share rented	81	34	25	90	90	112	106
Machinery value per crop acre	313	159	221	266	330	325	314

Financial Summary
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Age of Operator)

	<u>Avg. Of All Farms</u>	<u>Less Than 31</u>	<u>31 - 40</u>	<u>41 - 50</u>	<u>51 - 60</u>	<u>Over 60</u>
Number of farms	366	51	81	64	87	83
Income Statement						
Gross cash farm income	846,523	425,683	740,006	853,706	1,114,151	922,995
Total cash farm expense	703,605	373,056	653,359	722,737	949,501	683,252
Net cash farm income	142,917	52,628	86,647	130,969	164,650	239,743
Inventory change	1,260	29,978	45,921	8,936	10,893	-75,985
Depreciation	-73,167	-27,702	-51,024	-69,614	-104,009	-93,124
Net farm income from operations	71,010	54,904	81,544	70,292	71,534	70,634
Gain or loss on capital sales	3,090	142	2,447	705	1,750	8,770
Average net farm income	74,100	55,046	83,991	70,997	73,283	79,404
Median net farm income	36,319	26,536	48,684	26,345	23,391	43,701
Profitability (cost)						
Rate of return on assets	2.3%	4.1%	4.3%	2.4%	2.0%	1.3%
Rate of return on equity	0.6%	3.6%	3.9%	0.5%	-0.4%	0.2%
Operating profit margin	6.6%	7.8%	9.7%	6.2%	6.0%	5.0%
Asset turnover rate	34.6%	53.0%	44.9%	38.7%	33.0%	26.1%
Liquidity & Repayment (end of year)						
Current assets	595,318	282,999	523,725	634,398	762,259	676,960
Current liabilities	373,440	192,343	374,708	439,478	523,047	279,717
Current ratio	1.59	1.47	1.40	1.44	1.46	2.42
Working capital	221,878	90,657	149,017	194,920	239,212	397,243
Change in working capital	-22,887	-1,130	1,631	-24,958	-46,557	-38,160
Working capital to gross inc	30.7%	23.0%	19.3%	24.9%	26.7%	61.0%
Term debt coverage ratio	1.35	1.87	1.52	1.33	1.12	1.43
Replacement coverage ratio	0.92	1.60	1.23	0.92	0.77	0.78
Term debt to EBITDA	2.81	2.74	2.80	3.07	3.25	2.09
Solvency (end of year at cost)						
Number of sole proprietors	330	48	80	55	77	70
Total assets	2,381,379	894,376	1,885,712	2,338,406	3,191,944	3,109,655
Total liabilities	963,841	542,764	1,015,425	1,100,767	1,368,168	641,283
Net worth	1,417,537	351,611	870,287	1,237,639	1,823,776	2,468,373
Net worth change	39,680	45,736	79,346	21,164	22,853	23,251
Farm debt to asset ratio	44%	62%	56%	50%	47%	23%
Total debt to asset ratio	40%	61%	54%	47%	43%	21%
Change in earned net worth %	3%	15%	10%	2%	1%	1%
Nonfarm Information						
Net nonfarm income	37,433	39,166	34,507	46,848	29,034	40,765
Farms reporting living expenses	94	12	22	12	20	28
Total family living expense	65,967	49,196	60,042	75,961	67,700	72,290
Crop Acres						
Total crop acres	2,147	1,385	1,789	2,286	2,732	2,242
Total crop acres owned	458	111	244	361	652	751
Total crop acres cash rented	1,608	1,239	1,417	1,873	2,038	1,366
Total crop acres share rented	81	36	129	52	43	125
Machinery value per crop acre	313	154	252	278	345	408

Financial Summary
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Farm Type)

	<u>Avg. Of All Farms</u>	<u>Crop</u>	<u>Beef</u>	<u>Crop and Beef</u>	<u>Other</u>
Number of farms	366	247	30	30	56
Income Statement					
Gross cash farm income	846,523	972,671	184,446	520,405	653,390
Total cash farm expense	703,605	802,412	142,533	446,170	535,049
Net cash farm income	142,917	170,260	41,913	74,236	118,341
Inventory change	1,260	14,243	-21,345	-20,214	-51,392
Depreciation	-73,167	-88,001	-14,355	-39,171	-47,229
Net farm income from operations	71,010	96,502	6,213	14,850	19,720
Gain or loss on capital sales	3,090	3,207	-62	3,499	4,861
Average net farm income	74,100	99,709	6,151	18,349	24,581
Median net farm income	36,319	65,988	1,174	13,188	14,993
Profitability (cost)					
Rate of return on assets	2.3%	2.7%	-0.9%	0.4%	0.8%
Rate of return on equity	0.6%	1.4%	-5.3%	-3.8%	-2.5%
Operating profit margin	6.6%	7.6%	-4.7%	1.5%	2.5%
Asset turnover rate	34.6%	35.6%	18.5%	28.5%	31.3%
Liquidity & Repayment (end of year)					
Current assets	595,318	710,523	160,975	416,658	471,121
Current liabilities	373,440	446,857	110,779	357,786	237,581
Current ratio	1.59	1.59	1.45	1.16	1.98
Working capital	221,878	263,666	50,196	58,872	233,541
Change in working capital	-22,887	-24,197	-14,001	-36,303	-17,971
Working capital to gross inc	30.7%	30.7%	30.4%	11.99%	38.5%
Term debt coverage ratio	1.35	1.52	0.79	0.56	0.91
Replacement coverage ratio	0.92	1.01	0.71	0.46	0.57
Term debt to EBITDA	2.81	2.51	6.91	4.36	3.96
Solvency (end of year at cost)					
Number of sole proprietors	330	216	30	29	54
Total assets	2,381,379	2,775,573	831,856	1,751,089	1,994,946
Total liabilities	963,841	1,124,948	371,685	841,712	711,281
Net worth	1,417,537	1,650,625	460,171	909,376	1,283,665
Net worth change	39,680	52,558	23,537	-14,077	21,233
Farm debt to asset ratio	44%	44%	47%	51%	40%
Total debt to asset ratio	40%	41%	45%	48%	36%
Change in earned net worth %	3%	3%	5%	-2%	2%
Nonfarm Information					
Net nonfarm income	37,433	37,120	32,687	31,024	44,267
Farms reporting living expenses	94	57	11	8	18
Total family living expense	65,967	73,634	36,145	72,023	57,223
Crop Acres					
Total crop acres	2,147	2,573	500	1,875	1,250
Total crop acres owned	458	510	155	479	383
Total crop acres cash rented	1,608	1,956	331	1,328	850
Total crop acres share rented	81	106	14	69	17
Machinery value per crop acre	313	322	213	192	336

EXPLANATORY NOTES FOR CROPS TABLES

The "Crop Enterprise Analysis" tables show the average physical production, gross return, direct costs, overhead costs, and net returns per acre. The "Net Return per Acre" is the "Gross Return per Acre" minus the direct and overhead costs. "Net Return" represents the return to the operators and family's unpaid labor, management, and equity. It represents the return to all of the resources which are owned by the farm family and hence, not purchased or paid a wage. Net returns are also calculated after a charge for unpaid operator labor and management and after an allocation of direct government payments. The last section of each crop table contains breakeven yield measures which provide useful standards or goals for the individual managers.

There are potentially three tables for each crop depending on the farmer's tenure on the land. The crop tables may be for (1) owned land, (2) cash rented land, and (3) share rented land. Individual farms may have data in all three tables if all three land tenure categories are represented in that farm business. When there are less than five farms with a particular crop and tenure, that table is not included in the report. Farms may be classified into the low 20%, the mid 20%, or the high 20% on the basis of net return per acre. The classification is done separately for each table, i.e., an individual farm may be in the low 20% for one crop, the high 20% for a second, and the middle 20% for a third crop. When there are less than 25 total farms with any particular crop and farmer's tenure, only overall averages are presented.

Market Facilitation Payments, a 2019 USDA FSA program for commodities directly impacted by retaliatory tariffs, are included under "Other crop income per acre." "Government payments" are Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC) payments.

Several cost items, such as "utilities," "hired labor," and "interest paid," are listed under both "direct" and "overhead" costs because some of these costs are specific to that crop whereas others are general overhead costs of the farm. For example, "Machinery leases" as direct expense refers to machinery leased and used only in that crop enterprise; the most common example is the lease of equipment that is crop specific. However, cost of leasing machinery that is used for the entire farm operation is listed as an overhead cost. Interest payments are likewise divided into those incurred directly for a specific crop and those that are not. "Land Rent" is listed as a direct cost for each crop enterprise on cash rented land. In the case of double cropping, one-half of the rent is charged to each crop.

"Total direct expense per unit" and "Total dir & ovhd exp per unit" are calculated by dividing "Total direct expense per acre" and "Total dir & ovhd expenses per acre," respectively, by "Yield per acre." "With labor & management" is the breakeven yield after direct, overhead and a labor and management charge are considered. "Total exp less govt & oth income" is the breakeven yield after all costs (including a labor and management charge) are reduced by government payments and miscellaneous income.

In the last section of the crop table, "machinery cost per acre" is the sum of fuel, repairs, all custom hire and machinery leases, machinery depreciation and interest on intermediate debt.

Rounding of individual items for the report may have caused minor discrepancies with the calculated totals.

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Return)

Barley on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	17
Acres	151.81
Yield per acre (bu.)	65.69
Operators share of yield %	100.00
Value per bu.	4.16
Other product return per acre	8.57
Total product return per acre	282.00
Crop insurance per acre	14.55
Other crop income per acre	24.69
Gross return per acre	321.24
Direct Expenses	
Seed and plants	16.08
Fertilizer	44.44
Crop chemicals	28.52
Crop insurance	13.86
Fuel & oil	12.91
Repairs	21.36
Custom hire	6.35
Machinery leases	0.95
Operating interest	6.55
Miscellaneous	1.80
Total direct expenses per acre	152.83
Return over direct exp per acre	168.41
Overhead Expenses	
Custom hire	1.79
Hired labor	9.84
Machinery leases	2.43
Building leases	1.33
RE & pers. property taxes	8.35
Farm insurance	5.19
Utilities	3.66
Dues & professional fees	0.67
Interest	25.51
Mach & bldg depreciation	28.42
Miscellaneous	4.80
Total overhead expenses per acre	91.98
Total dir & ovhd expenses per acre	244.81
Net return per acre	76.43
Government payments	14.18
Net return with govt pmts	90.60
Labor & management charge	22.95
Net return over lbr & mgt	67.66
Cost of Production	
Total direct expense per bu.	2.33
Total dir & ovhd exp per bu.	3.73
Less govt & other income	2.78
With labor & management	3.13
Net value per unit	4.16
Machinery cost per acre	74.36
Est. labor hours per acre	1.32

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Return)

Barley on Cash Rent

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	30	6	6	6
Acres	322.57	122.17	656.58	227.65
Yield per acre (bu.)	78.85	58.39	79.12	93.14
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	4.08	3.76	4.15	4.43
Total product return per acre	322.03	219.32	328.54	412.36
Crop insurance per acre	10.87	-	7.12	-
Other crop income per acre	32.59	37.58	33.32	27.16
Gross return per acre	365.50	256.90	368.98	439.51
Direct Expenses				
Seed and plants	18.54	17.15	19.54	15.62
Fertilizer	48.62	49.64	49.51	49.49
Crop chemicals	34.40	25.25	41.49	26.63
Crop insurance	10.93	7.61	6.99	8.76
Fuel & oil	12.85	14.40	13.41	14.51
Repairs	24.26	30.24	17.75	32.21
Custom hire	8.06	7.80	14.35	1.71
Hired labor	0.58	-	1.43	-
Land rent	60.65	74.54	61.12	57.73
Machinery leases	0.34	-	0.84	-
Operating interest	5.92	7.09	3.41	10.65
Miscellaneous	1.95	0.43	2.48	0.09
Total direct expenses per acre	227.10	234.15	232.31	217.41
Return over direct exp per acre	138.39	22.75	136.66	222.10
Overhead Expenses				
Custom hire	0.26	2.19	-	0.06
Hired labor	9.02	8.31	8.98	15.16
Machinery leases	2.82	0.14	1.19	2.34
Building leases	0.48	0.56	0.02	2.61
Farm insurance	4.46	5.46	4.04	5.19
Utilities	3.82	6.23	3.88	3.09
Dues & professional fees	2.48	2.55	4.46	0.56
Interest	3.64	4.24	1.66	3.53
Mach & bldg depreciation	28.30	33.24	33.42	23.47
Miscellaneous	6.98	7.05	5.43	3.43
Total overhead expenses per acre	62.25	69.98	63.07	59.44
Total dir & ovhd expenses per acre	289.35	304.13	295.39	276.85
Net return per acre	76.14	-47.24	73.59	162.66
Government payments	11.52	8.65	13.44	10.81
Net return with govt pmts	87.66	-38.59	87.03	173.47
Labor & management charge	23.84	23.73	19.89	23.84
Net return over lbr & mgt	63.82	-62.32	67.14	149.63
Cost of Production				
Total direct expense per bu.	2.88	4.01	2.94	2.33
Total dir & ovhd exp per bu.	3.67	5.21	3.73	2.97
Less govt & other income	2.97	4.42	3.05	2.56
With labor & management	3.27	4.82	3.30	2.82
Net value per unit	4.08	3.76	4.15	4.43
Machinery cost per acre	78.38	91.49	79.27	75.26
Est. labor hours per acre	1.10	1.58	0.67	1.56

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Return)

Beans, Pinto on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	10
Acres	230.91
Yield per acre (cwt.)	14.24
Operators share of yield %	100.00
Value per cwt.	24.90
Total product return per acre	354.52
Crop insurance per acre	54.06
Other crop income per acre	35.46
Gross return per acre	444.03
Direct Expenses	
Seed and plants	56.29
Fertilizer	28.00
Crop chemicals	46.39
Crop insurance	18.08
Fuel & oil	13.50
Repairs	29.51
Custom hire	7.95
Machinery leases	1.73
Operating interest	10.84
Miscellaneous	1.25
Total direct expenses per acre	213.52
Return over direct exp per acre	230.51
Overhead Expenses	
Hired labor	10.64
Machinery leases	6.99
Building leases	1.21
RE & pers. property taxes	7.86
Farm insurance	6.43
Utilities	5.46
Dues & professional fees	2.96
Interest	60.52
Mach & bldg depreciation	35.51
Miscellaneous	3.64
Total overhead expenses per acre	141.22
Total dir & ovhd expenses per acre	354.74
Net return per acre	89.29
Government payments	3.85
Net return with govt pmts	93.14
Labor & management charge	30.30
Net return over lbr & mgt	62.85
Cost of Production	
Total direct expense per cwt.	15.00
Total dir & ovhd exp per cwt.	24.91
Less govt & other income	18.36
With labor & management	20.48
Net value per unit	24.90
Machinery cost per acre	97.18
Est. labor hours per acre	1.30

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Return)

Beans, Pinto on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	15
Acres	449.39
Yield per acre (cwt.)	15.57
Operators share of yield %	100.00
Value per cwt.	24.58
Total product return per acre	382.85
Crop insurance per acre	24.50
Other crop income per acre	58.47
Gross return per acre	465.81
Direct Expenses	
Seed and plants	59.72
Fertilizer	53.17
Crop chemicals	46.63
Crop insurance	18.57
Fuel & oil	12.39
Repairs	36.15
Custom hire	3.61
Land rent	71.85
Machinery leases	1.95
Operating interest	17.36
Miscellaneous	1.90
Total direct expenses per acre	323.30
Return over direct exp per acre	142.51
Overhead Expenses	
Hired labor	19.63
Machinery leases	15.19
Building leases	0.52
Farm insurance	4.80
Utilities	4.51
Dues & professional fees	1.63
Interest	6.69
Mach & bldg depreciation	34.54
Miscellaneous	9.67
Total overhead expenses per acre	97.17
Total dir & ovhd expenses per acre	420.47
Net return per acre	45.34
Government payments	4.56
Net return with govt pmts	49.90
Labor & management charge	30.34
Net return over lbr & mgt	19.55
Cost of Production	
Total direct expense per cwt.	20.76
Total dir & ovhd exp per cwt.	27.00
Less govt & other income	21.38
With labor & management	23.33
Net value per unit	24.58
Machinery cost per acre	105.19
Est. labor hours per acre	1.31

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
State Report, 2019
(Farms Sorted By Net Return)

Canola on Owned Land

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	26	5	5	6
Acres	276.61	187.54	296.69	322.60
Yield per acre (cwt.)	18.05	17.81	20.19	21.17
Operators share of yield %	100.00	100.00	100.00	100.00
Value per cwt.	14.98	14.59	15.05	15.85
Total product return per acre	270.41	259.90	303.89	335.53
Crop insurance per acre	16.17	5.94	-	2.42
Other crop income per acre	26.63	28.24	18.38	32.14
Gross return per acre	313.20	294.08	322.27	370.08
Direct Expenses				
Seed and plants	51.11	59.92	48.64	51.49
Fertilizer	62.17	81.26	66.19	60.34
Crop chemicals	28.65	31.70	26.50	26.72
Crop insurance	11.86	19.30	11.54	10.84
Fuel & oil	11.97	9.91	12.85	12.02
Repairs	20.88	33.63	26.05	12.96
Custom hire	3.91	8.86	1.95	3.41
Hired labor	0.55	1.11	1.97	-
Machinery leases	0.09	0.65	-	-
Operating interest	4.75	10.68	5.06	1.09
Miscellaneous	0.79	1.10	1.13	0.29
Total direct expenses per acre	196.72	258.12	201.86	179.17
Return over direct exp per acre	116.48	35.96	120.41	190.91
Overhead Expenses				
Custom hire	0.42	0.17	0.00	0.68
Hired labor	7.24	12.33	12.88	7.33
Machinery leases	0.78	0.20	-	0.81
Building leases	0.49	0.17	0.81	0.75
RE & pers. property taxes	7.80	9.15	9.14	6.76
Farm insurance	4.86	8.73	5.04	3.67
Utilities	3.41	5.22	3.79	2.70
Dues & professional fees	1.40	1.36	0.87	2.70
Interest	14.44	14.83	24.99	14.85
Mach & bldg depreciation	27.94	45.22	25.65	31.16
Miscellaneous	3.43	3.97	4.64	4.81
Total overhead expenses per acre	72.21	101.36	87.81	76.22
Total dir & ovhd expenses per acre	268.93	359.48	289.66	255.39
Net return per acre	44.27	-65.40	32.61	114.69
Government payments	14.23	16.29	18.41	10.63
Net return with govt pmts	58.51	-49.12	51.02	125.32
Labor & management charge	24.18	26.47	21.39	22.85
Net return over lbr & mgt	34.33	-75.59	29.63	102.47
Cost of Production				
Total direct expense per cwt.	10.90	14.49	10.00	8.46
Total dir & ovhd exp per cwt.	14.90	20.18	14.35	12.06
Less govt & other income	11.74	17.35	12.53	9.93
With labor & management	13.08	18.83	13.58	11.01
Net value per unit	14.98	14.59	15.05	15.85
Machinery cost per acre	65.36	98.13	64.97	58.27
Est. labor hours per acre	1.15	1.52	1.15	0.91

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
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(Farms Sorted By Net Return)

Canola on Cash Rent

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	49	9	10	10
Acres	440.79	268.47	301.87	629.14
Yield per acre (cwt.)	17.74	11.28	19.31	21.79
Operators share of yield %	100.00	100.00	100.00	100.00
Value per cwt.	14.95	14.42	14.69	15.13
Total product return per acre	265.33	162.62	283.62	329.68
Hedging gains/losses per acre	0.00	-	-	-
Crop insurance per acre	27.58	73.91	5.89	18.81
Other crop income per acre	28.34	30.44	24.96	25.09
Gross return per acre	321.26	266.98	314.47	373.58
Direct Expenses				
Seed and plants	53.98	62.78	52.16	50.22
Fertilizer	64.51	85.64	64.49	57.93
Crop chemicals	31.37	30.75	29.93	33.15
Crop insurance	13.72	16.51	10.62	15.44
Fuel & oil	11.62	10.59	13.40	11.85
Repairs	23.60	27.35	27.72	24.94
Custom hire	3.72	8.16	4.45	2.32
Hired labor	0.53	-	1.18	-
Land rent	49.37	49.53	51.01	48.03
Operating interest	5.90	8.97	6.13	4.46
Miscellaneous	2.12	2.11	1.42	2.17
Total direct expenses per acre	260.44	302.40	262.50	250.50
Return over direct exp per acre	60.82	-35.42	51.96	123.07
Overhead Expenses				
Custom hire	0.61	0.09	0.41	0.96
Hired labor	6.62	7.66	10.23	7.30
Machinery leases	3.93	6.15	0.72	4.95
Building leases	0.61	0.29	0.88	0.22
Farm insurance	4.06	4.53	4.85	3.70
Utilities	3.20	3.08	2.93	3.65
Dues & professional fees	1.03	1.71	2.14	0.81
Interest	2.66	2.31	2.31	2.53
Mach & bldg depreciation	26.81	36.53	20.47	27.41
Miscellaneous	3.07	3.70	3.28	3.04
Total overhead expenses per acre	52.61	66.06	48.22	54.57
Total dir & ovhd expenses per acre	313.05	368.46	310.72	305.07
Net return per acre	8.20	-101.48	3.74	68.50
Government payments	14.11	17.12	14.57	13.83
Net return with govt pmts	22.32	-84.36	18.31	82.34
Labor & management charge	25.29	22.80	21.07	26.96
Net return over lbr & mgt	-2.97	-107.15	-2.76	55.37
Cost of Production				
Total direct expense per cwt.	14.68	26.82	13.59	11.50
Total dir & ovhd exp per cwt.	17.64	32.67	16.09	14.00
Less govt & other income	13.70	21.90	13.74	11.35
With labor & management	15.12	23.92	14.83	12.59
Net value per unit	14.95	14.42	14.69	15.13
Machinery cost per acre	71.44	88.31	67.43	73.32
Est. labor hours per acre	1.19	1.07	1.35	1.26

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
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Corn on Owned Land

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	69	13	14	14
Acres	221.45	124.68	259.94	237.57
Yield per acre (bu.)	150.23	109.39	136.31	180.95
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	3.35	3.11	3.22	3.59
Other product return per acre	0.13	-	0.55	-
Total product return per acre	504.00	340.16	440.13	649.55
Hedging gains/losses per acre	3.43	-	-	3.82
Crop insurance per acre	8.78	0.61	19.67	10.31
Other crop income per acre	46.25	42.05	43.64	58.52
Gross return per acre	562.47	382.82	503.44	722.20
Direct Expenses				
Seed and plants	85.29	90.91	80.28	86.01
Fertilizer	108.82	97.71	102.51	124.81
Crop chemicals	23.97	28.35	26.16	19.62
Crop insurance	18.40	16.82	19.26	23.66
Drying expense	16.18	14.04	13.55	24.07
Fuel & oil	21.85	21.59	19.56	24.40
Repairs	40.92	35.77	39.70	38.29
Custom hire	6.16	7.23	6.65	5.20
Hired labor	0.92	-	0.41	0.90
Machinery leases	0.43	0.11	0.12	0.72
Operating interest	17.10	14.41	24.22	15.19
Miscellaneous	0.57	2.46	0.20	-
Total direct expenses per acre	340.62	329.39	332.62	362.86
Return over direct exp per acre	221.85	53.42	170.82	359.34
Overhead Expenses				
Custom hire	0.33	2.05	0.00	0.38
Hired labor	22.53	9.74	22.30	27.15
Machinery leases	6.22	2.42	0.46	15.69
RE & pers. property taxes	16.70	14.27	16.96	18.85
Farm insurance	6.65	6.48	6.54	5.68
Utilities	6.39	6.44	6.47	7.06
Dues & professional fees	3.01	2.10	2.05	4.12
Interest	42.50	51.81	20.30	42.49
Mach & bldg depreciation	47.99	37.06	57.86	46.55
Miscellaneous	4.42	4.74	3.21	7.78
Total overhead expenses per acre	156.75	137.11	136.16	175.74
Total dir & ovhd expenses per acre	497.37	466.50	468.78	538.60
Net return per acre	65.10	-83.68	34.66	183.60
Government payments	4.52	7.27	5.50	1.49
Net return with govt pmts	69.63	-76.41	40.16	185.08
Labor & management charge	45.58	35.93	52.38	42.94
Net return over lbr & mgt	24.05	-112.34	-12.22	142.15
Cost of Production				
Total direct expense per bu.	2.27	3.01	2.44	2.01
Total dir & ovhd exp per bu.	3.31	4.26	3.44	2.98
Less govt & other income	2.89	3.81	2.93	2.57
With labor & management	3.19	4.14	3.31	2.80
Net value per unit	3.38	3.11	3.22	3.61
Machinery cost per acre	123.79	108.07	120.28	130.86
Est. labor hours per acre	1.88	1.71	2.05	1.50

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Corn on Cash Rent

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	109	21	22	22
Acres	558.81	437.01	590.53	706.56
Yield per acre (bu.)	148.62	116.57	149.07	168.02
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	3.33	3.24	3.10	3.47
Other product return per acre	0.03	-	0.15	-
Total product return per acre	495.04	377.76	462.28	583.21
Hedging gains/losses per acre	2.75	-	-0.49	10.92
Crop insurance per acre	7.66	18.59	7.73	2.77
Other crop income per acre	47.11	48.77	43.76	51.18
Gross return per acre	552.56	445.12	513.27	648.08
Direct Expenses				
Seed and plants	81.59	85.07	72.77	81.45
Fertilizer	106.61	100.84	109.58	108.89
Crop chemicals	23.27	23.67	23.01	21.98
Crop insurance	16.54	17.90	16.49	14.82
Drying expense	13.32	11.63	15.63	11.55
Fuel & oil	21.52	22.62	18.64	22.49
Repairs	40.62	50.15	33.92	33.44
Custom hire	4.28	6.75	2.80	4.75
Hired labor	0.88	-	0.16	0.49
Land rent	101.17	113.72	99.98	94.85
Machinery leases	1.28	3.56	0.83	1.63
Operating interest	13.27	14.28	14.51	10.31
Miscellaneous	0.55	0.95	-0.29	0.93
Total direct expenses per acre	424.89	451.13	408.04	407.59
Return over direct exp per acre	127.68	-6.00	105.24	240.49
Overhead Expenses				
Custom hire	0.88	0.64	0.00	0.08
Hired labor	20.61	29.86	13.41	20.09
Machinery leases	9.52	8.91	13.44	4.09
Building leases	0.95	0.50	3.25	0.10
Farm insurance	5.85	7.75	5.00	5.58
Utilities	5.53	7.53	4.84	4.98
Dues & professional fees	3.10	3.35	1.27	4.02
Interest	3.38	5.37	2.51	3.24
Mach & bldg depreciation	42.62	49.85	41.12	41.62
Miscellaneous	6.16	3.32	9.88	4.26
Total overhead expenses per acre	98.59	117.08	94.73	88.06
Total dir & ovhd expenses per acre	523.47	568.20	502.77	495.64
Net return per acre	29.09	-123.08	10.50	152.43
Government payments	4.14	6.40	2.47	4.99
Net return with govt pmts	33.23	-116.68	12.97	157.42
Labor & management charge	37.98	43.43	34.61	35.74
Net return over lbr & mgt	-4.75	-160.11	-21.64	121.68
Cost of Production				
Total direct expense per bu.	2.86	3.87	2.74	2.43
Total dir & ovhd exp per bu.	3.52	4.87	3.37	2.95
Less govt & other income	3.11	4.24	3.01	2.53
With labor & management	3.36	4.61	3.25	2.75
Net value per unit	3.35	3.24	3.10	3.54
Machinery cost per acre	120.18	143.98	106.12	108.09
Est. labor hours per acre	1.70	2.06	1.50	1.41

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Corn on Share Rent

	<u>Avg. Of All Farms</u>
Number of farms	12
Acres	173.82
Yield per acre (bu.)	162.52
Operators share of yield %	65.33
Value per bu.	3.35
Total product return per acre	355.37
Hedging gains/losses per acre	0.76
Crop insurance per acre	4.68
Other crop income per acre	43.84
Gross return per acre	404.65
Direct Expenses	
Seed and plants	71.94
Fertilizer	99.08
Crop chemicals	16.38
Crop insurance	14.23
Drying expense	22.20
Fuel & oil	22.70
Repairs	37.34
Custom hire	7.55
Hired labor	1.12
Operating interest	5.74
Miscellaneous	0.77
Total direct expenses per acre	299.04
Return over direct exp per acre	105.61
Overhead Expenses	
Hired labor	17.91
Machinery leases	1.85
Building leases	0.86
Farm insurance	5.53
Utilities	7.24
Dues & professional fees	3.02
Interest	2.36
Mach & bldg depreciation	47.80
Miscellaneous	6.53
Total overhead expenses per acre	93.10
Total dir & ovhd expenses per acre	392.15
Net return per acre	12.50
Government payments	3.25
Net return with govt pmts	15.76
Labor & management charge	38.51
Net return over lbr & mgt	-22.76
Cost of Production	
Total direct expense per bu.	2.82
Total dir & ovhd exp per bu.	3.69
Less govt & other income	3.20
With labor & management	3.56
Net value per unit	3.35
Machinery cost per acre	114.59
Est. labor hours per acre	1.72

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Corn Silage on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	11
Acres	77.73
Yield per acre (ton)	14.46
Operators share of yield %	100.00
Value per ton	30.16
Other product return per acre	16.84
Total product return per acre	452.86
Crop insurance per acre	5.72
Other crop income per acre	25.23
Gross return per acre	483.82
Direct Expenses	
Seed and plants	75.02
Fertilizer	59.58
Crop chemicals	16.48
Crop insurance	13.61
Fuel & oil	17.80
Repairs	44.81
Custom hire	76.88
Hired labor	1.33
Operating interest	9.16
Miscellaneous	0.47
Total direct expenses per acre	315.14
Return over direct exp per acre	168.68
Overhead Expenses	
Custom hire	0.88
Hired labor	8.11
Machinery leases	0.86
RE & pers. property taxes	6.05
Farm insurance	3.37
Utilities	3.15
Dues & professional fees	1.46
Interest	14.89
Mach & bldg depreciation	39.21
Miscellaneous	3.06
Total overhead expenses per acre	81.04
Total dir & ovhd expenses per acre	396.18
Net return per acre	87.63
Government payments	5.92
Net return with govt pmts	93.55
Labor & management charge	29.34
Net return over lbr & mgt	64.22
Cost of Production	
Total direct expense per ton	21.80
Total dir & ovhd exp per ton	27.40
Less govt & other income	23.69
With labor & management	25.71
Net value per unit	30.16
Machinery cost per acre	178.98
Est. labor hours per acre	2.85

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Corn Silage on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	11
Acres	118.29
Yield per acre (ton)	17.26
Operators share of yield %	100.00
Value per ton	32.89
Total product return per acre	567.63
Crop insurance per acre	0.54
Other crop income per acre	48.72
Gross return per acre	616.89
Direct Expenses	
Seed and plants	83.98
Fertilizer	85.90
Crop chemicals	23.53
Crop insurance	13.64
Fuel & oil	30.40
Repairs	35.80
Custom hire	25.13
Land rent	87.17
Operating interest	14.73
Miscellaneous	0.11
Total direct expenses per acre	400.42
Return over direct exp per acre	216.48
Overhead Expenses	
Hired labor	30.37
Machinery leases	1.64
Building leases	0.17
Farm insurance	5.55
Utilities	4.62
Dues & professional fees	5.02
Interest	4.49
Mach & bldg depreciation	39.45
Miscellaneous	2.20
Total overhead expenses per acre	93.51
Total dir & ovhd expenses per acre	493.93
Net return per acre	122.96
Government payments	4.46
Net return with govt pmts	127.43
Labor & management charge	33.85
Net return over lbr & mgt	93.58
Cost of Production	
Total direct expense per ton	23.20
Total dir & ovhd exp per ton	28.62
Less govt & other income	25.51
With labor & management	27.47
Net value per unit	32.89
Machinery cost per acre	134.60
Est. labor hours per acre	2.26

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CRP on Owned Land

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	29	5	6	6
Acres	105.00	116.20	136.58	110.58
Gross return per acre	51.36	27.90	48.25	72.36
Direct Expenses				
Crop chemicals	0.35	-	0.19	1.19
Repairs	1.27	0.52	1.75	0.96
Miscellaneous	0.64	0.65	0.51	0.50
Total direct expenses per acre	2.26	1.17	2.45	2.65
Return over direct exp per acre	49.11	26.73	45.80	69.70
Overhead Expenses				
Hired labor	0.52	0.47	0.05	0.28
Machinery leases	0.29	0.07	0.83	0.00
RE & pers. property taxes	8.79	10.55	6.19	12.22
Farm insurance	0.77	0.28	1.37	0.20
Utilities	0.48	0.23	1.18	0.09
Interest	14.85	31.29	6.46	5.24
Mach & bldg depreciation	4.20	1.02	10.30	2.57
Miscellaneous	0.65	0.18	0.32	0.19
Total overhead expenses per acre	30.56	44.09	26.68	20.79
Total dir & ovhd expenses per acre	32.82	45.26	29.13	23.44
Net return per acre	18.55	-17.36	19.12	48.91

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Flax on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	10
Acres	239.49
Yield per acre (bu.)	19.37
Operators share of yield %	100.00
Value per bu.	9.94
Total product return per acre	192.55
Crop insurance per acre	63.87
Other crop income per acre	21.72
Gross return per acre	278.14
Direct Expenses	
Seed and plants	15.60
Fertilizer	35.93
Crop chemicals	27.83
Crop insurance	13.76
Fuel & oil	10.88
Repairs	19.74
Custom hire	2.04
Land rent	47.93
Machinery leases	0.16
Operating interest	5.91
Miscellaneous	0.15
Total direct expenses per acre	179.93
Return over direct exp per acre	98.22
Overhead Expenses	
Hired labor	7.10
Machinery leases	2.58
Building leases	0.36
Farm insurance	2.76
Utilities	3.00
Dues & professional fees	1.43
Interest	3.52
Mach & bldg depreciation	24.06
Miscellaneous	5.07
Total overhead expenses per acre	49.89
Total dir & ovhd expenses per acre	229.81
Net return per acre	48.33
Government payments	12.98
Net return with govt pmts	61.31
Labor & management charge	24.48
Net return over lbr & mgt	36.83
Cost of Production	
Total direct expense per bu.	9.29
Total dir & ovhd exp per bu.	11.86
Less govt & other income	6.77
With labor & management	8.04
Net value per unit	9.94
Machinery cost per acre	61.59
Est. labor hours per acre	1.14

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Hay, Alfalfa on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	12
Acres	103.28
Yield per acre (ton)	1.69
Operators share of yield %	100.00
Value per ton	81.60
Total product return per acre	137.87
Crop insurance per acre	0.37
Other crop income per acre	8.86
Gross return per acre	147.10
Direct Expenses	
Fertilizer	3.46
Crop insurance	0.97
Fuel & oil	7.83
Repairs	14.71
Custom hire	5.59
Operating interest	5.39
Miscellaneous	0.26
Total direct expenses per acre	38.20
Return over direct exp per acre	108.90
Overhead Expenses	
Custom hire	0.69
Hired labor	2.84
Machinery leases	0.85
RE & pers. property taxes	7.75
Farm insurance	3.74
Utilities	2.86
Dues & professional fees	0.96
Interest	14.35
Mach & bldg depreciation	13.06
Miscellaneous	0.69
Total overhead expenses per acre	47.77
Total dir & ovhd expenses per acre	85.97
Net return per acre	61.13
Government payments	2.05
Net return with govt pmts	63.18
Labor & management charge	13.06
Net return over lbr & mgt	50.12
Cost of Production	
Total direct expense per ton	22.61
Total dir & ovhd exp per ton	50.88
Less govt & other income	44.20
With labor & management	51.93
Net value per unit	81.60
Machinery cost per acre	44.55
Est. labor hours per acre	1.05

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Hay, Alfalfa on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	14
Acres	105.82
Yield per acre (ton)	2.47
Operators share of yield %	100.00
Value per ton	84.26
Total product return per acre	208.29
Other crop income per acre	12.65
Gross return per acre	220.95
Direct Expenses	
Seed and plants	0.59
Fertilizer	3.03
Crop chemicals	0.62
Crop insurance	1.41
Fuel & oil	10.02
Repairs	22.13
Custom hire	3.37
Hired labor	0.15
Land rent	43.57
Machinery leases	0.34
Operating interest	2.92
Miscellaneous	1.95
Total direct expenses per acre	90.11
Return over direct exp per acre	130.84
Overhead Expenses	
Hired labor	6.06
Machinery leases	0.35
Farm insurance	4.23
Utilities	4.43
Dues & professional fees	2.44
Interest	1.72
Mach & bldg depreciation	28.30
Miscellaneous	3.70
Total overhead expenses per acre	51.23
Total dir & ovhd expenses per acre	141.34
Net return per acre	79.61
Government payments	4.73
Net return with govt pmts	84.34
Labor & management charge	17.47
Net return over lbr & mgt	66.87
Cost of Production	
Total direct expense per ton	36.45
Total dir & ovhd exp per ton	57.18
Less govt & other income	50.15
With labor & management	57.21
Net value per unit	84.26
Machinery cost per acre	61.09
Est. labor hours per acre	0.99

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Hay, Grass on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	14
Acres	113.46
Yield per acre (ton)	1.13
Operators share of yield %	100.00
Value per ton	48.99
Total product return per acre	55.20
Other crop income per acre	1.19
Gross return per acre	56.39
Direct Expenses	
Seed and plants	0.56
Fertilizer	1.40
Fuel & oil	6.70
Repairs	12.28
Custom hire	0.26
Operating interest	2.58
Miscellaneous	0.53
Total direct expenses per acre	24.32
Return over direct exp per acre	32.07
Overhead Expenses	
Custom hire	0.22
Hired labor	4.06
Machinery leases	0.18
RE & pers. property taxes	2.54
Farm insurance	1.08
Utilities	1.32
Dues & professional fees	0.53
Interest	7.70
Mach & bldg depreciation	10.62
Miscellaneous	2.61
Total overhead expenses per acre	30.86
Total dir & ovhd expenses per acre	55.17
Net return per acre	1.21
Government payments	1.30
Net return with govt pmts	2.51
Labor & management charge	11.72
Net return over lbr & mgt	-9.20
Cost of Production	
Total direct expense per ton	21.58
Total dir & ovhd exp per ton	48.97
Less govt & other income	46.76
With labor & management	57.16
Net value per unit	48.99
Machinery cost per acre	30.25
Est. labor hours per acre	1.22

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Hay, Grass on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	20
Acres	314.43
Yield per acre (ton)	1.04
Operators share of yield %	100.00
Value per ton	63.24
Total product return per acre	65.56
Other crop income per acre	1.97
Gross return per acre	67.53
Direct Expenses	
Seed and plants	0.80
Fertilizer	1.84
Fuel & oil	7.42
Repairs	11.38
Custom hire	0.23
Land rent	17.57
Operating interest	3.58
Miscellaneous	0.65
Total direct expenses per acre	43.47
Return over direct exp per acre	24.06
Overhead Expenses	
Hired labor	5.24
Farm insurance	1.22
Utilities	1.08
Dues & professional fees	0.74
Interest	0.95
Mach & bldg depreciation	12.20
Miscellaneous	2.51
Total overhead expenses per acre	23.93
Total dir & ovhd expenses per acre	67.40
Net return per acre	0.14
Government payments	0.78
Net return with govt pmts	0.91
Labor & management charge	10.06
Net return over lbr & mgt	-9.14
Cost of Production	
Total direct expense per ton	41.93
Total dir & ovhd exp per ton	65.01
Less govt & other income	62.36
With labor & management	72.06
Net value per unit	63.24
Machinery cost per acre	31.58
Est. labor hours per acre	0.98

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Hay, Mixed Alfalfa/Grass on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	18
Acres	160.54
Yield per acre (ton)	1.38
Operators share of yield %	100.00
Value per ton	66.82
Other product return per acre	1.65
Total product return per acre	94.07
Crop insurance per acre	0.07
Other crop income per acre	0.89
Gross return per acre	95.03
Direct Expenses	
Seed and plants	0.93
Fertilizer	2.08
Crop chemicals	0.10
Crop insurance	0.92
Fuel & oil	6.93
Repairs	12.14
Machinery leases	0.24
Operating interest	1.76
Miscellaneous	2.17
Total direct expenses per acre	27.27
Return over direct exp per acre	67.75
Overhead Expenses	
Custom hire	0.14
Hired labor	3.17
Machinery leases	0.26
RE & pers. property taxes	5.81
Farm insurance	3.12
Utilities	1.92
Dues & professional fees	1.31
Interest	16.84
Mach & bldg depreciation	14.41
Miscellaneous	1.87
Total overhead expenses per acre	48.85
Total dir & ovhd expenses per acre	76.12
Net return per acre	18.90
Government payments	2.60
Net return with govt pmts	21.51
Labor & management charge	12.96
Net return over lbr & mgt	8.55
Cost of Production	
Total direct expense per ton	19.72
Total dir & ovhd exp per ton	55.04
Less govt & other income	51.27
With labor & management	60.64
Net value per unit	66.82
Machinery cost per acre	34.20
Est. labor hours per acre	1.01

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Hay, Mixed Alfalfa/Grass on Cash Rent

	Avg. Of All Farms
Number of farms	22
Acres	231.56
Yield per acre (ton)	1.43
Operators share of yield %	100.00
Value per ton	59.37
Total product return per acre	84.66
Other crop income per acre	0.38
Gross return per acre	85.04
Direct Expenses	
Seed and plants	0.73
Fertilizer	0.53
Crop insurance	0.29
Fuel & oil	6.06
Repairs	9.41
Land rent	20.01
Machinery leases	0.23
Operating interest	2.99
Miscellaneous	0.20
Total direct expenses per acre	40.44
Return over direct exp per acre	44.60
Overhead Expenses	
Hired labor	3.91
Farm insurance	2.33
Utilities	2.34
Dues & professional fees	0.83
Interest	3.22
Mach & bldg depreciation	11.55
Miscellaneous	1.92
Total overhead expenses per acre	26.11
Total dir & ovhd expenses per acre	66.55
Net return per acre	18.49
Government payments	0.61
Net return with govt pmts	19.09
Labor & management charge	10.69
Net return over lbr & mgt	8.40
Cost of Production	
Total direct expense per ton	28.36
Total dir & ovhd exp per ton	46.67
Less govt & other income	45.98
With labor & management	53.48
Net value per unit	59.37
Machinery cost per acre	29.57
Est. labor hours per acre	0.69

Crop Enterprise Analysis
North Dakota Farm Business Management Education Program
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Hay, Small Grain on Owned Land

	Avg. Of All Farms
Number of farms	23
Acres	90.59
Yield per acre (ton)	2.07
Operators share of yield %	100.00
Value per ton	59.31
Total product return per acre	122.80
Crop insurance per acre	0.80
Other crop income per acre	19.88
Gross return per acre	143.48
Direct Expenses	
Seed and plants	15.29
Fertilizer	23.25
Crop chemicals	6.50
Crop insurance	0.56
Fuel & oil	10.16
Repairs	16.46
Custom hire	3.16
Operating interest	3.65
Miscellaneous	0.52
Total direct expenses per acre	79.55
Return over direct exp per acre	63.93
Overhead Expenses	
Custom hire	0.75
Hired labor	6.36
Machinery leases	0.74
Building leases	0.34
RE & pers. property taxes	5.34
Farm insurance	4.17
Utilities	2.75
Dues & professional fees	1.29
Interest	15.30
Mach & bldg depreciation	17.73
Miscellaneous	2.82
Total overhead expenses per acre	57.58
Total dir & ovhd expenses per acre	137.14
Net return per acre	6.35
Government payments	6.97
Net return with govt pmts	13.32
Labor & management charge	16.88
Net return over lbr & mgt	-3.56
Cost of Production	
Total direct expense per ton	38.42
Total dir & ovhd exp per ton	66.23
Less govt & other income	52.88
With labor & management	61.03
Net value per unit	59.31
Machinery cost per acre	50.81
Est. labor hours per acre	1.38

Crop Enterprise Analysis
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Hay, Small Grain on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	17
Acres	87.61
Yield per acre (ton)	2.48
Operators share of yield %	100.00
Value per ton	58.18
Other product return per acre	2.29
Total product return per acre	146.31
Other crop income per acre	12.39
Gross return per acre	158.71
Direct Expenses	
Seed and plants	21.50
Fertilizer	31.69
Crop chemicals	8.71
Crop insurance	0.82
Fuel & oil	8.66
Repairs	16.45
Custom hire	4.29
Land rent	36.32
Operating interest	4.60
Miscellaneous	0.43
Total direct expenses per acre	133.46
Return over direct exp per acre	25.24
Overhead Expenses	
Custom hire	0.70
Hired labor	3.40
Farm insurance	2.78
Utilities	3.20
Dues & professional fees	0.66
Interest	4.06
Mach & bldg depreciation	14.66
Miscellaneous	3.80
Total overhead expenses per acre	33.26
Total dir & ovhd expenses per acre	166.72
Net return per acre	-8.01
Government payments	4.55
Net return with govt pmts	-3.46
Labor & management charge	14.73
Net return over lbr & mgt	-18.19
Cost of Production	
Total direct expense per ton	53.91
Total dir & ovhd exp per ton	67.34
Less govt & other income	59.57
With labor & management	65.52
Net value per unit	58.18
Machinery cost per acre	48.16
Est. labor hours per acre	1.13

Crop Enterprise Analysis
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Oats on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	75.24
Yield per acre (bu.)	70.77
Operators share of yield %	100.00
Value per bu.	2.38
Other product return per acre	8.14
Total product return per acre	176.72
Crop insurance per acre	4.29
Other crop income per acre	36.80
Gross return per acre	217.80
Direct Expenses	
Seed and plants	14.84
Fertilizer	48.39
Crop chemicals	12.92
Crop insurance	10.99
Fuel & oil	20.81
Repairs	22.31
Custom hire	1.10
Operating interest	10.18
Miscellaneous	0.29
Total direct expenses per acre	141.84
Return over direct exp per acre	75.96
Overhead Expenses	
Custom hire	0.83
Hired labor	11.68
Machinery leases	1.80
RE & pers. property taxes	6.92
Farm insurance	6.17
Utilities	2.89
Dues & professional fees	1.39
Interest	29.48
Mach & bldg depreciation	18.24
Miscellaneous	6.48
Total overhead expenses per acre	85.87
Total dir & ovhd expenses per acre	227.71
Net return per acre	-9.91
Government payments	14.02
Net return with govt pmts	4.11
Labor & management charge	21.42
Net return over lbr & mgt	-17.31
Cost of Production	
Total direct expense per bu.	2.00
Total dir & ovhd exp per bu.	3.22
Less govt & other income	2.32
With labor & management	2.63
Net value per unit	2.38
Machinery cost per acre	73.26
Est. labor hours per acre	1.25

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Oats on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	6
Acres	157.56
Yield per acre (bu.)	68.44
Operators share of yield %	100.00
Value per bu.	2.46
Other product return per acre	35.54
Total product return per acre	203.66
Crop insurance per acre	1.24
Other crop income per acre	26.70
Gross return per acre	231.59
Direct Expenses	
Seed and plants	12.24
Fertilizer	42.11
Crop chemicals	17.53
Crop insurance	10.76
Fuel & oil	15.01
Repairs	19.17
Custom hire	5.47
Land rent	48.59
Operating interest	11.81
Miscellaneous	1.66
Total direct expenses per acre	184.35
Return over direct exp per acre	47.25
Overhead Expenses	
Hired labor	4.19
Machinery leases	2.06
Building leases	0.90
Farm insurance	3.37
Utilities	2.15
Dues & professional fees	1.07
Interest	8.68
Mach & bldg depreciation	19.55
Miscellaneous	5.94
Total overhead expenses per acre	47.92
Total dir & ovhd expenses per acre	232.26
Net return per acre	-0.67
Government payments	5.43
Net return with govt pmts	4.76
Labor & management charge	22.76
Net return over lbr & mgt	-18.00
Cost of Production	
Total direct expense per bu.	2.69
Total dir & ovhd exp per bu.	3.39
Less govt & other income	2.39
With labor & management	2.72
Net value per unit	2.46
Machinery cost per acre	67.70
Est. labor hours per acre	0.88

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Pasture on Owned Land

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	46	9	9	10
Acres	723.27	464.21	1,309.46	592.88
Yield per acre (aum)	0.83	0.87	0.61	1.17
Operators share of yield %	100.00	100.00	100.00	100.00
Value per aum	20.05	21.80	16.59	23.55
Total product return per acre	16.68	18.88	10.05	27.51
Crop insurance per acre	0.03	0.00	0.09	-
Other crop income per acre	0.02	0.19	-	-
Gross return per acre	16.74	19.08	10.15	27.51
Direct Expenses				
Repairs	0.63	0.90	0.46	0.71
Custom hire	0.13	0.52	-	-
Miscellaneous	1.17	0.81	0.97	0.69
Total direct expenses per acre	1.94	2.23	1.44	1.40
Return over direct exp per acre	14.80	16.85	8.71	26.11
Overhead Expenses				
RE & pers. property taxes	2.30	4.24	1.17	3.03
Interest	7.01	27.40	2.71	3.68
Mach & bldg depreciation	0.75	0.45	0.67	0.86
Miscellaneous	0.64	0.38	0.60	0.89
Total overhead expenses per acre	10.70	32.47	5.16	8.48
Total dir & ovhd expenses per acre	12.64	34.70	6.60	9.88
Net return per acre	4.10	-15.62	3.55	17.63

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Pasture on Cash Rent

	<u>Avg. Of All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	57	11	12	12
Acres	1,084.07	1,323.21	1,122.94	1,133.51
Yield per acre (aum)	0.95	0.71	0.86	1.36
Operators share of yield %	100.00	100.00	100.00	100.00
Value per aum	21.10	19.95	21.57	22.31
Total product return per acre	20.09	14.13	18.51	30.38
Crop insurance per acre	0.02	-	-	0.00
Other crop income per acre	0.05	-	0.23	-
Gross return per acre	20.15	14.13	18.74	30.38
Direct Expenses				
Crop insurance	0.28	0.61	0.58	0.03
Repairs	0.81	0.63	0.54	0.59
Custom hire	0.17	0.16	0.60	-
Land rent	16.36	20.42	16.14	13.10
Miscellaneous	0.92	1.09	1.00	0.50
Total direct expenses per acre	18.53	22.92	18.86	14.21
Return over direct exp per acre	1.62	-8.78	-0.13	16.17
Overhead Expenses				
Mach & bldg depreciation	0.67	0.56	0.82	0.67
Miscellaneous	0.82	1.08	0.65	0.85
Total overhead expenses per acre	1.49	1.64	1.47	1.52
Total dir & ovhd expenses per acre	20.02	24.55	20.33	15.73
Net return per acre	0.13	-10.42	-1.59	14.65

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Peas, Field on Cash Rent

	<u>Avg. Of</u> <u>All Farms</u>
Number of farms	14
Acres	296.00
Yield per acre (bu.)	46.21
Operators share of yield %	100.00
Value per bu.	5.67
Total product return per acre	261.97
Crop insurance per acre	3.97
Other crop income per acre	22.42
Gross return per acre	288.36
Direct Expenses	
Seed and plants	34.35
Fertilizer	6.77
Crop chemicals	36.83
Crop insurance	12.62
Fuel & oil	9.79
Repairs	19.42
Custom hire	3.87
Land rent	50.71
Machinery leases	1.25
Operating interest	5.15
Miscellaneous	4.58
Total direct expenses per acre	185.33
Return over direct exp per acre	103.02
Overhead Expenses	
Custom hire	0.65
Hired labor	7.33
Machinery leases	2.46
Building leases	1.20
Farm insurance	3.44
Utilities	1.87
Dues & professional fees	0.82
Interest	3.50
Mach & bldg depreciation	23.76
Miscellaneous	3.45
Total overhead expenses per acre	48.46
Total dir & ovhd expenses per acre	233.80
Net return per acre	54.56
Government payments	10.84
Net return with govt pmts	65.40
Labor & management charge	19.81
Net return over lbr & mgt	45.59
Cost of Production	
Total direct expense per bu.	4.01
Total dir & ovhd exp per bu.	5.06
Less govt & other income	4.25
With labor & management	4.68
Net value per unit	5.67
Machinery cost per acre	61.03
Est. labor hours per acre	0.85

Crop Enterprise Analysis
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Soybeans on Owned Land

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	106	21	21	22
Acres	287.05	285.00	223.98	195.53
Yield per acre (bu.)	34.78	27.82	35.26	42.82
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	8.10	7.91	8.12	8.32
Total product return per acre	281.80	220.03	286.24	356.29
Hedging gains/losses per acre	0.07	0.02	-	-
Crop insurance per acre	21.32	22.01	5.65	37.81
Other crop income per acre	40.86	36.55	40.17	52.23
Gross return per acre	344.05	278.61	332.05	446.33
Direct Expenses				
Seed and plants	59.66	64.60	61.34	60.59
Fertilizer	8.73	11.17	8.27	5.37
Crop chemicals	28.36	27.29	28.18	30.50
Crop insurance	14.24	14.46	12.88	18.24
Fuel & oil	13.47	14.72	13.26	13.62
Repairs	24.24	29.56	23.20	24.95
Custom hire	3.80	2.96	3.62	4.85
Hired labor	0.93	0.63	0.32	-
Machinery leases	0.91	-	-	1.28
Operating interest	8.10	6.86	6.74	4.32
Miscellaneous	1.55	2.67	0.97	0.60
Total direct expenses per acre	164.01	174.92	158.78	164.32
Return over direct exp per acre	180.05	103.69	173.27	282.01
Overhead Expenses				
Custom hire	0.40	0.58	0.69	0.73
Hired labor	8.39	5.33	5.63	12.38
Machinery leases	2.72	3.39	3.33	5.83
Building leases	0.31	0.08	0.36	0.55
RE & pers. property taxes	10.85	8.50	11.27	15.21
Farm insurance	5.65	6.40	5.37	6.78
Utilities	4.36	3.84	4.65	5.29
Dues & professional fees	1.56	1.36	1.72	2.29
Interest	32.17	48.16	28.94	12.60
Mach & bldg depreciation	34.41	36.30	37.71	24.77
Miscellaneous	4.88	5.68	3.19	3.77
Total overhead expenses per acre	105.72	119.63	102.87	90.19
Total dir & ovhd expenses per acre	269.73	294.55	261.64	254.51
Net return per acre	74.33	-15.93	70.41	191.82
Government payments	7.89	8.13	11.73	3.09
Net return with govt pmts	82.22	-7.80	82.14	194.91
Labor & management charge	27.29	27.67	25.84	28.53
Net return over lbr & mgt	54.93	-35.47	56.30	166.38
Cost of Production				
Total direct expense per bu.	4.72	6.29	4.50	3.84
Total dir & ovhd exp per bu.	7.76	10.59	7.42	5.94
Less govt & other income	5.74	8.19	5.79	3.77
With labor & management	6.52	9.18	6.52	4.44
Net value per unit	8.11	7.91	8.12	8.32
Machinery cost per acre	80.06	88.76	81.52	76.20
Est. labor hours per acre	1.19	1.22	1.10	1.37

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Soybeans on Cash Rent

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	169	33	34	34
Acres	685.64	486.47	815.37	589.00
Yield per acre (bu.)	35.04	28.32	32.63	42.14
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	8.15	8.03	8.09	8.43
Other product return per acre	0.05	0.36	-	-
Total product return per acre	285.53	227.85	263.88	355.06
Hedging gains/losses per acre	0.27	0.86	-	0.35
Crop insurance per acre	17.45	28.85	26.53	9.61
Other crop income per acre	40.89	42.60	40.95	42.56
Gross return per acre	344.13	300.15	331.35	407.57
Direct Expenses				
Seed and plants	61.21	65.38	59.72	56.81
Fertilizer	7.81	10.38	6.94	7.68
Crop chemicals	29.24	32.58	28.49	29.25
Crop insurance	13.41	17.00	12.29	13.08
Drying expense	0.21	0.23	0.10	0.55
Fuel & oil	12.36	13.67	11.51	12.97
Repairs	22.76	31.66	19.31	21.19
Custom hire	3.64	6.62	5.17	2.04
Hired labor	0.70	-	2.46	0.12
Land rent	78.55	86.29	81.85	78.94
Machinery leases	0.83	0.53	1.28	0.54
Operating interest	7.21	8.15	7.56	4.97
Miscellaneous	1.61	1.90	1.49	0.52
Total direct expenses per acre	239.52	274.39	238.17	228.66
Return over direct exp per acre	104.61	25.76	93.18	178.91
Overhead Expenses				
Custom hire	0.76	1.84	0.18	0.43
Hired labor	9.95	9.28	9.80	10.14
Machinery leases	3.87	2.17	8.00	1.97
Farm insurance	5.31	6.50	4.45	4.42
Utilities	4.15	5.71	3.88	3.92
Dues & professional fees	2.59	2.38	1.49	3.00
Interest	3.02	4.78	3.26	2.43
Mach & bldg depreciation	30.24	33.20	26.14	28.65
Miscellaneous	4.84	5.35	3.38	4.46
Total overhead expenses per acre	64.73	71.21	60.58	59.41
Total dir & ovhd expenses per acre	304.25	345.60	298.75	288.07
Net return per acre	39.89	-45.45	32.60	119.50
Government payments	7.57	7.63	7.22	6.15
Net return with govt pmts	47.46	-37.83	39.83	125.66
Labor & management charge	24.04	28.67	22.91	24.49
Net return over lbr & mgt	23.42	-66.50	16.91	101.17
Cost of Production				
Total direct expense per bu.	6.84	9.69	7.30	5.43
Total dir & ovhd exp per bu.	8.68	12.20	9.16	6.84
Less govt & other income	6.79	9.37	6.87	5.44
With labor & management	7.48	10.38	7.57	6.03
Net value per unit	8.16	8.06	8.09	8.43
Machinery cost per acre	74.86	92.11	72.49	67.55
Est. labor hours per acre	1.12	1.34	1.12	0.95

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Soybeans on Share Rent

	<u>Avg. Of</u> <u>All Farms</u>
Number of farms	23
Acres	235.81
Yield per acre (bu.)	36.62
Operators share of yield %	69.60
Value per bu.	7.97
Total product return per acre	203.22
Hedging gains/losses per acre	0.52
Crop insurance per acre	9.51
Other crop income per acre	32.17
Gross return per acre	245.42
Direct Expenses	
Seed and plants	57.07
Fertilizer	6.47
Crop chemicals	27.99
Crop insurance	11.55
Fuel & oil	13.03
Repairs	22.49
Custom hire	3.45
Operating interest	3.07
Miscellaneous	1.11
Total direct expenses per acre	146.23
Return over direct exp per acre	99.19
Overhead Expenses	
Custom hire	0.31
Hired labor	6.35
Machinery leases	0.81
Building leases	0.64
Farm insurance	4.85
Utilities	4.56
Dues & professional fees	0.99
Interest	2.53
Mach & bldg depreciation	38.70
Miscellaneous	4.79
Total overhead expenses per acre	64.53
Total dir & ovhd expenses per acre	210.76
Net return per acre	34.66
Government payments	10.19
Net return with govt pmts	44.85
Labor & management charge	23.90
Net return over lbr & mgt	20.95
Cost of Production	
Total direct expense per bu.	5.74
Total dir & ovhd exp per bu.	8.27
Less govt & other income	6.21
With labor & management	7.15
Net value per unit	7.99
Machinery cost per acre	78.78
Est. labor hours per acre	1.02

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Sugar Beets on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	14
Acres	90.90
Yield per acre (ton)	20.86
Operators share of yield %	100.00
Value per ton	25.76
Total product return per acre	537.31
Crop insurance per acre	130.99
Other crop income per acre	20.88
Gross return per acre	689.18
Direct Expenses	
Seed and plants	203.07
Fertilizer	93.50
Crop chemicals	147.41
Crop insurance	30.24
Fuel & oil	52.42
Repairs	108.75
Custom hire	6.82
Hired labor	14.40
Operating interest	18.56
Miscellaneous	43.28
Total direct expenses per acre	718.44
Return over direct exp per acre	-29.26
Overhead Expenses	
Hired labor	38.35
Machinery leases	8.17
RE & pers. property taxes	22.87
Farm insurance	9.67
Utilities	10.00
Dues & professional fees	2.37
Interest	80.90
Mach & bldg depreciation	75.44
Miscellaneous	10.55
Total overhead expenses per acre	258.31
Total dir & ovhd expenses per acre	976.75
Net return per acre	-287.57
Government payments	-
Net return with govt pmts	-287.57
Labor & management charge	94.96
Net return over lbr & mgt	-382.53
Cost of Production	
Total direct expense per ton	34.44
Total dir & ovhd exp per ton	46.83
Less govt & other income	39.55
With labor & management	44.10
Net value per unit	25.76
Machinery cost per acre	255.37
Est. labor hours per acre	4.10

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Sugar Beets on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	19
Acres	235.81
Yield per acre (ton)	17.48
Operators share of yield %	100.00
Value per ton	24.85
Total product return per acre	434.36
Crop insurance per acre	225.97
Other crop income per acre	24.00
Gross return per acre	684.33
Direct Expenses	
Seed and plants	200.28
Fertilizer	84.47
Crop chemicals	141.07
Crop insurance	32.16
Fuel & oil	56.32
Repairs	103.17
Custom hire	10.14
Hired labor	4.71
Land rent	116.72
Stock/quota lease	6.11
Operating interest	29.00
Miscellaneous	56.58
Total direct expenses per acre	840.72
Return over direct exp per acre	-156.39
Overhead Expenses	
Hired labor	46.66
Machinery leases	10.37
RE & pers. property taxes	0.14
Farm insurance	8.40
Utilities	12.58
Dues & professional fees	5.24
Interest	6.61
Mach & bldg depreciation	73.93
Miscellaneous	9.79
Total overhead expenses per acre	173.71
Total dir & ovhd expenses per acre	1,014.44
Net return per acre	-330.11
Government payments	-
Net return with govt pmts	-330.11
Labor & management charge	92.54
Net return over lbr & mgt	-422.64
Cost of Production	
Total direct expense per ton	48.10
Total dir & ovhd exp per ton	58.04
Less govt & other income	43.74
With labor & management	49.03
Net value per unit	24.85
Machinery cost per acre	258.42
Est. labor hours per acre	3.94

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Sunflowers on Owned Land

	<u>Avg. Of All Farms</u>
Number of farms	8
Acres	166.66
Yield per acre (cwt.)	14.66
Operators share of yield %	100.00
Value per cwt.	18.53
Total product return per acre	271.63
Crop insurance per acre	48.50
Other crop income per acre	32.00
Gross return per acre	352.13
Direct Expenses	
Seed and plants	41.47
Fertilizer	49.51
Crop chemicals	33.46
Crop insurance	11.71
Drying expense	0.64
Fuel & oil	10.13
Repairs	18.10
Custom hire	11.36
Operating interest	6.75
Miscellaneous	2.05
Total direct expenses per acre	185.16
Return over direct exp per acre	166.97
Overhead Expenses	
Hired labor	2.78
Machinery leases	0.37
Building leases	0.37
RE & pers. property taxes	7.23
Farm insurance	3.13
Utilities	2.67
Dues & professional fees	0.73
Interest	21.54
Mach & bldg depreciation	36.96
Miscellaneous	4.13
Total overhead expenses per acre	79.91
Total dir & ovhd expenses per acre	265.07
Net return per acre	87.06
Government payments	5.74
Net return with govt pmts	92.80
Labor & management charge	23.34
Net return over lbr & mgt	69.46
Cost of Production	
Total direct expense per cwt.	12.63
Total dir & ovhd exp per cwt.	18.08
Less govt & other income	12.20
With labor & management	13.79
Net value per unit	18.53
Machinery cost per acre	77.80
Est. labor hours per acre	1.10

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Sunflowers on Cash Rent

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Acres	495.60	324.48	830.19	316.25
Yield per acre (cwt.)	15.85	11.81	13.95	24.01
Operators share of yield %	100.00	100.00	100.00	100.00
Value per cwt.	18.27	18.71	18.50	18.35
Total product return per acre	289.46	221.00	258.14	440.67
Crop insurance per acre	17.86	26.16	43.05	-
Other crop income per acre	25.57	32.79	24.87	27.73
Gross return per acre	332.89	279.95	326.06	468.41
Direct Expenses				
Seed and plants	41.62	31.95	43.04	41.68
Fertilizer	41.81	48.99	44.04	46.06
Crop chemicals	34.02	33.96	29.81	44.14
Crop insurance	10.63	12.85	9.49	10.77
Drying expense	0.29	-	-	1.39
Fuel & oil	13.38	14.03	13.84	18.03
Repairs	22.67	25.61	26.21	26.33
Custom hire	11.40	6.25	10.16	2.12
Hired labor	3.21	21.22	-	-
Land rent	55.82	82.76	51.29	53.52
Machinery leases	1.25	4.52	0.02	-
Operating interest	7.53	4.76	11.29	10.61
Miscellaneous	0.92	0.02	1.44	-
Total direct expenses per acre	244.54	286.91	240.62	254.65
Return over direct exp per acre	88.36	-6.96	85.44	213.76
Overhead Expenses				
Custom hire	2.33	0.00	6.38	-
Hired labor	5.29	2.45	5.94	11.60
Machinery leases	1.28	0.96	2.96	0.00
Farm insurance	3.77	2.99	2.14	6.45
Utilities	3.62	4.28	2.89	4.52
Dues & professional fees	1.61	0.97	0.70	6.14
Interest	3.57	3.41	4.27	5.68
Mach & bldg depreciation	25.13	30.92	20.55	34.54
Miscellaneous	4.48	3.75	5.13	5.11
Total overhead expenses per acre	51.06	49.72	50.96	74.05
Total dir & ovhd expenses per acre	295.60	336.63	291.58	328.70
Net return per acre	37.29	-56.68	34.47	139.71
Government payments	6.46	3.02	7.09	3.77
Net return with govt pmts	43.76	-53.66	41.57	143.48
Labor & management charge	22.60	24.22	21.21	33.63
Net return over lbr & mgt	21.16	-77.88	20.35	109.85
Cost of Production				
Total direct expense per cwt.	15.43	24.29	17.24	10.61
Total dir & ovhd exp per cwt.	18.65	28.50	20.90	13.69
Less govt & other income	15.51	23.25	15.52	12.38
With labor & management	16.93	25.30	17.04	13.78
Net value per unit	18.27	18.71	18.50	18.35
Machinery cost per acre	79.06	83.26	83.49	82.95
Est. labor hours per acre	1.12	2.08	0.90	1.75

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Wheat, Durum on Cash Rent

	<u>Avg. Of All Farms</u>
Number of farms	8
Acres	432.47
Yield per acre (bu.)	58.83
Operators share of yield %	100.00
Value per bu.	6.18
Other product return per acre	2.94
Total product return per acre	366.62
Crop insurance per acre	22.72
Other crop income per acre	36.86
Gross return per acre	426.20
Direct Expenses	
Seed and plants	20.68
Fertilizer	71.15
Crop chemicals	38.82
Crop insurance	13.49
Drying expense	2.67
Fuel & oil	12.01
Repairs	22.84
Custom hire	3.06
Land rent	52.58
Machinery leases	0.74
Operating interest	7.04
Miscellaneous	0.72
Total direct expenses per acre	245.80
Return over direct exp per acre	180.40
Overhead Expenses	
Hired labor	9.52
Building leases	0.55
Farm insurance	4.22
Utilities	3.34
Dues & professional fees	2.11
Interest	5.41
Mach & bldg depreciation	35.02
Miscellaneous	4.29
Total overhead expenses per acre	64.46
Total dir & ovhd expenses per acre	310.26
Net return per acre	115.94
Government payments	7.48
Net return with govt pmts	123.42
Labor & management charge	23.36
Net return over lbr & mgt	100.06
Cost of Production	
Total direct expense per bu.	4.18
Total dir & ovhd exp per bu.	5.27
Less govt & other income	4.08
With labor & management	4.48
Net value per unit	6.18
Machinery cost per acre	75.41
Est. labor hours per acre	0.99

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Wheat, Spring on Owned Land

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	95	19	19	19
Acres	365.88	327.29	334.10	478.01
Yield per acre (bu.)	52.43	43.68	49.29	61.63
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	4.92	4.70	5.01	5.10
Other product return per acre	1.46	3.12	0.39	0.48
Total product return per acre	259.66	208.50	247.38	314.62
Hedging gains/losses per acre	0.75	-	-	0.55
Crop insurance per acre	26.15	51.39	21.36	26.24
Other crop income per acre	29.95	29.29	36.72	31.48
Gross return per acre	316.51	289.18	305.47	372.90
Direct Expenses				
Seed and plants	16.42	24.10	18.17	13.57
Fertilizer	61.49	70.22	61.75	58.06
Crop chemicals	29.58	32.93	23.84	29.88
Crop insurance	14.08	15.63	14.93	13.42
Drying expense	0.37	0.92	-	0.44
Fuel & oil	11.39	13.56	9.33	11.38
Repairs	20.62	30.29	18.00	15.71
Custom hire	4.16	6.56	4.56	0.99
Hired labor	0.59	1.21	-	0.33
Operating interest	5.88	9.87	6.19	5.06
Miscellaneous	2.17	3.21	1.10	1.20
Total direct expenses per acre	166.76	208.49	157.87	150.04
Return over direct exp per acre	149.75	80.69	147.60	222.86
Overhead Expenses				
Custom hire	0.59	1.17	0.48	0.12
Hired labor	7.18	7.08	7.34	5.87
Machinery leases	1.22	0.90	3.02	0.77
Building leases	0.38	0.13	0.21	0.84
RE & pers. property taxes	8.25	9.57	8.59	6.95
Farm insurance	5.19	5.54	6.35	4.81
Utilities	3.73	4.38	3.99	4.07
Dues & professional fees	1.29	1.45	0.91	2.03
Interest	24.29	36.33	34.04	20.55
Mach & bldg depreciation	36.43	39.48	35.41	37.62
Miscellaneous	5.04	7.27	3.92	5.03
Total overhead expenses per acre	93.58	113.30	104.26	88.66
Total dir & ovhd expenses per acre	260.34	321.79	262.12	238.70
Net return per acre	56.17	-32.61	43.35	134.19
Government payments	12.60	14.52	9.70	12.07
Net return with govt pmts	68.77	-18.09	53.05	146.26
Labor & management charge	23.96	29.72	23.86	22.83
Net return over lbr & mgt	44.81	-47.81	29.18	123.43
Cost of Production				
Total direct expense per bu.	3.18	4.77	3.20	2.43
Total dir & ovhd exp per bu.	4.97	7.37	5.32	3.87
Less govt & other income	3.61	5.12	3.94	2.72
With labor & management	4.07	5.80	4.42	3.09
Net value per unit	4.94	4.70	5.01	5.11
Machinery cost per acre	74.14	90.78	71.25	64.99
Est. labor hours per acre	1.09	1.18	1.23	0.91

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Wheat, Spring on Cash Rent

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	145	29	29	29
Acres	719.20	462.10	797.87	1,028.28
Yield per acre (bu.)	53.10	42.83	55.01	63.25
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	4.90	4.55	4.86	5.12
Other product return per acre	0.44	0.74	-	-
Total product return per acre	260.54	195.80	267.21	323.91
Hedging gains/losses per acre	0.78	1.26	-	2.16
Crop insurance per acre	30.46	47.86	20.94	24.66
Other crop income per acre	31.67	39.01	25.78	31.41
Gross return per acre	323.44	283.93	313.93	382.13
Direct Expenses				
Seed and plants	17.67	22.82	17.44	17.06
Fertilizer	63.70	79.98	64.05	62.07
Crop chemicals	31.37	33.34	31.45	30.29
Crop insurance	13.93	16.22	14.25	12.95
Drying expense	0.36	1.17	0.11	0.32
Fuel & oil	11.21	11.63	11.83	11.51
Repairs	22.56	33.17	24.16	18.13
Custom hire	6.11	7.94	4.42	3.71
Hired labor	1.72	-	4.86	0.74
Land rent	57.79	74.30	56.41	54.74
Machinery leases	0.97	0.06	1.86	1.03
Operating interest	6.59	10.21	7.45	5.46
Miscellaneous	1.89	1.97	0.72	2.67
Total direct expenses per acre	235.86	292.79	239.01	220.69
Return over direct exp per acre	87.58	-8.86	74.91	161.45
Overhead Expenses				
Custom hire	0.69	2.98	0.05	0.11
Hired labor	6.98	10.80	8.37	7.66
Machinery leases	2.90	4.36	4.76	1.60
Building leases	0.49	0.21	0.20	0.99
Farm insurance	4.21	5.95	4.02	4.22
Utilities	3.54	4.83	3.58	3.40
Dues & professional fees	1.44	2.44	0.68	1.71
Interest	3.32	2.54	3.17	3.41
Mach & bldg depreciation	27.83	35.96	25.79	29.01
Miscellaneous	3.62	3.18	3.84	4.40
Total overhead expenses per acre	55.03	73.23	54.45	56.50
Total dir & ovhd expenses per acre	290.89	366.02	293.47	277.18
Net return per acre	32.55	-82.10	20.46	104.95
Government payments	9.53	7.64	9.34	10.59
Net return with govt pmts	42.08	-74.45	29.80	115.54
Labor & management charge	22.49	23.59	22.06	22.18
Net return over lbr & mgt	19.59	-98.05	7.74	93.36
Cost of Production				
Total direct expense per bu.	4.44	6.84	4.34	3.49
Total dir & ovhd exp per bu.	5.48	8.55	5.33	4.38
Less govt & other income	4.11	6.29	4.32	3.29
With labor & management	4.53	6.84	4.72	3.64
Net value per unit	4.91	4.58	4.86	5.16
Machinery cost per acre	73.08	95.13	73.97	65.03
Est. labor hours per acre	1.05	1.13	1.16	1.00

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Wheat, Spring on Share Rent

	<u>Avg. Of</u> <u>All Farms</u>	<u>Low 20%</u>	<u>40 - 60%</u>	<u>High 20%</u>
Number of farms	25	5	5	5
Acres	326.33	184.93	178.20	747.28
Yield per acre (bu.)	61.45	39.95	56.02	74.09
Operators share of yield %	64.53	60.69	72.32	61.36
Value per bu.	4.81	4.51	4.87	4.83
Total product return per acre	190.89	109.25	197.32	219.50
Hedging gains/losses per acre	1.04	4.24	-	1.22
Crop insurance per acre	26.10	8.93	16.45	33.93
Other crop income per acre	21.60	18.07	32.13	14.11
Gross return per acre	239.62	140.50	245.91	268.76
Direct Expenses				
Seed and plants	12.91	5.87	19.69	11.89
Fertilizer	52.96	62.04	60.88	50.42
Crop chemicals	32.06	34.11	30.54	31.65
Crop insurance	11.46	6.76	11.58	10.27
Drying expense	0.14	1.28	-	-
Fuel & oil	10.28	10.53	12.05	9.69
Repairs	19.42	26.59	33.97	16.63
Custom hire	4.31	14.31	2.06	2.88
Marketing	0.07	-	0.61	-
Operating interest	3.16	6.96	2.15	1.25
Miscellaneous	0.66	5.05	0.19	0.09
Total direct expenses per acre	147.43	173.50	173.72	134.77
Return over direct exp per acre	92.19	-33.00	72.19	133.99
Overhead Expenses				
Custom hire	0.58	1.84	-	0.12
Hired labor	7.57	11.06	5.08	10.04
Machinery leases	1.67	0.10	0.97	0.74
Building leases	0.49	0.45	-	0.63
Farm insurance	3.97	3.42	7.13	2.78
Utilities	3.02	3.60	4.31	1.85
Dues & professional fees	0.52	1.39	0.73	0.26
Interest	1.79	1.67	2.98	0.33
Mach & bldg depreciation	30.22	28.86	28.98	25.23
Miscellaneous	3.43	5.49	6.65	2.09
Total overhead expenses per acre	53.27	57.88	56.83	44.08
Total dir & ovhd expenses per acre	200.70	231.37	230.55	178.85
Net return per acre	38.92	-90.88	15.36	89.91
Government payments	8.04	8.19	14.36	5.25
Net return with govt pmts	46.96	-82.69	29.72	95.16
Labor & management charge	18.36	18.15	30.34	13.45
Net return over lbr & mgt	28.60	-100.84	-0.62	81.71
Cost of Production				
Total direct expense per bu.	3.72	7.16	4.29	2.96
Total dir & ovhd exp per bu.	5.06	9.54	5.69	3.93
Less govt & other income	3.63	7.92	4.14	2.74
With labor & management	4.09	8.67	4.89	3.03
Net value per unit	4.84	4.68	4.87	4.86
Machinery cost per acre	66.00	82.22	79.40	54.00
Est. labor hours per acre	0.87	0.99	1.07	0.75

EXPLANATORY NOTES FOR LIVESTOCK TABLES

The "Livestock Enterprise Analysis" table shows the average physical production, gross returns, direct costs, overhead costs, and net return per unit. All costs are actual costs; no opportunity costs are included. The "Net Return" to the enterprise is the "Gross Margin" minus the direct and overhead costs. "Net Return" represents the return to the operators and family's unpaid labor, management, and equity. It represents the return to all of the resources, which are owned by the farm family and hence, not purchased or paid a wage. The last section of each livestock table contains both economic and technical efficiency measures, which are particularly useful to individual managers in assessing their performance as compared to their peers.

When there are less than five farms with a particular livestock enterprise, that enterprise is not included in the report. When there is a sufficient number (i.e., more than 24), farms are divided into low 20%, middle 20% and high 20% on the basis of returns to overhead costs. The classification is done separately for each livestock enterprise.

The "Dairy" enterprise contains the information for only the milking herd (which includes dry cows). "Dairy Replacement Heifers" are those heifers kept for replacement into the milking herd. "Dairy Heifers (for sale)" are heifers intended for feeding and sale. "Dairy Steers" includes only steers for feeding. The "Dairy and Replacement Heifers" table includes both "Dairy" and "Dairy Replacement Heifers."

"Lbs. feed per lb. of gain" is the lbs. of total feed divided by total gain. The total feed is calculated by adding total pounds of feed. For grains, these pounds per unit are used: corn, 56; oats, 32; barley, 48; grain sorghum, 56; wheat, 60; and millet, 48. For these roughages, the pounds are calculated by these factors: alfalfa haylage, 0.5; corn silage, 0.33; oatlage, 0.5; and sorghum silage, 0.33; and small grain silage, 0.33.

The calving and weaning percentages are calculated as the number of calves, which are calved and weaned, respectively, divided by the number of cows, which are supposed to bear young.

Rounding of individual items for the report has caused minor discrepancies with the calculated totals.

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Beef Cow-Calf -- Average Per Cwt. Produced

	<u>Avg. Of All Farms</u>		<u>Low 20%</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	26		5		5		6	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms								
Beef Calves sold (lb)	34.54	52.22	86.94	129.68	43.52	64.94	11.78	17.82
Transferred out (lb)	65.46	96.07	13.06	20.10	56.48	81.25	88.22	127.23
Cull sales		16.70		19.72		9.75		13.75
Government payments		4.03		0.67		-		5.10
Other income		0.47		0.68		1.20		0.19
Purchased		-13.75		-6.16		-14.10		-9.06
Transferred in		-28.91		-7.67		-27.06		-39.46
Inventory change		0.38		-56.58		15.80		16.99
Gross margin		127.21		100.44		131.77		132.56
Direct Expenses								
Protein Vit Minerals (lb.)	61.82	4.72	28.75	6.38	248.97	4.49	1.29	1.09
Corn Silage (lb.)	538.44	8.29	1,010.00	15.57	160.90	2.76	576.76	7.16
Hay, Alfalfa (lb.)	85.56	3.35	109.70	3.45	109.93	4.77	100.60	4.02
Hay, Grass (lb.)	915.86	23.57	1,678.80	44.09	864.93	27.43	758.26	13.77
Pasture (aum)	1.20	21.45	1.44	24.48	1.41	35.17	1.09	17.95
Stover (lb.)	48.72	0.71	337.68	5.07	-	-	-	-
DDGS, dry (lb.)	20.71	1.03	137.22	6.77	0.28	0.02	9.72	0.51
Other feed stuffs (lb)	165.62	6.95	166.64	6.49	116.76	4.26	165.05	7.52
Veterinary		5.49		9.06		3.84		5.51
Supplies		4.38		4.70		2.99		3.35
Fuel & oil		4.69		5.92		3.84		3.22
Repairs		9.57		15.12		6.72		6.12
Custom hire		1.00		0.81		2.96		-
Operating interest		1.95		4.71		1.28		1.00
Total direct expenses		97.15		152.62		100.55		71.23
Return over direct expense		30.06		-52.18		31.22		61.33
Overhead Expenses								
Hired labor		2.90		6.35		0.94		3.09
Farm insurance		2.14		3.23		1.84		1.13
Utilities		2.22		2.54		2.56		1.31
Mach & bldg depreciation		8.02		6.93		6.93		7.62
Miscellaneous		5.43		7.68		6.14		3.25
Total overhead expenses		20.71		26.73		18.40		16.40
Total dir & ovhd expenses		117.86		179.35		118.95		87.64
Net return		9.35		-78.92		12.82		44.93
Labor & management charge		12.71		10.85		13.58		7.46
Net return over lbr & mgt		-3.36		-89.77		-0.76		37.47
Cost of Production Per Cwt. Produced								
Total direct expense per unit		97.15		152.62		100.55		71.23
Total dir & ovhd expense per unit		117.86		179.35		118.95		87.64
With other revenue adjustments		139.45		229.67		134.55		100.32
With labor and management		152.16		240.52		148.13		107.78
Est. labor hours per unit		0.98		1.42		0.89		0.77
Other Information								
Number of cows		205.5		150.7		201.8		223.2
Pregnancy percentage		96.4		96.9		99.7		91.1
Pregnancy loss percentage		1.6		2.3		0.6		1.6
Culling percentage		11.7		13.4		7.5		11.2
Calving percentage		94.8		94.6		99.1		89.7
Weaning percentage		90.7		89.5		95.9		87.0
Calves sold per cow		0.94		0.91		1.01		0.94
Calf death loss percent		4.7		6.9		3.4		2.6
Cow death loss percent		1.6		2.9		1.0		0.8
Average weaning weight		549		542		538		586
Lb. weaned/exposed female		498		485		517		510
Feed cost per cow		372.18		553.76		436.40		304.96
Avg wgt/ Beef Calves sold		558		550		573		532
Avg price / cwt.		151.18		149.17		149.22		151.26

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Beef Cow-Calf -- Average Per Cow

	<u>Avg. Of All Farms</u>		<u>Low 20%</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	26		5		5		6	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms								
Beef Calves sold (lb)	183.5	277.42	428.7	639.49	240.7	359.14	69.1	104.47
Transferred out (lb)	347.7	510.32	64.4	99.11	312.4	449.32	517.1	745.82
Cull sales		88.71		97.22		53.90		80.58
Government payments		21.39		3.32		-		29.87
Other income		2.51		3.33		6.64		1.12
Purchased		-73.02		-30.38		-77.98		-53.09
Transferred in		-153.59		-37.81		-149.66		-231.28
Inventory change		2.02		-279.01		87.39		99.58
Gross margin		675.75		495.26		728.74		777.07
Direct Expenses								
Protein Vit Minerals (lb.)	328.4	25.08	141.8	31.47	1,376.9	24.85	7.6	6.39
Corn Silage (lb.)	2,860.3	44.02	4,980.4	76.80	889.9	15.26	3,381.0	41.95
Hay, Alfalfa (lb.)	454.5	17.77	540.9	17.00	608.0	26.38	589.7	23.57
Hay, Grass (lb.)	4,865.2	125.21	8,278.4	217.43	4,783.4	151.72	4,444.9	80.73
Pasture (aum)	6.4	113.95	7.1	120.69	7.8	194.52	6.4	105.23
Stover (lb.)	258.8	3.76	1,665.1	24.98	-	-	-	-
DDGS, dry (lb.)	110.0	5.48	676.7	33.40	1.5	0.12	57.0	2.99
Other feed stuffs (lb)	879.8	36.91	821.7	32.00	645.7	23.56	967.5	44.09
Veterinary		29.17		44.66		21.24		32.28
Supplies		23.26		23.19		16.51		19.64
Fuel & oil		24.93		29.20		21.25		18.90
Repairs		50.86		74.54		37.17		35.90
Custom hire		5.33		4.02		16.39		-
Operating interest		10.35		23.23		7.09		5.86
Total direct expenses		516.08		752.59		556.06		417.55
Return over direct expense		159.67		-257.33		172.68		359.52
Overhead Expenses								
Hired labor		15.41		31.30		5.21		18.09
Farm insurance		11.38		15.93		10.16		6.65
Utilities		11.79		12.55		14.13		7.71
Mach & bldg depreciation		42.59		34.16		38.33		44.65
Miscellaneous		28.83		37.89		33.95		19.07
Total overhead expenses		109.99		131.82		101.78		96.17
Total dir & ovhd expenses		626.07		884.41		657.84		513.72
Net return		49.68		-389.15		70.90		263.36
Labor & management charge		67.52		53.53		75.11		43.73
Net return over lbr & mgt		-17.84		-442.67		-4.21		219.63
Cost of Production Per Cwt. Produced								
Total direct expense per unit		97.15		152.62		100.55		71.23
Total dir & ovhd expense per unit		117.86		179.35		118.95		87.64
With other revenue adjustments		139.45		229.67		134.55		100.32
With labor and management		152.16		240.52		148.13		107.78
Est. labor hours per unit		5.18		7.00		4.90		4.50
Other Information								
Number of cows		205.5		150.7		201.8		223.2
Pregnancy percentage		96.4		96.9		99.7		91.1
Pregnancy loss percentage		1.6		2.3		0.6		1.6
Culling percentage		11.7		13.4		7.5		11.2
Calving percentage		94.8		94.6		99.1		89.7
Weaning percentage		90.7		89.5		95.9		87.0
Calves sold per cow		0.94		0.91		1.01		0.94
Calf death loss percent		4.7		6.9		3.4		2.6
Cow death loss percent		1.6		2.9		1.0		0.8
Average weaning weight		549		542		538		586
Lb. weaned/exposed female		498		485		517		510
Feed cost per cow		372.18		553.76		436.40		304.96
Avg wgt/ Beef Calves sold		558		550		573		532
Avg price / cwt.		151.18		149.17		149.22		151.26

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Beef Cow-Calf Whole Herd w/backgrounding -- Average Per Cwt. Produced

	<u>Avg. Of All Farms</u>		<u>Low 20%</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	30		6		6		6	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms								
Beef Calves sold (lb)	58.68	84.02	39.93	58.35	47.63	68.77	85.21	122.43
Transferred out (lb)	19.39	29.89	2.85	4.82	27.45	44.12	14.24	20.86
Cull sales		18.81		24.35		16.06		17.90
Insurance income		0.27		-		-		-
Other income		1.91		-		1.75		0.18
Purchased		-32.19		-57.61		-41.93		-20.87
Transferred in		-13.54		-0.92		-12.00		-21.00
Inventory change		34.97		69.27		63.74		18.73
Gross margin		124.14		98.26		140.53		138.23
Direct Expenses								
Protein Vit Minerals (lb.)	147.61	4.50	37.87	7.11	4.94	5.02	5.70	2.72
Complete Ration (lb.)	17.70	2.64	54.29	4.07	16.03	3.95	-	-
Corn Silage (lb.)	479.82	6.97	362.35	5.44	2.10	0.04	1.24	0.02
Hay, Alfalfa (lb.)	159.31	6.48	613.95	27.66	57.20	1.43	33.81	1.30
Hay, Grass (lb.)	916.78	25.76	842.95	22.43	1,470.69	41.23	990.42	30.48
Pasture (aum)	1.39	27.76	2.24	40.17	1.35	24.57	1.22	26.79
Other feed stuffs (lb)	256.89	8.97	82.99	4.09	165.92	6.70	202.08	5.18
Veterinary		4.30		4.14		5.00		3.90
Supplies		4.64		4.48		3.06		2.46
Fuel & oil		4.77		6.28		6.94		4.26
Repairs		6.94		12.30		9.21		4.23
Custom hire		2.52		3.16		5.02		0.80
Marketing		1.77		3.51		2.99		1.42
Operating interest		3.22		5.38		3.95		3.38
Total direct expenses		111.23		150.22		119.11		86.93
Return over direct expense		12.91		-51.96		21.42		51.29
Overhead Expenses								
Hired labor		1.89		1.50		4.35		-
Interest		4.77		10.10		11.50		1.45
Mach & bldg depreciation		8.28		10.29		10.70		6.15
Miscellaneous		7.53		11.27		8.80		6.77
Total overhead expenses		22.47		33.17		35.35		14.36
Total dir & ovhd expenses		133.70		183.39		154.47		101.30
Net return		-9.56		-85.12		-13.94		36.93
Labor & management charge		12.67		17.62		15.97		15.17
Net return over lbr & mgt		-22.23		-102.75		-29.90		21.76
Cost of Production Per Cwt. Produced								
Total direct expense per unit		111.23		150.22		119.11		86.93
Total dir & ovhd expense per unit		133.70		183.39		154.47		101.30
With other revenue adjustments		154.69		223.63		163.48		105.38
With labor and management		167.36		241.25		179.44		120.55
Est. labor hours per unit		0.97		1.26		1.18		1.16
Other Information								
Number of cows		132.1		125.8		126.5		127.8
Pregnancy percentage		97.2		97.5		94.7		99.2
Pregnancy loss percentage		1.7		3.3		1.2		0.4
Culling percentage		14.2		17.5		9.7		12.0
Calving percentage		95.6		94.3		93.5		98.8
Weaning percentage		91.3		88.1		88.5		96.3
Calves sold per cow		0.71		0.33		0.65		0.98
Calf death loss percent		5.9		8.3		5.1		3.1
Cow death loss percent		2.2		3.6		2.2		0.4
Average weaning weight		532		466		554		575
Lb. weaned/exposed female		486		410		490		554
Feed cost per cow		495.10		502.98		424.10		418.60
Avg wgt/ Beef Calves sold		677		577		625		640
Avg price / cwt.		143.18		146.12		144.39		143.67

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Beef Cow-Calf Whole Herd w/backgrounding -- Average Per Cow

	<u>Avg. Of All Farms</u>		<u>Low 20%</u>		<u>40 - 60%</u>		<u>High 20%</u>	
	30		6		6		6	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Number of farms								
Beef Calves sold (lb)	349.8	500.77	181.0	264.48	243.6	351.68	536.5	770.78
Transferred out (lb)	115.6	178.12	12.9	21.85	140.4	225.62	89.6	131.35
Cull sales		112.12		110.36		82.15		112.71
Insurance income		1.60		-		-		-
Other income		11.36		-		8.97		1.12
Purchased		-191.83		-261.11		-214.42		-131.39
Transferred in		-80.69		-4.17		-61.34		-132.20
Inventory change		208.43		313.97		325.94		117.90
Gross margin		739.88		445.39		718.59		870.26
Direct Expenses								
Protein Vit Minerals (lb.)	879.7	26.80	171.7	32.25	25.3	25.69	35.9	17.12
Complete Ration (lb.)	105.5	15.72	246.1	18.46	81.9	20.21	-	-
Corn Silage (lb.)	2,859.7	41.55	1,642.4	24.64	10.8	0.19	7.8	0.11
Hay, Alfalfa (lb.)	949.5	38.60	2,782.8	125.36	292.5	7.31	212.9	8.17
Hay, Grass (lb.)	5,464.0	153.55	3,820.8	101.66	7,520.3	210.83	6,235.5	191.90
Pasture (aum)	8.3	165.44	10.2	182.09	6.9	125.63	7.7	168.65
Other feed stuffs (lb)	1,531.1	53.45	376.2	18.54	848.4	34.24	1,272.3	32.63
Veterinary		25.62		18.76		25.57		24.56
Supplies		27.68		20.32		15.65		15.47
Fuel & oil		28.43		28.45		35.50		26.85
Repairs		41.36		55.74		47.10		26.66
Custom hire		15.03		14.33		25.66		5.01
Marketing		10.55		15.91		15.28		8.91
Operating interest		19.17		24.40		20.20		21.27
Total direct expenses		662.94		680.89		609.08		547.32
Return over direct expense		76.93		-235.50		109.51		322.94
Overhead Expenses								
Hired labor		11.29		6.81		22.23		-
Interest		28.44		45.78		58.82		9.11
Mach & bldg depreciation		49.33		46.64		54.71		38.70
Miscellaneous		44.87		51.09		45.02		42.61
Total overhead expenses		133.94		150.33		180.78		90.42
Total dir & ovhd expenses		796.88		831.22		789.86		637.74
Net return		-57.01		-385.83		-71.27		232.52
Labor & management charge		75.51		79.88		81.64		95.54
Net return over lbr & mgt		-132.51		-465.71		-152.91		136.99
Cost of Production Per Cwt. Produced								
Total direct expense per unit		111.23		150.22		119.11		86.93
Total dir & ovhd expense per unit		133.70		183.39		154.47		101.30
With other revenue adjustments		154.69		223.63		163.48		105.38
With labor and management		167.36		241.25		179.44		120.55
Est. labor hours per unit		5.79		5.71		6.01		7.31
Other Information								
Number of cows		132.1		125.8		126.5		127.8
Pregnancy percentage		97.2		97.5		94.7		99.2
Pregnancy loss percentage		1.7		3.3		1.2		0.4
Culling percentage		14.2		17.5		9.7		12.0
Calving percentage		95.6		94.3		93.5		98.8
Weaning percentage		91.3		88.1		88.5		96.3
Calves sold per cow		0.71		0.33		0.65		0.98
Calf death loss percent		5.9		8.3		5.1		3.1
Cow death loss percent		2.2		3.6		2.2		0.4
Average weaning weight		532		466		554		575
Lb. weaned/exposed female		486		410		490		554
Feed cost per cow		495.10		502.98		424.10		418.60
Avg wgt/ Beef Calves sold		677		577		625		640
Avg price / cwt.		143.18		146.12		144.39		143.67

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Beef Replacement Heifers -- Average Per Head

	<u>Avg. Of All Farms</u>	
Number of farms	12	
	Quantity	Value
Beef Replace sold (hd)	0.34	355.81
Transferred out (hd)	0.81	1,116.57
Cull sales (hd)	0.01	10.92
Government payments		18.55
Purchased (hd)	0.00	-2.31
Transferred in (hd)	0.87	-786.96
Inventory change (hd)	-0.30	-252.28
Gross margin		460.30
Direct Expenses		
Protein Vit Minerals (lb.)	258.85	24.16
Creep / Starter (lb.)	66.59	6.66
Complete Ration (lb.)	124.53	6.66
Barley (bu.)	0.20	0.60
Corn (bu.)	1.38	4.34
Corn Silage (lb.)	3,234.30	55.28
Hay, Alfalfa (lb.)	300.69	13.16
Hay, Grass (lb.)	2,493.11	70.80
Pasture (aum)	17.02	75.36
Other feed stuffs (lb)	412.04	7.02
Breeding fees		6.39
Veterinary		13.31
Supplies		8.04
Fuel & oil		6.50
Repairs		9.78
Custom hire		5.21
Total direct expenses		313.28
Return over direct expense		147.01
Overhead Expenses		
Hired labor		7.15
Utilities		3.40
Mach & bldg depreciation		14.54
Miscellaneous		13.50
Total overhead expenses		38.60
Total dir & ovhd expenses		351.88
Net return		108.42
Labor & management charge		21.33
Net return over lbr & mgt		87.09
Est. labor hours per unit		1.05
Other Information		
No. purchased or trans in		52
Number sold or trans out		68
Average number of head		59
Percentage death loss		0.6
Feed cost per average head		264.05
Feed cost/head sold/trans		230.61

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Beef Replacement Heifers -- Average Per Head Sold/Trans

	<u>Avg. Of All Farms</u>	
Number of farms	12	
	Quantity	Value
Beef Replace sold (hd)	0.3	310.75
Transferred out (hd)	0.7	975.15
Cull sales (hd)	0.0	9.54
Government payments		16.20
Purchased (hd)	0.0	-2.02
Transferred in (hd)	0.8	-687.29
Inventory change (hd)	-0.3	-220.33
Gross margin		402.00
Direct Expenses		
Protein Vit Minerals (lb.)	226.1	21.10
Creep / Starter (lb.)	58.2	5.82
Complete Ration (lb.)	108.8	5.82
Barley (bu.)	0.2	0.52
Corn (bu.)	1.2	3.79
Corn Silage (lb.)	2,824.7	48.28
Hay, Alfalfa (lb.)	262.6	11.49
Hay, Grass (lb.)	2,177.3	61.83
Pasture (aum)	14.9	65.82
Other feed stuffs (lb)	359.9	6.13
Breeding fees		5.58
Veterinary		11.62
Supplies		7.02
Fuel & oil		5.68
Repairs		8.55
Custom hire		4.55
Total direct expenses		273.61
Return over direct expense		128.39
Overhead Expenses		
Hired labor		6.25
Utilities		2.97
Mach & bldg depreciation		12.70
Miscellaneous		11.79
Total overhead expenses		33.71
Total dir & ovhd expenses		307.31
Net return		94.69
Labor & management charge		18.63
Net return over lbr & mgt		76.06
Est. labor hours per unit		0.92
Other Information		
No. purchased or trans in		52
Number sold or trans out		68
Average number of head		59
Percentage death loss		0.6
Feed cost per average head		264.05
Feed cost/head sold/trans		230.61

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Beef Backgrounding -- Average Per Cwt. Produced

	<u>Avg. Of</u>	
	<u>All Farms</u>	
Number of farms	13	
	Quantity	Value
Backgnd Beef sold (lb)	341.90	509.30
Transferred out (lb)	73.11	91.15
Other income		0.23
Purchased (lb)	-34.78	-50.27
Transferred in (lb)	-242.52	-360.94
Inventory change (lb)	-37.71	-63.30
Gross margin		126.18
Direct Expenses		
Protein Vit Minerals (lb.)	7.27	3.05
Creep / Starter (lb.)	22.89	3.80
Complete Ration (lb.)	65.15	3.83
Corn (bu.)	4.08	12.60
Corn Silage (lb.)	598.73	9.77
Hay, Alfalfa (lb.)	141.90	5.26
Hay, Grass (lb.)	329.16	7.51
Oats (bu.)	0.41	1.26
DDGS, wet (lb.)	18.80	1.72
Other feed stuffs (lb)	283.92	8.53
Veterinary		5.03
Supplies		3.44
Repairs		3.19
Operating interest		0.90
Total direct expenses		69.90
Return over direct expense		56.28
Overhead Expenses		
Utilities		0.93
Mach & bldg depreciation		2.99
Miscellaneous		3.10
Total overhead expenses		7.02
Total dir & ovhd expenses		76.92
Net return		49.26
Labor & management charge		3.79
Net return over lbr & mgt		45.47
Cost of Production Per Cwt. Produced		
Total direct expense per unit		131.12
Total dir & ovhd expense per unit		132.81
With other revenue adjustments		132.81
With labor and management		133.73
Est. labor hours per unit		0.32
Other Information		
No. purchased or trans in		169
Number sold or trans out		193
Percentage death loss		0.2
Avg. daily gain (lb.)		2.15
Lb. of conc / lb. of gain		4.82
Lb. of feed / lb. of gain		13.21
Feed cost per cwt. of gain		57.34
Feed cost per head		66.67
Avg wgt / Backgnd Beef sold		689
Avg sales price / cwt.		148.96

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Beef Backgrounding -- Average Per Head

	<u>Avg. Of All Farms</u>	
Number of farms	13	
	Quantity	Value
Backgnd Beef sold (lb)	397.5	592.18
Transferred out (lb)	85.0	105.99
Other income		0.27
Purchased (lb)	-40.4	-58.45
Transferred in (lb)	-282.0	-419.68
Inventory change (lb)	-43.9	-73.60
Gross margin		146.71
Direct Expenses		
Protein Vit Minerals (lb.)	8.4	3.55
Creep / Starter (lb.)	26.6	4.42
Complete Ration (lb.)	75.8	4.45
Barley (bu.)	0.3	0.78
Corn (bu.)	4.7	14.65
Corn Silage (lb.)	696.2	11.35
Hay, Alfalfa (lb.)	165.0	6.12
Hay, Grass (lb.)	382.7	8.74
Oats (bu.)	0.5	1.47
DDGS, dry (lb.)	116.7	5.00
DDGS, wet (lb.)	21.9	2.00
Other feed stuffs (lb)	213.2	4.14
Veterinary		5.85
Supplies		2.49
Fuel & oil		1.51
Repairs		3.71
Operating interest		1.04
Total direct expenses		81.27
Return over direct expense		65.44
Overhead Expenses		
Mach & bldg depreciation		3.47
Miscellaneous		4.69
Total overhead expenses		8.16
Total dir & ovhd expenses		89.43
Net return		57.28
Labor & management charge		4.41
Net return over lbr & mgt		52.87
Cost of Production Per Cwt. Produced		
Total direct expense per unit		131.12
Total dir & ovhd expense per unit		132.81
With other revenue adjustments		132.81
With labor and management		133.73
Est. labor hours per unit		0.37
Other Information		
No. purchased or trans in		169
Number sold or trans out		193
Percentage death loss		0.2
Avg. daily gain (lb.)		2.15
Lb. of conc / lb. of gain		4.82
Lb. of feed / lb. of gain		13.21
Feed cost per cwt. of gain		57.34
Feed cost per head		66.67
Avg wgt / Backgnd Beef sold		689
Avg sales price / cwt.		148.96

Figure 1. Gross Cash Income Per Farm

N.D. Farm Business Management Education Program

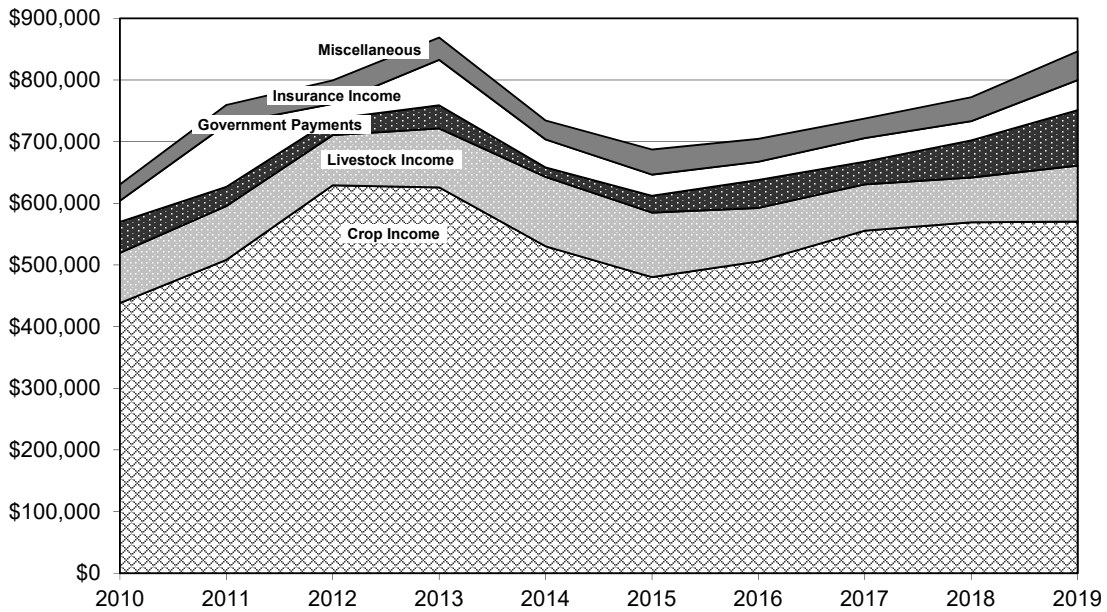


Figure 2. Net Farm Income (Accrual) Per Farm

N.D. Farm Business Management Education Program

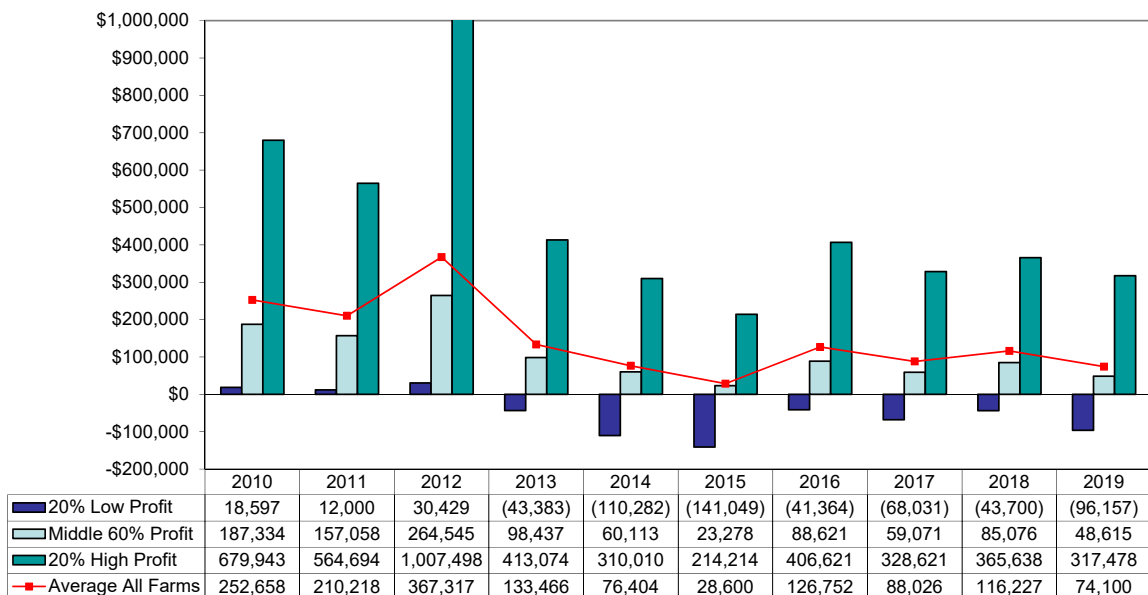


Figure 3. Financial Efficiency Measures (As Percent of Gross Revenue)

N.D. Farm Business Management Education Program

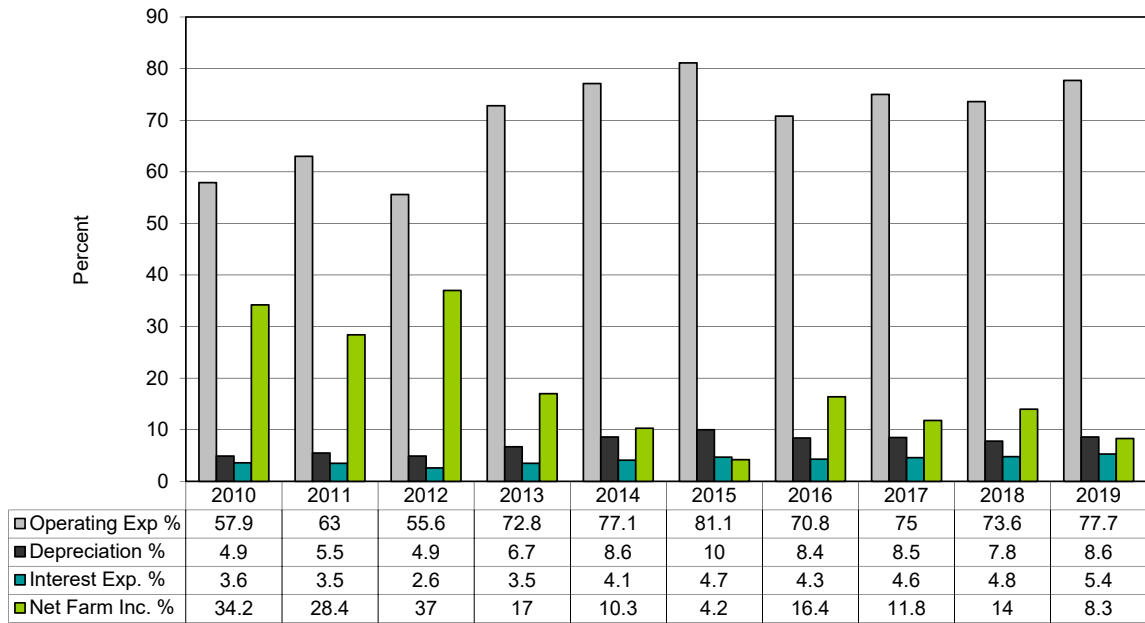


Figure 4. Profitability Measures Per Farm

N.D. Farm Business Management Education Program

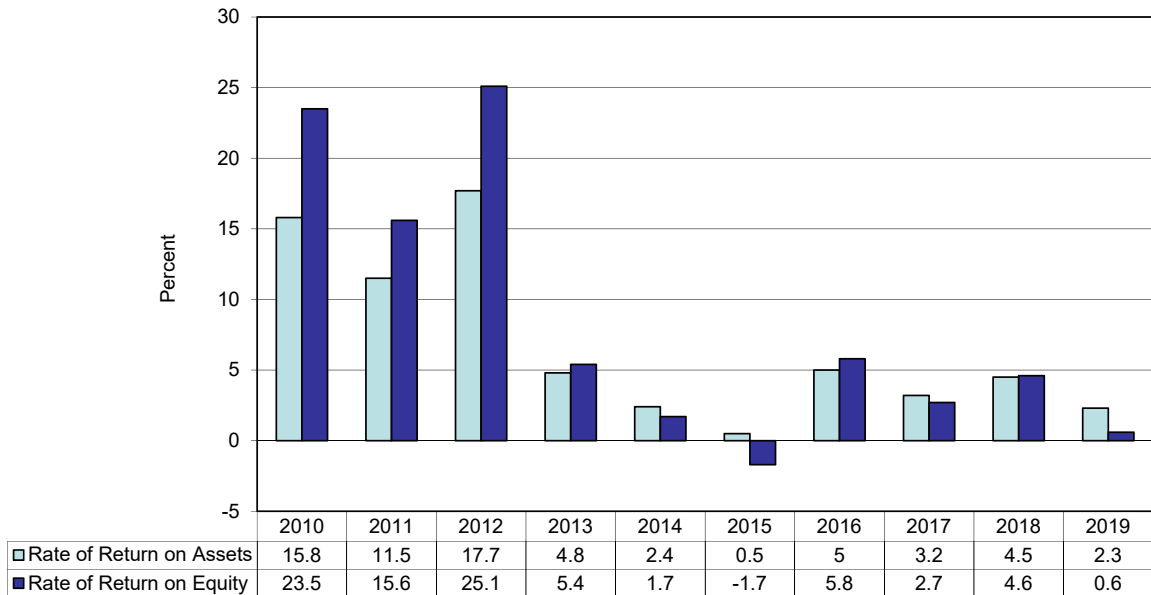


Figure 5. Assets and Liabilities Per Farm, 2019
N.D. Farm Business Management Education Program

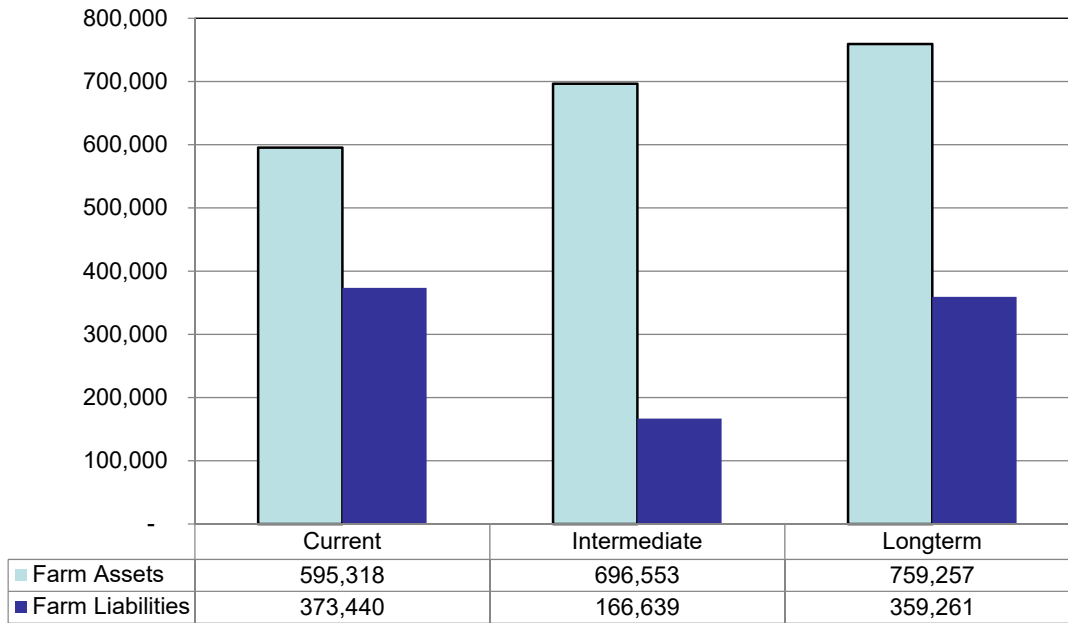


Figure 6. Total Farm Assets and Liabilities
N.D. Farm Business Management Education Program

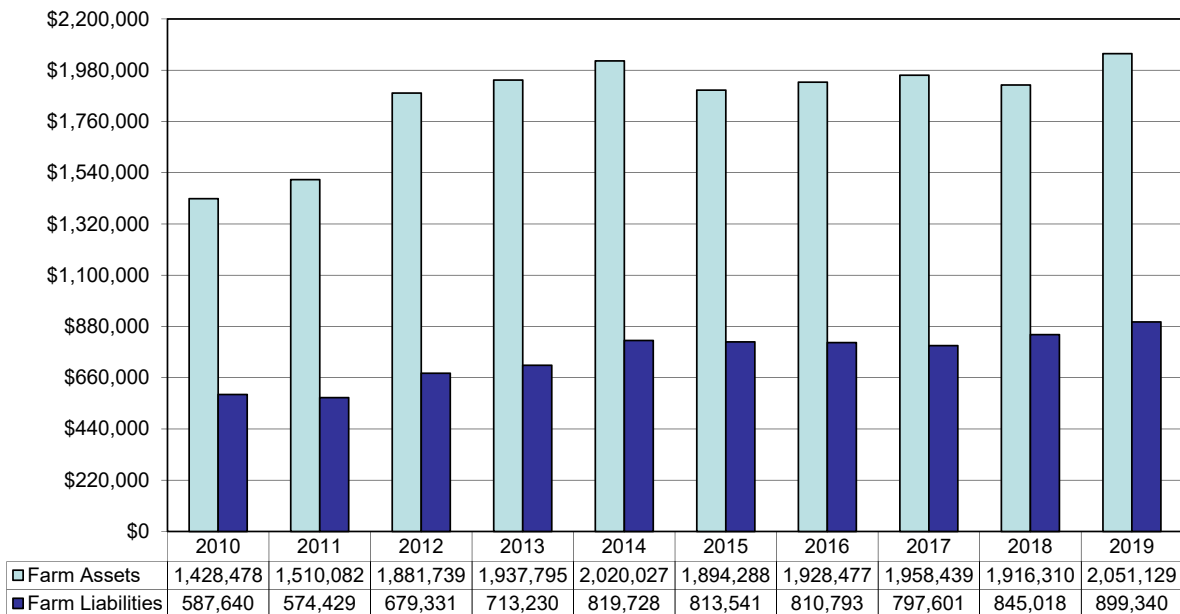


Figure 7. Household and Personal Expenses

N.D. Farm Business Management Education Program

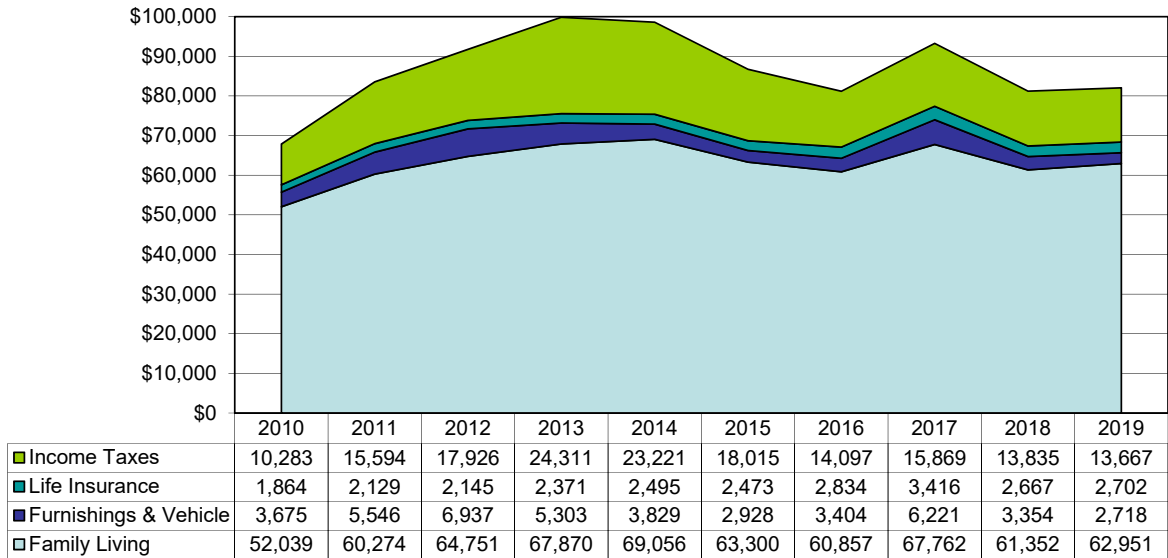


Figure 8. Crop Acreage Per Farm

N.D. Farm Business Management Education Program

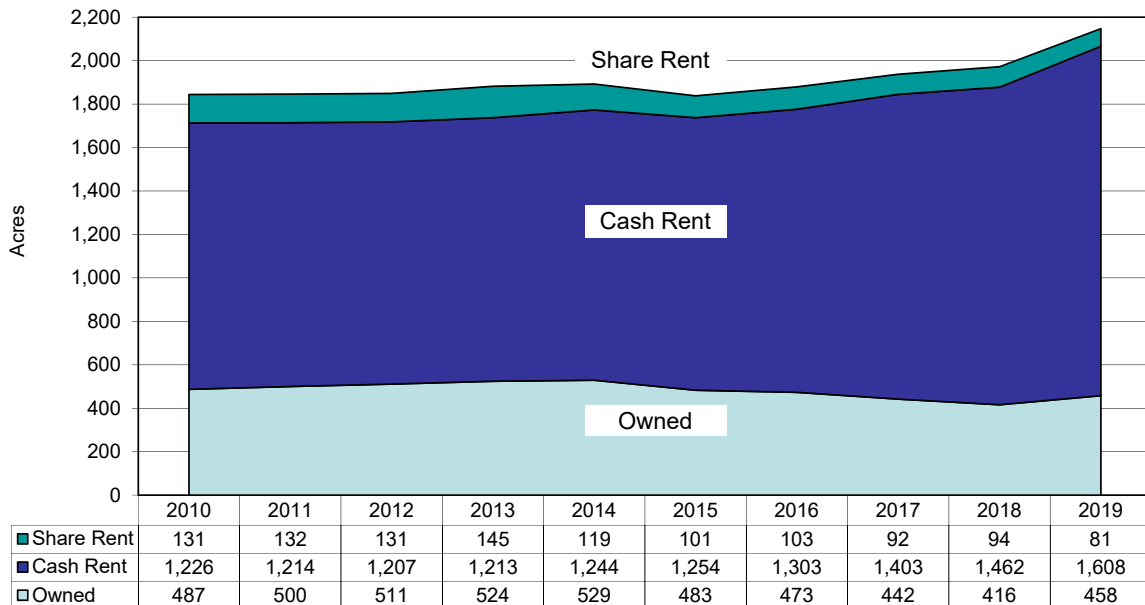


Figure 9. Spring Wheat Costs Per Acre
N.D. Farm Business Management Education Program

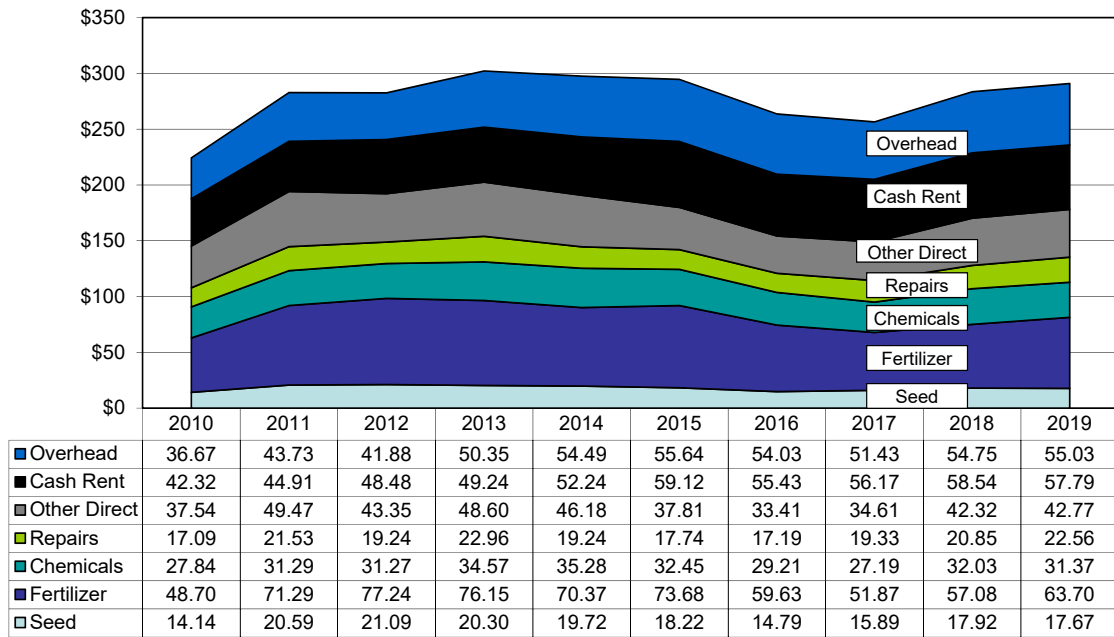
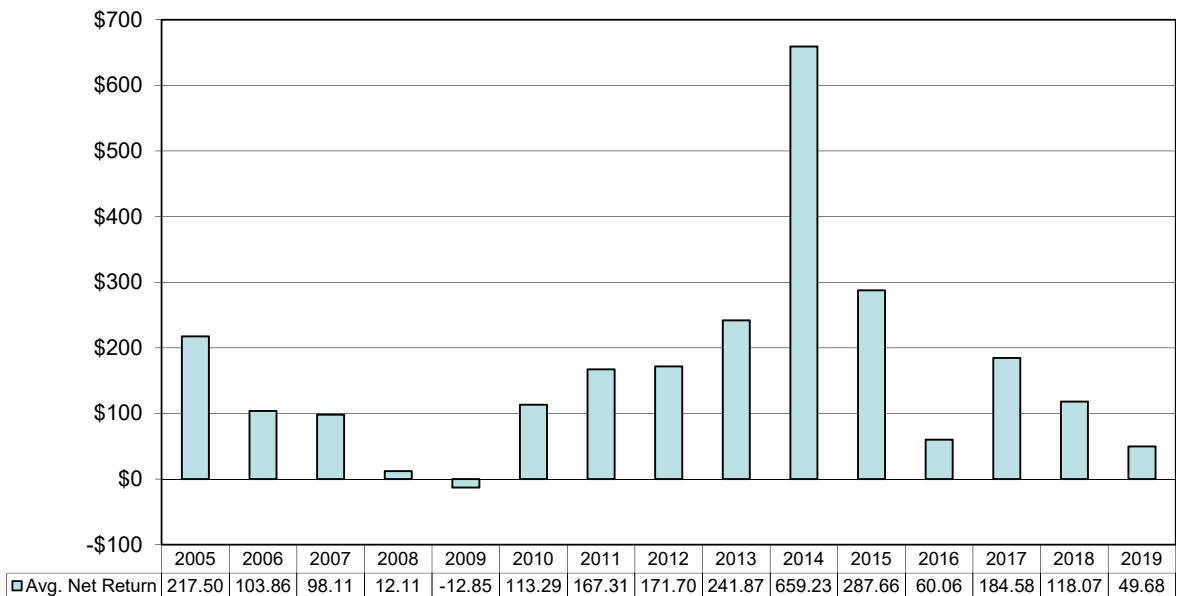


Figure 10. Average Net Return Per Beef Cow
N.D. Farm Business Management Education Program



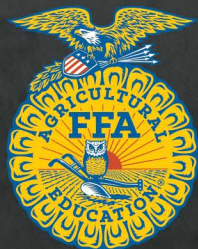
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March 11, 2021

Members of the North Dakota
HOUSE APPROPRIATIONS – EDUCATION AND ENVIRONMENT COMMITTEE

Support for SB2019 – Dr. Denise Jonas, Director of Career and Technical Education

Chairman Monson and members of the House Appropriations Committee. Thank you for the opportunity to provide written testimony in support of SB2019. Your “DO PASS” vote is critical to the Department of Career and Technical Education to sustain current programming for career education, technical training, and workforce development. I also respectfully ask that you honor the \$45 million earmarked for Career Workforce Academies, as there are several regions ready to launch this proven model and your leadership would pave the way for North Dakota’s economy. I would also ask for consideration to restore funding for new and expanded programming, TrainND, and Adult Farm Management, as they will serve as supports to career and technical education in North Dakota. Department of CTE oversight with ensure the design, implementation, and on-going monitoring of high-quality CTE programming.

As Cass County Director of Career and Technical Education, I am approached almost daily by business and industry inquiring about opportunities to connect with our K12 teachers and students. These requests are not limited to high school students, but extend to elementary and middle school learners. With our State’s low unemployment, workforce demands, and natural employee attrition, K12-business partnerships are viewed as a mechanism to create company awareness, expose students to future careers, and provide experiential learning.

In Cass County, we are pleased to offer a variety of career and technical education programs and pathways in our current K12 educational systems, yet in a 2018 Career Workforce Academy Program and Curriculum study, it revealed program gaps in agriculture education, construction, manufacturing, and transportation. In our region, there is also a growing demand in medical careers, information technology, transportation, and biomedical technologies influenced by Sanford Health, Microsoft, and Aldevron. Despite K12 efforts, schools are challenged to meet local school district demands, along with workforce demands, without collaborative efforts to scale, support, and grow opportunities through a hub for coordination and expanded learning such as the CWA.

Cass County Career Workforce Academy collaborative discussions began in 2016. Sparked by a shared vision to create a systemic pipeline; the CWA is a collective network of business partners, K-12 schools, post-secondary leaders, the cities of Fargo and West Fargo, the Cass County Commission, FM Economic Development, FMWF Chamber of Commerce, and local legislators. All driven to improve education, and the local and State’s economy.

Over the past five years, concerted efforts have moved a vision to action with these committed stakeholders:

- 2017-2018 - Phase I – Career Workforce Academy Strategic Plan complete (attached)
- 2018-2019 – Phase II - K-14 Program Priorities and Curriculum audit complete (attached)
- 2019-2020 - Fundraising, operational budget and governance planning to support Strategic Plan
- 2020-2021 – Phase III - architecture selection, design input, renderings, bids, and groundbreaking
- 2021-2022 – Phase IV – Build and program development for opening Fall 2022

As one of the fastest growing communities in North Dakota and serving as a diverse economic engine for the state, workforce development is critical Cass County. Manufacturing to information technology, agriculture to medical sciences, entrepreneurship to the trades, technical training is at the forefront of our discussions. Magnifying this need is projected regional growth, along with 8,000 jobs anticipated for the Fargo Diversion and Amazon alone. With this current need and anticipated demand, I respectfully ask for your support of SB2019 to leverage career and technical education programming and Career Workforce Academies to create a systemic workforce pipeline for the state and future of North Dakota!

#8813



CAREER WORKFORCE ACADEMY

STRATEGIC PLAN

MAY 9, 2018

CAREER WORKFORCE ACADEMY

The Career Workforce Academy is a program initiated by the North Dakota State College of Science (NDSCS) and the school districts of Fargo, West Fargo, Northern Cass, Central Cass, Kindred and Moorhead. It is designed to deliver workforce training and education that is more responsive to changing employer and student needs. This plan will expand and enhance our ability to attract, retain and grow businesses and develop opportunities for student success in the workforce.

What Is An Academy?

A career academy is a type of school that can provide K-14 students, incumbent workers* and new Americans a curriculum to prepare them for a successful career through:

- Career path education.
- Curriculum that matches their identified career path.
- Strong partnerships that work together to enhance curriculum with relevant learning for successful outcomes.

Academy Vision Statement

The Academy will build the awareness of multiple career clusters and the skills necessary to be career ready through experiential education, classroom training, student connection to business and industry, and career path counseling. It will present real-time opportunities and real-life experiences by responding and adapting quickly to industry demands and student interest. Success will depend on engaged student interest and on the collaboration of all stakeholders.

*For the purpose of this report, an incumbent worker is defined as a person who was previously employed and is seeking training for a new job or is currently employed and is seeking further training.

ACADEMIES

What Experts Say About Career Academies

“The number of career academies has been expanding rapidly, in part because academies have been found to be effective, and in part because they embody ideas promoted by several major high school reform movements. ... [R]igorous evaluations have found that individual career academies within larger high schools help improve students’ academic performance, prepare them for postsecondary education, and boost earnings after high school.”¹

Career Academies Supported By Research

The number of career academies nationwide has grown dramatically, one reason being a conceptual grounding in strong research and evaluation. In 2008, MDRC, a prominent education policy research organization, released a study entitled, “Career Academies: Long Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood.”² The researchers employed a random assignment research design in a group of nine high schools across the United States to determine the effect of attending a career academy. Their findings included the following:

- An average increase in earnings of 11 percent. The effect was concentrated among young men; in fact, an increase of 17 percent was seen in this demographic.
- An increase in the percentage of individuals living independently with children and a spouse or partner after leaving secondary education.
- An improvement in attendance, increased academic course taking, and an increased likelihood of graduating on time.
- An increase in the level of interpersonal support students experienced during high school from career academy staff.
- An increase in student participation in career awareness and work-based learning.

Very recent academic literature on career technical education (CTE) continues to highlight the many positive outcomes from CTE offerings. A research report in the April 2018 American Educational Research Journal concludes, “By providing CTE coursework, especially later in a student’s high school career, relevance between coursework and long-term goals is potentially increased, thereby increasing the odds of high school graduation. ... This lends support to the idea of further expansion of CTE coursework in high school.”³

What Students Say About Career Academies

“The academy has taught me a lot of life skills. Before, it was about me coming home just to do homework and now it’s about me working towards something.”¹

“It really helps us figure out our future and what we want to do.”

“The job shadow experience has really given me a better perspective on what I want to achieve in life. [With] the academy you take that extra step to see if it’s really something you might want to do.”¹

¹“Career Academies: A Proven Strategy to Prepare High School Students for College and Careers.” Career Academy Support Network, 2010, University of California, Berkeley, Graduate School of Education.

²“Career Academies: Investing in Students, the Workforce and Career Technical Education,” May 2013, National Association of State Directors of Career Technical Education (NASDCTEc).

³“Linking the Timing of Career and Technical Education Course taking With High School Dropout and College-Going Behavior,” April 2018, American Educational Research Journal, M. Gottfried & J. Plasman, University of California, Santa Barbara.

STRATEGIC PLANNING PROCESS

In order to gain vital information for the development of the Cass-Clay Career Workforce Academy (Academy) strategic plan, a planning committee commissioned Flint Group to take the lead in developing a strategic plan for the Academy. Flint personnel conducted several discovery sessions with Academy stakeholders and reviewed documents from other programs around the United States. During the review of other programs, a wide variety of approaches were found in how strategic plans were developed and in what they included. Each had objectives tied to local needs; there were significant differences in the number of stakeholders, and the size of the region and the number of districts they serve. In other words, no two plans were alike. Despite the differences, a number of best practices were discovered and utilized in this plan.

Discovery Methodology:

- Reviewed documents from prior meetings pertaining to the Academy.
- Conducted and facilitated input sessions including members of the following stakeholder groups around the theme “pathways to success”:
 - K-12 counselors, career advisors and administrators
 - NDSCS faculty
 - Business and industry representatives
Note: Two sessions were held with K-12 group and two with the NDSCS group. Business and industry representatives were interviewed one on one. After these separate sessions, a combined session was held with representatives from all three stakeholder groups.
- Interviewed select directors of other academies across the country.
- Researched and reviewed documents relevant to effective academies in other states.
- Researched best practices at national associations and centers focused on career academies.
- Met with Academy steering committee to review findings and present directional draft of plan and garner further comment and input.
- Considerable time was spent discussing the challenges involving curriculum development and scheduling, two areas that will be the most challenging due to the number of school districts participating in the Academy.

Planning participants

“Students don’t know what they don’t know.”

“We always want more exposure for students to explore careers ... whether it’s diesel, auto or tech careers. We want more people to know what’s available because we want to see if there is interest in our industry.”

“We have craft workers who have a Bachelor of Science or a Bachelor of Fine Arts in the field making \$80,000-85,000 a year, or \$130,000 if they’re an operator; they went to four years of college and they’re not using their degree the way they thought they were going to, but they’re in a career they enjoy. So, if we can eliminate the cost and time of a four-year degree – where people end up in a career that doesn’t require a four-year degree – that would be success.”

KEY DISCUSSION POINTS

Stakeholders identified essential elements that will be prevalent throughout the strategic plan. These elements are vital in understanding stakeholders' needs and maintaining strong partnerships.

- Collaboration – between all stakeholders on each initiative of the plan.
- Communication – ongoing discussion on all aspects of the Academy, including changing perceptions, outcome assessments, stakeholder issues and successes.
- Transparency – full disclosure to all stakeholders.
- Resources – upfront disclosure on resources needed to achieve goals.

KEY ELEMENTS

As part of the input sessions, stakeholders identified essential elements that will serve as the cornerstones of the strategic plan. These elements are vital in understanding stakeholders' needs and maintaining strong partnerships. They include the following:

- Collaboration – between all stakeholders on each initiative of the plan.
- Communication – ongoing discussion on all aspects of the Academy, including changing perceptions, outcome assessments, stakeholder issues and successes.
- Transparency – full disclosure to all stakeholders.
- Resources – upfront disclosure on resources needed to achieve goals

During the discovery process a vision statement, value statements and expected outcomes for the Academy were developed. It was also agreed there should be assessment and evaluation standards to determine gain toward desired outcomes.

Academy Value Statements

The Academy concept is:

- A proven model in responding to the needs of industries and students.
- Effective in improving outcomes for students during and after high school.

The Academy will:

- Provide exposure to multiple career paths for all levels of K-14 students.
- Present more opportunities for students to sample and experiment within a variety of careers.
- Create opportunity for those interested in a technical degree.
- Create a path for incumbent workers and new Americans for a new career.
- Provide appropriate facilities and equipment for hands-on career training.
- Focus on the region's workforce and employer needs.

Stakeholders identified 10 critical issues that must be addressed for realizing the vision for the Academy:

1. Changing perceptions
2. Buy-in at all levels
3. Ownership/governance/decision-making process
4. Curriculum development
5. Synchronized calendars and schedules between all schools
6. Trained instructors/qualifications for HS staff/teachers
7. Grow too fast/start too small
8. Who's paying for this? Taxpayers' response
9. Transportation
10. Safety

The Academy Will Help Gain Respect For Multiple Career Pathways

- Parents will be informed about diverse careers and be encouraged to start having earlier conversations with their children about career path options.
- We will inspire a change in the mindset of parents currently working in technical and trade careers who in the past might have said to their children, “I don’t want you to do what I do; I don’t want you to work with your hands,” and push them into “white-collar work” and getting a four-year college education.
- Students will want to learn about and develop skills in technical and trade careers and will gain respect for having a career in these high-demand, high-wage fields.
- Counselors, teachers and parents will not just be focused on, “Where are you going to college?” but instead, “What are you interested in going to college for?”

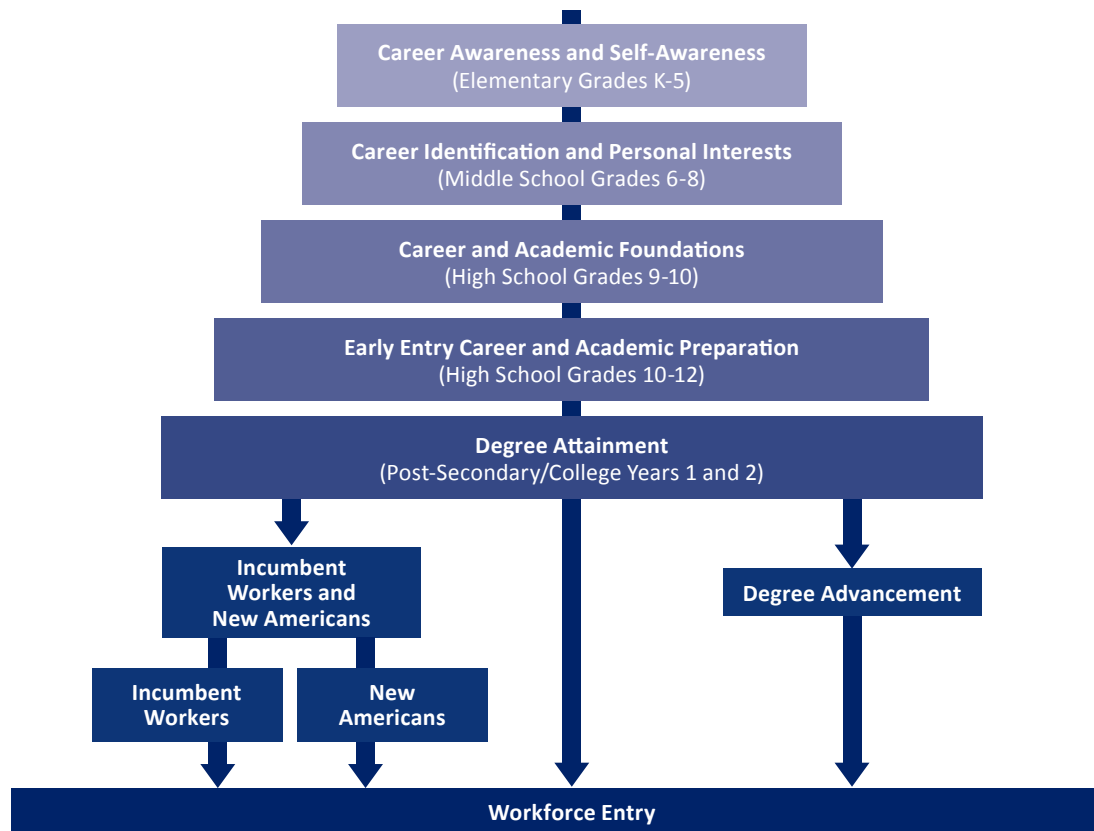
CAREER PATHWAY MODEL

The following graphic illustrates the collaborative career pathway model that guided the initial development of the Academy. In this model, K-12 schools promote comprehensive career awareness in elementary grades, a career exploration component that includes a four-year rolling career path planning that begins in middle school, and applied/hands-on career preparation in high school. Post-secondary schools collaborate with the high schools to facilitate classes focused on preparation for technical and trade careers; college credit is available for high school students taking these classes. Business partners are an integral part of the Academy by working with K-12 schools to provide career awareness and exploration opportunities in the elementary and middle school grades, and work/learning opportunities for high school students. Business and industry are sectors of the community that anticipate seeing trained workers exiting the Academy prepared to either join the workforce or continue their education.



Initial Academy Concept

The idea of an academy began with a plan that has evolved over the past two years. Career awareness, exploration and preparation were initially included and are still included as key elements guiding the framing of the academy concept, as illustrated in the following graphic. These components have been associated with more or less distinct periods of learning: elementary school, middle school and high school/post-secondary, as illustrated in the graphic below. Career awareness and self-awareness in grades kindergarten through five; career identification and personal interests in middle school (grades six through eight); career and academic foundations in grades nine through 10 of high school; early entry career and academic preparation in grades 10 through 12; and attainment of a two-year or associate degree in post-secondary education. Incumbent workers and new Americans would also be given the same opportunity for career preparation/training as Academy high school students.

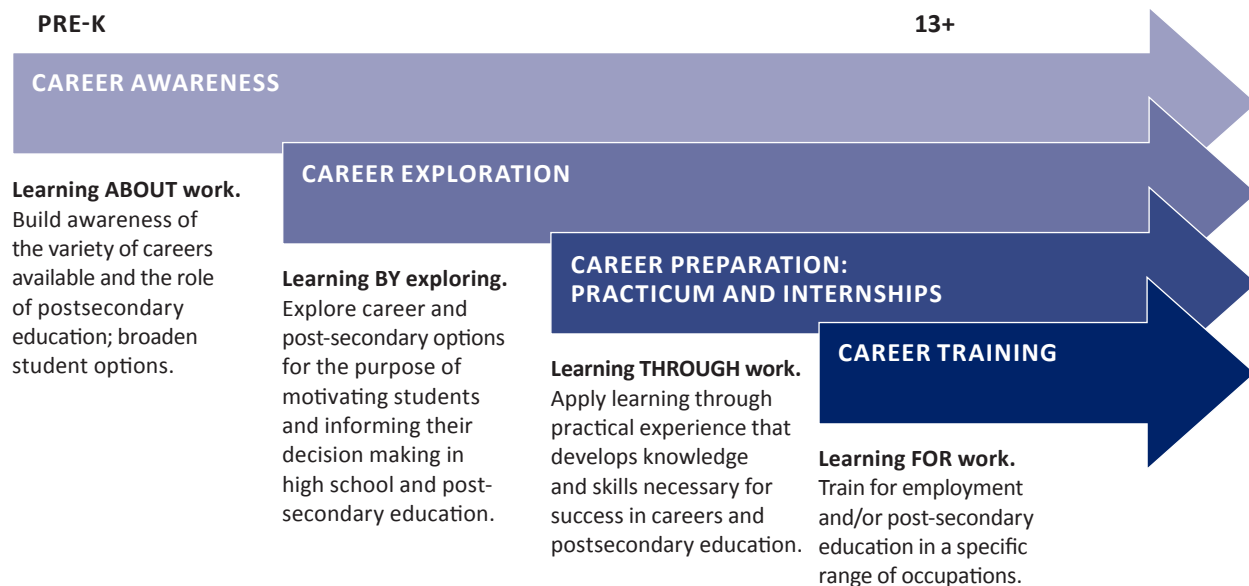


Academy Conceptual Framework

The Academy’s conceptual framework can be depicted with a diagram showing a continuum of career awareness and career exploration taking place throughout the K-12 educational experience. Developed by Linked Learning, the diagram below⁴ illustrates this continuum stretching from kindergarten into adulthood in four areas:

- Career awareness, where “Learning ABOUT work” begins at kindergarten and continues into adulthood. This aspect of the continuum is focused on broadening student career options by building awareness of the variety of careers available and the role of post-secondary education in the learning process.
- Career exploration, where middle school students are given “Learning ABOUT work” opportunities to explore career and post-secondary options. The purpose of career exploration is to motivate students and inform their decision-making through high school and beyond. This exploration component of the Academy will continue at every level of student participation and involvement.
- Career preparation, or “Learning THROUGH work,” begins in high school, where students apply what they are learning through practical experience. This hands-on experience helps them develop the knowledge and skills necessary for them to be successful in careers and post-secondary education. In addition to serving high school students, incumbent workers and new Americans are given the same opportunities in career preparation within the academy setting.
- Career training, where the Academy offers high school and post-secondary students “Learning FOR work” opportunities that might include classroom and non-classroom training, such as apprenticeships, internships and clinical experiences. These opportunities will also be available to incumbent workers and new Americans.

Academy Learning Continuum



⁴“Work-Based Learning in Linked Learning: Definitions, Outcomes, and Quality Criteria, Field Review Draft,” Nov. 2012, Linked Learning, Sacramento, CA.

Conceptual Framework: K-14 Focus

The K-14 aspect of the Academy will be centered on the concept of workplace- or experience-based learning, similar to work-based learning defined by Linked Learning as follows:

“An instructional strategy that is essential in preparing all students for success in postsecondary education and careers ... The primary purposes of work-based learning are to expose students to future options and provide opportunities for skill development and mastery over time. All work-based learning experiences involve interactions with industry or community professionals that are linked to school-based instruction. These learning experiences are intentionally designed to help students extend and deepen classroom work and to make progress toward learning outcomes that are difficult to achieve through classroom or standard project-based learning alone. The term ‘work-based’ does not mean the experience must occur at a workplace or during the standard ‘work day.’”⁵

Conceptual Framework: Incumbent Workers and New Americans Focus

We will follow an experience-based learning concept for K-14 students but will include an additional component focused on incumbent workers and new Americans. This aspect of the Academy will have access to the same instructional opportunities in a true multi-use educational facility.

While incumbent workers and new Americans may not have benefited from career awareness and exploration offered in their elementary and middle school experience, they will be given these opportunities during their career preparation and training offered by the Academy.

Plan Purpose

- Provide clarity for all partners
- Increase alignment among all partners
- Identify and define strategic initiatives and goals to accomplish desired outcomes
- Determine key performance indicators

Focus Areas

- Employer engagement
- Student (motivation, interest, value-added)
- Perceptions of technical and trade careers
- Educational system

Major Benefactors

- Students
- Business and industry

Enablers/Facilitators

- K-12
- Two-year colleges
- Business and industry
- Other secondary educational institutions

⁵“Work-Based Learning in Linked Learning: Definitions, Outcomes, and Quality Criteria, Field Review Draft,” Nov. 2012, Linked Learning, Sacramento, CA.

ACADEMY STRATEGIC PLAN

The strategic planning process was designed to elevate our region in the complementary fields of workforce training and education, hoping to become ever more responsive to changing employer and student needs. This plan will expand and enhance the community's ability to attract, retain, and grow businesses and develop educational opportunities to support student success in the workforce. It will also enhance the region's ability to address the economic and workforce shifts well into the future.

Specifically, the strategic plan for the Academy will:

- Ensure education and economic competitiveness.
 - Strengthen business and industry relationships with K-14.
 - Maximize employer engagement in the development of career clusters and relevant programs that will lead to jobs and careers.
 - Enhance education and training at all levels.
 - Provide multiple options for students to move into a career pathway.
 - Provide Choice Ready opportunities for K-12 students to assist students to be workforce ready.*
-

IN SUMMARY

The academy concept has a proven track record of effectiveness for introducing students to multiple career paths – matching their skill sets and interests to job opportunities. It has become the best-tested strategy and accepted principles to prepare students for life after high school. Additionally, by including incumbent workers and new Americans, the Academy will benefit the business and industry community by having these groups access the same career preparation and training opportunities as Academy high school students.

*https://www.nd.gov/dpi/uploads/1494/ND_ConsolidatedStatePlan_4302018.pdf

Strategic Plan and Goal Statements

Strategic Initiative 1

Identify and implement an academy governance and management structure to ensure long-term success. Setting the proper structure from the start will be critical. Letting the numerous stakeholders have representation and a voice will be important, but having a defined organizational structure and a strong management team will give clear direction and help avoid conflicts.

Goal 1. Career Workforce Academy facility ownership will require appropriate approvals and will be determined in the future.

Goal 2. Academy will be operated and managed by NDSCS.

Goal 3. Develop leadership model.

Goal 4. Develop model for oversight of strategic initiatives; include assessment and evaluation plan.

Goal 5. Academy will be responsive to stakeholders' needs.

Goal 6. Engage parents.

Strategic Initiative 2

Increase early childhood career awareness. An important finding in recent research on career decision-making is that young people have a limited view of many of the careers not requiring a four-year college degree. A central underpinning of our strategic plan is that young people need to be introduced to a variety of careers and learn about work much earlier in their education. This starts at the elementary level through educational programs and direct exposure and interaction with real jobs.

Goal 1. Create engaged exposure to a variety of careers.

Goal 2. Develop well-rounded career awareness education.

Goal 3. Engage business and industry.

Goal 4. Gain teacher support.

Goal 5. Engage parents of elementary school students.

Strategic Initiative 3

Prepare middle school students for career pathway decisions through exploration. Students will be given the opportunity to explore career options that will motivate them to learn about careers, the skills needed in each field of work and the educational options to fulfill a career path. This level gives students a more active role in selecting a career pathway that matches their interests through interaction.

Goal 1. Identify student strengths and interests.

Goal 2. Begin five-year career path planning.

Goal 3. Engage business and industry.

Goal 4. Gain teacher support.

Goal 5. Engage parents of middle school students.

Strategic Initiative 4

Invest high school students in career path preparation and participation. Career preparation marks a shift in the continuum, moving students into more active experiential programs for career readiness. It includes more interaction with professionals from businesses and the community and is designed to give students supervised, practical hands-on application through the Academy. This will assist students to be workforce ready, as described in the North Dakota Every Student Succeeds Act (ESSA) State Plan.

Goal 1. Match curriculum with skill set.

Goal 2. Provide direct exposure to chosen career(s), i.e., doing, internships, hands-on (Career Ready Practices).

Goal 3. Engage business and industry, i.e., technical assessment/industry credentialing, workplace learning experience, co-curricular activities, 21st century skills, dual-credit courses.

Goal 4. Gain teacher support.

Goal 5. Engage parents of high school students.

Strategic Initiative 5

Create opportunity for incumbent workers and new Americans to enter workforce.

The Academy will provide an additional way to increase the Cass-Clay workforce and help meet the employee recruitment needs of business and industry. The Academy will be active in training and retraining individuals looking to enter the workforce in specific job skill areas. This will not be a separate program, but one that is combined with regular classes.

Goal 1. Determine skill sets and interests.

Goal 2. Assess gaps in learning and skills.

Goal 3. Align training/education to meet employer needs.

Goal 4. Provide training, curriculum, etc.

Strategic Initiative 6

Curriculum development and implementation. Critical to achieving the outcomes of the Academy is alignment of the curriculum to the interests of the students and the skill sets necessary to fulfill the needs of business and industry. Curriculum will be designed around identified cluster groups and must meet state educational and/or certification requirements. It will also need to be fluid and have the ability to adjust to changing skill sets and career shifts.

Goal 1. In collaboration with business and industry, identify clusters and skills required.

Goal 2. Match curriculum with cluster group needs.

Goal 3. Align to North Dakota and Minnesota school standards.

Goal 4. Meet accreditation requirements.

Goal 5. Teacher professional development and certification.

Goal 6. Align with North Dakota and Minnesota CTE objectives.

Goal 7. Create new programs or utilize existing program for expanding curriculum needs.

Goal 8. Identify faculty to teach curriculum.

Goal 9. Determine location of course offerings (what is going to be offered where).

Goal 10. Increase support for dual credit/early college models.

Goal 11. Imbed “soft skills” across curriculum.

Strategic Initiative 7

Align scheduling. Due to the number of school districts, this is one of the most difficult initiatives to administer. Flexibility and willingness to alter current set practices will be needed to accommodate the needs of students and the availability of instructors and classrooms. Many elements will have to be considered at the high school level to achieve success, including transportation, extracurricular activities and maintaining graduation standards. For incumbent workers and new Americans, language and current employment could be obstacles.

Goal 1. Influence policy for more K-12 hands-on training.

Goal 2. Hire scheduling coordinator to facilitate Academy class schedules.

Goal 3. Identify existing class schedules for CTE-related courses at participating high schools and post-secondary institutions.

Goal 4. Align and coordinate schedules of high schools and Academy.

Goal 5. Develop transportation plan for class and extracurricular activities.

Goal 6. Streamline and facilitate process for registration, credits, etc.

Goal 7. Engage parents at all levels.

Strategic Initiative 8

Strengthen connections. A key intention of the Academy is to strengthen the connections between businesses and the education stakeholders, and among districts, two-year colleges and other institutions. Stronger relationships will help develop seamless transitions through the continuum and help align the desired outcomes. They will also help increase the confidence level of all stakeholders.

Goal 1. Build relationships of and assurances for state and local educational systems on value and outcomes of Academy.

Goal 2. Become true partners with business and industry in mission and vision of Academy by sector-based engagement and development efforts in order to identify with and respond to workforce challenges and needs.

Goal 3. Participate in local economic development planning, workforce activities and initiatives to understand and communicate role of Academy and build trust.

Goal 4. Better understand and identify the roles of K-12 districts, adult education, CTE, NDSCS and other contributing entities as a way to build stronger relationships.

Goal 5. Engage with students at appropriate level, allowing them to be a “partner” in the development of programs.

Goal 6. Engage parents, allowing them to be a “partner” in giving feedback to the Academy.

Strategic Initiative 9

Educate stakeholders, partners, influencers and community of the value of the Academy. Creating an atmosphere of support for our role in developing careers in technical and trade careers will be an important objective for us. This includes changing perceptions apparent at multiple levels; parents, students, and even counselors and teachers themselves have been found to promote the four-year degree as the “ideal” career choice, discounting a two-year degree mostly due to lack of awareness of its benefits. To realize desired Academy outcomes, intentional efforts will be developed and implemented to change inaccurate or limited perceptions of technical and trade careers. In addition, education of policy makers will help in changing and developing policy that allows the Academy build successful programs.

Goal 1. Review current perceptions and raise awareness of career opportunities.

Goal 2. Change policies and regulations that are roadblocks in developing a smooth path for students to receive necessary education from career awareness through training and degree and/or certificate achievement.

Goal 3. Develop and implement comprehensive communications plan to build awareness of Academy and influence perceptions of technical and trade degrees.

Goal 4. Identify and engage community and state partners, organizations, and networks in support of Academy.

Strategic Initiatives and Action Steps

Strategic Initiative 1

Identify and implement an academy governance and management structure to ensure longterm success. Setting the proper structure from the start will be critical. Letting the numerous stakeholders have representation and a voice will be important, but having a defined organizational structure and a strong management team will give clear direction and help avoid conflicts.

Goal 1. Career Workforce Academy facility ownership will require appropriate approvals and will be determined in the future.

- 1.1 The intent of ownership will be a private non-profit that has full responsibility for differed maintenance.
- 1.2 Funding for the facility will consist of participation from stakeholders.

Goal 2. Academy will be operated and managed by NDSCS.

- 2.1 A fiscal agent will be appointed to oversee financial aspects of Academy operations.
- 2.2 NDSCS will reach out to other institutions for input and advisement on all aspects of operations.
- 2.3 Operational funding will come from revenue generated by the Academy.
 - Student and user fees.
 - Participation in operational funding from other educational entities may come through different sources and in different forms (fees, equipment, personnel).

Goal 3. Develop leadership model.

- 3.1 Appoint Academy leadership team under NDSCS (dean, program director, financial manager, etc.) to implement strategic plan.
 - Seek input and approval from SBHE, North Dakota Department for Career and Technical Education and local school districts.
- 3.2 Create an advisory board made up of K-12, two-year colleges, and business and industry representatives from workforce partner program to help guide the Academy.

Goal 4. Develop model for oversight of strategic initiatives; include assessment and evaluation plan.

- 4.1 Implement coordinator position to oversee the interaction among the Academy program models at all levels including K-12 and post-secondary.
 - Initiate proper training; set goals and timeline.
- 4.2 Develop plan for continual review and update of plan, allowing to address improvements, new initiatives and needs as they change.
 - Set up yearly strategic planning review.
 - Utilize advisory board for feedback and input.

Goal 5. Academy will be responsive to stakeholders' needs.

- 5.1 Implement evaluation system of intended Academy outcomes.
- 5.2 Conduct annual community review.
- 5.3 Conduct student exit reviews.

Goal 6. Engage parents.

- 6.1 Provide regular opportunities for Academy personnel to meet with parents.

Strategic Initiative 2

Increase early childhood career awareness.

An important finding in recent research on career decision-making is that young people have a limited view of many of the careers not requiring a four-year college degree. A central underpinning of our strategic plan is that young people need to be introduced to a variety of careers and learn about work much earlier in their education. This starts at the elementary level through educational programs and direct exposure and interaction with real jobs.



All elementary students will receive a well-rounded career awareness education, through hands-on activity, in which they will be exposed to the different career clusters and be able to identify personal careers of interest while demonstrating a mindset of curiosity and reasoning.

Goal 1. Create engaged exposure to a variety of careers.

- 1.1 Appoint and train career awareness coordinator.
- 1.2 Introduce Academy concepts at teacher meetings.
- 1.3 Academy career awareness coordinator and staff facilitate professional development for teachers.

Goal 2. Develop well-rounded career awareness education.

- 2.1 Organize K-8 task force of teachers/administrators to develop program components for career awareness education.
 - Identify the most effective models and strategies for early career exposure and align funding.
 - Develop materials to illustrate career attributes, i.e., videos, demonstrations, class projects, hands-on activities.
- 2.2 Influence policy shifts to allow time for career education.

Goal 3. Engage business and industry.

- 3.1 Form advisory committee to include employers and teachers.
 - Prioritize opportunities for students to hear from industry, i.e., career fairs, speaker engagements, visit parents at work, workplace tours.

Goal 4. Gain teacher support.

- 4.1 Academy has regular engagement with teachers/school administrators.
- 4.2 Assess student awareness of career options.
- 4.3 Assess teacher support.
- 4.4 Teachers will have credentials required to offer professional certifications.

Goal 5. Engage parents of elementary school students.

- 5.1 Provide regular opportunities for Academy personnel to meet with parents.

Strategic Initiative 3

Prepare middle school students for career pathway decisions through exploration.

Students will be given the opportunity to explore career options that will motivate them to learn about careers, the skills needed in each field of work and the educational options to fulfill a career path. This level gives students a more active role in selecting a career pathway that matches their interests through interaction.



All middle school students will be given the opportunity to identify their strengths and skills and explore real life work experiences through planned project-based learning from industry speakers, demonstrations and field trips that culminate in the understanding of connecting classroom education with the job skills necessary to pursue real life careers.

Goal 1. Identify student strengths and interests.

- 1.1 Use testing and other academic assessments to determine strengths.
- 1.2 Relate skills and interests to careers.

Goal 2. Begin five-year career path planning.

- 2.1 Determine strategies for preparing students for college and career assessments.
- 2.2 Offer career exploration fair, field trips, videos, and speakers.

Goal 3. Engage business and industry.

- 3.1 Work with businesses to develop and keep program current.
- 3.2 Promote to other businesses and industries that might be interested.
- 3.3 Form advisory committee to include employers and teachers.

Goal 4. Gain teacher support.

- 4.1 Academy will have regular engagement with teachers/ school administrators.
- 4.2 Assess student awareness of career options.
- 4.3 Assess teacher support.
- 4.4 Teachers have individual learning plans by grade level.
- 4.5 Need teacher assessment training (are there standards to follow?).
- 4.6 Teachers will have the required professional certifications.

Goal 5. Engage parents of middle school students.

- 5.1 Provide regular opportunities for Academy personnel to meet with parents.

Strategic Initiative 4

Invest high school students in career path preparation and participation.

Career preparation marks a shift in the continuum, moving students into more active experiential programs for career readiness. It includes more interaction with professionals from businesses and the community and is designed to give students supervised, practical hands-on application through the Academy.



All high school students will be personally invested in their career path and be able to make informed educational decisions through job shadows, internships with hands-on experience and counseling to be college and/or career ready.

Goal 1. Match curriculum with skill set.

- 1.1 Review and follow individual learning plans that were put into place.
- 1.2 Students meet with school counselor to discuss progress plan towards graduation.
- 1.3 Ninth graders participate in freshman Academy transition course.
- 1.4 Introduce Academy summer classes.

Goal 2. Provide direct exposure to chosen career(s), i.e., doing, hands-on, internships, etc.

- 2.1 Organize high school task force of teachers/administrators/counselors to develop curriculum components.
- 2.2 Offer career fairs, field trips, speakers to explore and discuss career options.
- 2.3 Look at options for internships, apprenticeships, job shadowing, mentorships.

Goal 3. Engage business and industry.

- 3.1 Continue meetings with business and industry to get their buy-in and make sure it is relevant to what their needs are.
- 3.2 Form advisory committee to include employers and teachers.

Goal 4. Gain teacher support.

- 4.1 Continue workshops and guidelines for teachers.
- 4.2 Teachers will have the required professional certifications.
- 4.3 Organize teacher round tables for learning and training.

Goal 5. Engage parents of high school students.

- 5.1 Provide regular opportunities for Academy personnel to meet with parents.

Strategic Initiative 5

Create opportunity for incumbent workers and new Americans to enter workforce.

The Academy will provide an additional way to increase the workforce in Cass and Clay counties and help meet the employee recruitment needs of business and industry. The Academy will be active in training and retraining individuals looking to enter the workforce in specific job skill areas. This will not be a separate program, but one that is combined with regular classes.

Goal 1. Determine skill sets and interests.

- 1.1 Assess skill sets by testing.
- 1.2 Assess interests by exploring options.

Goal 2. Assess gaps in learning and skills.

- 2.1 Assess student learning needs prior to attending classes.
- 2.2 Assess additional training needs at the end of classes.

Goal 3. Align training/education to meet employer needs.

- 3.1 Create plan.

Goal 4. Provide training, curriculum, etc.

Strategic Initiative 6

Curriculum development and implementation.

Critical to achieving the outcomes of the Academy is alignment of the curriculum to the interests of the students and the skill sets necessary to fulfill the needs of business and industry. Curriculum will be designed around identified cluster groups and must meet state educational and/or certification requirements. It will also need to be fluid and have the ability to adjust to changing skill sets and career shifts.

Goal 1. In collaboration with business and industry, identify clusters and skills required.

- 1.1** Confirm initial clusters.
 - Manufacturing and STEM
 - Information technology
 - Health science pathway
 - Architecture and construction
 - Ag and transportation
 - Business and hospitality
- 1.2** Set up a curriculum team from all three stakeholder groups.
 - Align curriculum to defined employer-based, student interest and career pathways.
 - Develop curriculum to attain clear pathway to graduation and/or industry third-party credentials.
- 1.3** Utilize employer-driven work-based learning to assure on-the-job competencies.
- 1.4** Understand employer skill needs and gaps to ensure proper development.
 - Conduct study to determine employer needs.
 - Identify how work-based learning may differ among industries and adjust accordingly.
 - Research current knowledge about existing industry-adopted examples to support ongoing conversation with employers.
- 1.5** Document best practices of employer-driven models.
 - Seek curriculum sharing from other programs.
- 1.6** Reduce duplication among training providers.
 - Encourage collaboration between colleges and other training providers.

Goal 2. Match curriculum with cluster group needs.

- 2.1** Review existing curriculum.
 - Determine areas where curriculum is insufficient.
- 2.2** Incorporate best practices into curriculum development efforts.
- 2.3** Identify skills deemed essential for employment by cluster.
 - Develop effective practices.
 - Provide plan for implementation of training.
 - Create a rubric to measure performance outcomes.
 - Engage student employees to assess level of effective training.

Goal 3. Align to North Dakota and Minnesota school standards.

- 3.1** Curriculum team will lead this effort, assigning tasks to groups at the three academic levels, i.e., K-6, middle school, high school.
- Work with North Dakota Department of Career and Technical Education.
 - Work with North Dakota Department of Public Instruction.
 - Work with Minnesota Department of Education.

Goal 4. Meet accreditation requirements.

- 4.1** Identify accrediting bodies for appropriate discipline, including K-12 and post-secondary.
- 4.2** Establish protocol and procedures to ensure accreditation is being monitored.

Goal 5. Teacher professional development and certification.

- 5.1** Meet credentials for professional certificates.
- 5.2** Assessment training.
- 5.3** Guidelines or workshops for working with businesses.

Goal 6. Align with North Dakota and Minnesota CTE objectives.

- 6.1** High school curriculum team will lead effort to assure CTE objectives are aligned with Academy curriculum.
- Work with North Dakota Department of Career and Technical Education.
 - Work with Minnesota Department of Education's CTE unit.

Goal 7. Create new programs or utilize existing program for expanding curriculum needs.

- 7.1** Determine what the ongoing and expanding needs are.
- 7.2** Determine if there is enough student interest to continue to expand curriculum.

Goal 8. Identify faculty to teach curriculum.

- 8.1** Identify the teacher persona that is needed for these positions.
- 8.2** Identify teachers that match the persona.

Goal 9. Determine location of course offerings (what is going to be offered where).

- 9.1** Set up committee to develop matrix on existing course offerings.
- Work with curriculum team to develop policy on distribution of courses.
 - Establish procedure to regularly review course distribution.

Goal 10. Increase support for dual credit/early college models.

10.1 Set up committee to review and monitor dual credit/early college models.

10.2 Coordinate with post-secondary institutions and governing bodies.

- Suggest policy changes as needed at K-12 and post-secondary level.
- Oversee various registration procedures.

Goal 11. Imbed “soft skills” across curriculum.

11.1 Set up committee to determine what “soft skills” are needed and feasible.

- Review best practices and academic literature.

11.2 Determine processes to implement the introduction of soft skills into curriculum.

- Monitor process in which soft skills are incorporated across curriculum.

Strategic Initiative 7

Align scheduling.

Due to the number of school districts, this is one of the most difficult initiatives to administer. Flexibility and willingness to alter current set practices will be needed to accommodate the needs of students and the availability of instructors and classrooms. Many elements will have to be considered at the high school level to achieve success, including transportation, extracurricular activities and maintaining graduation standards. For incumbent workers and new Americans, language and current employment could be obstacles.

Goal 1. Influence policy for more K-12 hands-on training.

- 1.1** Hold ongoing meetings with top leadership of the Academy, participating school districts and participating post-secondary institutions.
- 1.2** Involve all Academy-related advisory groups, curriculum committees and other groups.
- 1.3** Hold period public meetings conveying the work and goals of the Academy.

Goal 2. Hire scheduling coordinator to facilitate Academy class schedules.

- 2.1** Establish scheduling committee with representation from all participating high schools and post-secondary institutions.
- 2.2** Scheduling coordinator will maintain regular contact and interaction with classroom schedulers at all participating high schools and post-secondary institutions.
- 2.3** Scheduling coordinator will identify data sources and how to access and use data needed to develop Academy schedule.

Goal 3. Identify existing class schedules for CTE-related courses at participating high schools and post-secondary institutions.

- 3.1** Academy class scheduler will develop process and data system in collaboration with school schedulers.
- 3.2** Academy class scheduler in cooperation with scheduling committee and curriculum committees will develop a process to prioritize CTE-related courses.

Goal 4. Align and coordinate schedules of high schools and Academy.

- 4.1** Using data acquired by Academy scheduler, the scheduler and scheduling committee will develop prototype of Academy schedule that works with class schedules at high schools and post-secondary institutions.
- 4.2** Academy director and Academy scheduler will prepare/aggregate/disseminate prototype of Academy schedule and relevant data in advance of meeting focused on scheduling.
- 4.3** Curriculum committee chairs, school schedulers and school leaders (or their representatives) will meet to review prototype of Academy schedule that works with class schedules at high schools and post-secondary institutions.
- 4.4** Academy scheduler will revise/amend Academy schedule based on input from meeting.

Goal 5. Develop transportation plan for class and extracurricular activities.

- 5.1** Academy director will assign transportation planning and oversight to staff with responsibility as Academy transportation coordinator.
- 5.2** Transportation coordinator will establish transportation committee including school district staff responsible for transportation/busing.
- 5.3** Transportation coordinator, with input from transportation committee, will develop plan to transport Academy students to and from schools.

Goal 6. Streamline and facilitate process for registration, credits, etc.

- 6.1** An Academy registration task force will be established to facilitate registration procedures among participating schools and post-secondary institutions.

Goal 7. Engage parents at all levels.

- 7.1** Provide regular opportunities for Academy personnel to meet with parents.
- 7.2** Hold annual public forums on Academy scheduling, registration and transportation.

Strategic Initiative 8

Strengthen connections.

A key intention of the Academy is to strengthen the connections between businesses and the education stakeholders, and among districts, two-year colleges and other institutions. Stronger relationships will help develop seamless transitions through the continuum and help align the desired outcomes. They will also help increase the confidence level of all stakeholders.

Goal 1. Build relationships of and assurances for state and local educational systems on value and outcomes of Academy.

- 1.1 Develop training for counselors at all levels to participate together to build relationships and assure consistent content messaging.
- 1.2 Ensure ongoing and consistent communications.
 - Share data across all systems.
- 1.3 Establish and approve priorities as they impact each educational partner.

Goal 2. Become true partners with business and industry in mission and vision of Academy by sector-based engagement and development efforts in order to identify with and respond to workforce challenges and needs.

- 2.1 Hire Academy business partner coach (works with the businesses and teachers to ensure needs are being met).
- 2.2 Engage business in the design and delivery of training programs.
 - Utilize industry subject matter experts.
 - Assure the ability to meet their needs in development of curriculum and instruction.
- 2.3 Develop outreach program.
 - Conduct meetings for businesses and education stakeholders to keep communication open.
 - Establish business and industry advisory group, including workforce organizations, i.e., chamber, GFMEDC, VPP, to assess business needs.
 - Document engagement concerns, solutions.
 - Be responsive and adaptive to the changing needs of employers.

Goal 3. Participate in local economic development planning, workforce activities and initiatives to understand and communicate role of Academy and build trust.

- 3.1 Adopt joint goals that will incentivize partner collaboration.
 - Identify responsibilities so educational systems have clear objective.

Goal 4. Better understand and identify the roles of K-12 districts, adult education, CTE, NDSCS and other contributing entities as a way to build stronger relationships.

Goal 5. Engage with students at appropriate level, allowing them to be a “partner” in the development of programs.

- 5.1 Assess students’ perceptions of the Academy and where it can be improved.
- 5.2 Find out what the student needs are and if there is an interest in the proposed curriculum.

Goal 6. Engage parents, allowing them to be a “partner” in giving feedback to the Academy.

- 6.1 Provide regular opportunities for Academy personnel to meet with parents.
- 6.2 Hold open house at Academy for parents.

Strategic Initiative 9

Educate stakeholders, partners, influencers and community of the value of the Academy.

Creating an atmosphere of support for our role in developing careers in technical and trade careers will be an important objective for us. This includes changing perceptions apparent at multiple levels; parents, students, and even counselors and teachers themselves have been found to promote the four-year degree as the “ideal” career choice, discounting a two-year degree mostly due to lack of awareness of its benefits. To realize desired Academy outcomes, intentional efforts will be developed and implemented to change inaccurate or limited perceptions of technical and trade careers. In addition, education of policy makers will help in changing and developing policy that allows the Academy build successful programs.

Goal 1. Review current perceptions and raise awareness of career opportunities

- 1.1** Conduct an assessment of the current understanding and perspectives to develop a baseline of knowledge gaps and misconceptions.
 - Utilize current research where available.
 - Parents’, students’ and counselors’ current perceptions are key to determining needed messaging.
- 1.2** Build factual background on advantages of expanding perceptions of career options and the success of the Academy approach.

Goal 2. Change policies and regulations that are roadblocks in developing a smooth path for students to receive necessary education from career awareness through training and degree and/or certificate achievement.

- 2.1** Develop comprehensive policy document on policies that impact the Academy, i.e., dual credits, scheduling for awareness education, scheduling for Academy attendance.
 - Build case and messaging for updating policies.
- 2.2** Understand regulations that hinder the system’s ability to move forward quickly to meet community and business partners’ needs.
- 2.3** Partner with key partners to advocate for necessary changes.

Goal 3. Develop and implement comprehensive communications plan to build awareness of Academy and influence perceptions of technical and trade degrees.

- 3.1** Identify target audiences and build database by category.
- 3.2** Develop key messages and construct message matrix by key audience categories.
 - Review all stakeholders’ messaging and speak as one voice.
- 3.3** Determine best vehicles for delivering messages.
- 3.4** Develop materials to promote Academy.
 - Materials will be audience-based.
 - Demonstrate ROI for business, community.

Goal 4. Identify and engage community and state partners, organizations, and networks in support of Academy.

- 4.1** Encourage and secure local government support.
- 4.2** Utilize existing support from work force advocates to help tell the Academy story, i.e., local and state chamber, GFMEDC, Department of Commerce, Valley Prosperity Partnership.
 - Arm them with key messaging and materials.
- 4.3** Make ambassadors of community-based organizations that are not part of the educational system but are educational in nature, i.e., DECA, FFA, Boy/Girl Scouts.
 - Engage their leadership in delivering a broader perspective on career exposure through exploration activities.

EVALUATING PROGRESS

An important part of any venture is the evaluation of all the strategic initiatives. This will help determine progress, what is working and what can be improved. The first step in any evaluation is to set goals and determine what key performance indicators (KPIs) will be most important in moving forward. A number of areas were discussed and many of them will be used in multiple strategic areas. The following KPIs have been identified as valuable in determining the success of the Academy.

- Results of existing standardized assessment measurements that have components related to Academy goals.
- Classroom time (hours) devoted to career awareness, exploration and preparation in K-12 settings.
- The number and quality of engagements between schools and business/industry.
- The number of high school students taking Academy coursework.
- The number of teachers participating in Academy class offerings.
- High school retention and graduation rates.
- High school graduates going on to two- and four-year colleges.
- High school graduates obtaining jobs in technical and trade careers right out of high school.
- The number of incumbent workers and new Americans in the trade and technology area through the Academy.
- Employment statistics from Cass and Clay Counties.
- Satisfaction ratings from students, school teachers, college faculty, administrators, parents and employers (ratings would be on a variety of relevant topics).
- Perception of two-year degrees among stakeholders.
- Perceived value of Academy among stakeholders.
- External academic accreditation reviews for both K-12 schools and post-secondary institutions.
- The findings from regular, ongoing program evaluation of Academy.

Advisory groups/committees

An important inclusion in the Cass-Clay Career Workforce Academy Strategic Plan is the notion of participation and transparency. This is based on the idea that an organization that involves actors, administrators and stakeholders from many diverse areas will function at an optimal level if the voices of the various groups can be represented in decision-making and allocation of effort and resources. This representation of participant views is demonstrated by the numerous advisory groups and committees described in the Academy Strategic Plan. Below, the various groups and committees identified in the Strategic Plan are enumerated with their membership noted.

Academy Steering Committee

Academy Leadership Team under NDSCS

Advisory board from K-12, two-year colleges, businesses and industry representatives

K-8 task force of teachers/administrators

Advisory committee of employers and teachers for K-8

Advisory committee of employers and teachers for middle school

High school task force of teachers/administrators/counselors for curriculum

Advisory committee of employers and teachers for high school

Curriculum team from all three stakeholder groups for overall K-12

Committee to develop matrix on existing course offerings

Committee to review and monitor dual credit/early college models

Committee to determine what “soft skills” are needed

Scheduling committee with representation from all participating high schools and post-secondary institutions

Transportation committee including school district staff responsible for transportation/busing

Registration task force

References and contributors

In the development of the Cass-Clay Workforce Academy Strategic Plan, background research included reviewing relevant topical information found in academic literature and at the websites of professional associations, think tanks, universities and K-12 schools/academies. Additional information was also acquired by communicating directly with individuals knowledgeable about academies in various parts of the country. Multiple telephone interviews were also conducted with business and industry leaders in the Cass-Clay community to gain further understanding of the local dimension and interest in the Academy.

Below are those organizations included in the research conducted in the production of the Academy Strategic Plan:

Bismarck Career Academy, Bismarck, ND
 CTE Academy, Sioux Falls, SD
 Linked Learning, Sacramento, CA
 The Academies of Nashville, Nashville, TN
 National Career Academy Coalition (NCAC), Nashville, TN
 North Dakota Department of Public Instruction
 Career Academy Support Network (CASN), Berkeley, CA
 Advance CTE, Silver Springs, MD
 Association for Career & Technical Education (ACTE), Alexandria, VA
 Career and Technical Education, Lake County Schools, FL
 Illinois Community College Board, Springfield, IL
 Metro Career Academy, Oklahoma City, OK

Business leaders representing the following:

FM Area Foundation
 First International Bank
 WCCO Belting
 Cardinal IG
 Intercept Corp
 Cass County Electric
 General Equipment
 Industrial Builders
 Matrix Properties
 McNeilus Steel
 Xcel Energy
 Midco

K-12 Participants in the Strategy Planning Input Groups

NDSCS Participants in the Strategy Planning Input Groups



**CAREER WORKFORCE
ACADEMY**

**PROGRAM PRIORITIES AND
CURRICULUM DEVELOPMENT**

STRATEGIC PLAN – PHASE II
MAY 9, 2019

PROGRAM PRIORITIES AND CURRICULUM DEVELOPMENT

The vision of a Career Workforce Academy (CWA) began in 2016 with a purpose to design education that is responsive to changing employer needs and to increase learner success. This desire was the catalyst for collaboration amongst area secondary schools and two-year colleges. In phase one, career awareness, exploration and preparation for K-12 learners and adults were identified as key elements in the CWA Strategic Plan, May 2018. These elements serve as foundational elements in the research and design of the CWA's program and curriculum identification process for phase two 2019.

As stipulated in the **CWA Strategic Plan - Initiative #6, Curriculum Development and Implementation** are critical to achieving vision outcomes of the Academy. Alignment of the curriculum to student interests, skill sets necessary to fulfill the needs of business and industry, and alignment between secondary and post-secondary are also essential to the design. Curriculums were to be organized around identified career clusters and meet state educational standards and/or certification requirements. Curriculums will also need to be fluid, be more responsive to changing employers and student needs, and have the ability to adjust career shifts.

In order to gain a broad consensus of the potential programs and curriculum through the Career Workforce Academy (CWA), Flint Group was enlisted to facilitate stakeholder input sessions with area K-12 schools and two-year colleges. Participants included: Central Cass, Fargo, Kindred, Moorhead, Northern Cass, and West Fargo Public Schools, along with Minnesota State Community and Technical College-Moorhead (M State-Moorhead) and North Dakota State College of Science (NDSCS).

Representatives were engaged in a process to identify and prioritize initial and future curriculums for the CWA. The phase two desired outcomes were to address the following CWA Strategic Plan - Initiative #6 goals:

Goal 1. In collaboration with business and industry, identify clusters and skills required.

1.1 Confirm initial clusters.

- Manufacturing and STEM
- Information technology
- Health science pathway
- Architecture and construction
- Ag and transportation
- Business and hospitality

1.2 Set up a curriculum team from all three stakeholder groups.

- Align curriculum to defined employer-based, student interest and career pathways
- Develop curriculum to attain clear pathway to graduation and/or industry third-party credentials

- 1.4 Understand employer skill needs and gaps to ensure proper development.**
 - Conduct study to determine employer needs
 - Identify how work-based learning may differ among industries and adjust accordingly
 - Research current knowledge about existing industry-adopted examples to support ongoing conversation with employers
- 1.6 Reduce duplication among training providers.**
 - Encourage collaboration between colleges and other training providers

Goal 2. Match curriculum with cluster group needs.

- 2.1 Review existing curriculum.**
 - Determine areas where curriculum is insufficient

Goal 7. Create new programs or utilize existing program for expanding curriculum needs.

- 7.1 Determine what the ongoing and expanding needs are**
- 7.2 Determine if there is enough student interest to continue to expand curriculum**

Goal 9. Determine location of course offerings (what is going to be offered where).

- 9.1 Set up committee to develop matrix on existing course offerings.**
 - Work with curriculum team to develop policy on distribution of courses
 - Establish procedure to regularly review course distribution

To accomplish this, Flint conducted input sessions with K-12 schools, M State-Moorhead, and NDSCS representatives. Groups studied current and future industry workforce trends and concluded with a combined input and feedback session with all three groups. The report outlines findings and preliminary recommendations toward initial CWA curriculum.

Report Outline

1. The Assignment
2. Process
 - a. Input Session K-12
 - b. Input Session NDSCS
 - c. Input Session M State-Moorhead
 - d. Combined Input and Feedback Session
3. Recommendations
 - a. Career Workforce Academy Concept
 - b. Career Pathway Learning Continuum
 - c. Delivery System
 - d. Curriculum Offerings
 - e. Advancing the Vision - Career Awareness and Education
4. Conclusion
5. Appendix 1

THE ASSIGNMENT

The scope of work proposed led us through a collaborative, consensus-building approach for alignment and directional outcomes. OUR PROPOSED WORK INCLUDED THE FOLLOWING ELEMENTS:

1. Discovery
 - a. Conduct sessions with education partners to ascertain current training programs, course offerings, and their vision for new programs at the academy.
 - b. Conduct input sessions with selected team members to gain knowledge of cluster group industry needs.
 - c. Work with local groups to understand the current information available and other organizations' discussions on workforce training.
2. Share findings with input session stakeholders for feedback.
3. Draft preliminary findings and a final report for the CWA Steering Committee for refinement, approval and direction.
4. Write final report.

Note: The original Scope of Work included interviews with industry representatives to further understand current and future workforce needs. Due to budget restrictions, these interviews were eliminated. Also eliminated were the student interviews, as the committee felt they had a grasp of student awareness levels and felt they could address this in ongoing current research efforts. Added to the Scope of Work was M State-Moorhead, including an input session, their involvement in the joint session and their program offerings. Timelines were adjusted in order to accommodate each group's input session and the addition of M State-Moorhead.

THE PROCESS – INPUT SESSIONS

Three stakeholder input sessions were conducted with representatives from each of the educational groups. Each group followed a similar agenda. Steps 1-3 were identical and reported below. Steps 4-7 were specific to each group and reported on under their specific session.

1. Review Strategic Plan and Initiative 6
2. Career cluster groups identified
3. Review labor statistics
4. Analyze current K-12 programs and courses
5. Collaboration areas (gaps and duplications)
6. Criteria for regular review of courses
7. Education on career pathways (discussion)

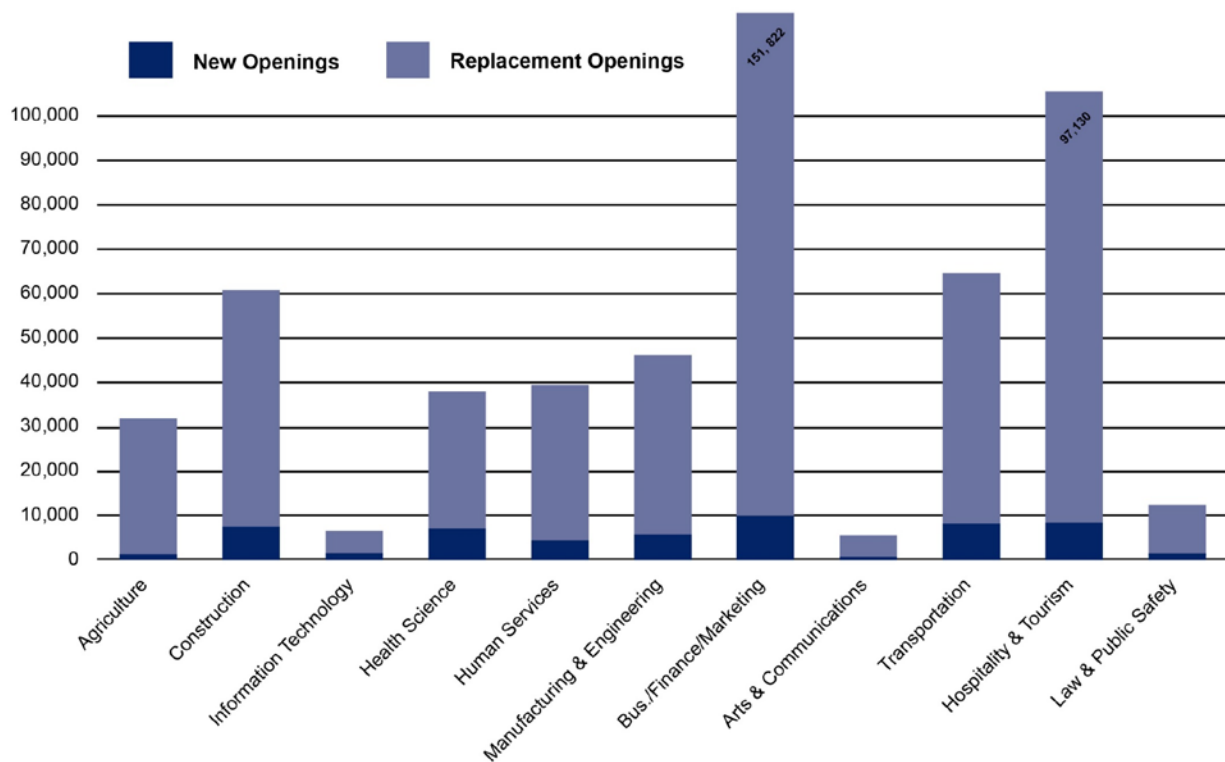
Career Cluster Groups

There was discussion around the identification of the career cluster groups, how they were formed and the overlap of jobs between each cluster. Examples included the need for transportation workers in almost all clusters, health care needs in all clusters, and IT positions open in every cluster. There was a general confirmation of these clusters and the formation of workforce needs under each of them.

Industry Labor Needs

We spent considerable time reviewing industry needs, with the emphasis on identifying careers, programs and classes that will help fill regional job openings now and into the near future (most labor reports went through 2026). These reports indicated that openings in regions served in NW Minnesota and eastern ND were very similar. High demands were found in Health Services, Hospitality and Tourism, Business Management and Administration, Transportation, Food Prep, Manufacturing, Architecture, and Construction; based on these reports, all will be in critical need. Openings included current new growth openings, exit worker openings and occupational transfer openings.

Projected 2025 Job Openings



Source: Labor Market Information Center, Job Service North Dakota

We also looked at input from CTE advisory committees. Many of the occupational needs they listed were in line with studies and analysis completed by North Dakota Job Service, Minnesota Department of Economic Development, and various regional reports. The advisory groups put much emphasis on soft skills and the need in most occupations to include them as part of a student's career path. (Note: the soft skills term has taken on many implications in the education world. It is important that it is defined with specific skill sets and what the industry needs.) Specifically mentioned were professional communications, business acumen, writing, and computer skills. The discussion around a student's approach to the workplace revealed many thoughts on how skill learning is not being applied to areas such as critical thinking, problem solving, communication skills, and the ability to work in a team environment. In addition, industry representatives also called out noticeable absence of pride in work, eagerness to learn, dependability and work ethic.

The following were specific careers identified as having high employment needs:

- Health Sciences: MLT, surgical technicians, CNA, LPN, RN, medical lab scientists, health care environmental services, dietary services
- Construction: carpenters, plumbers, electricians, all building trades
- Manufacturing: machining, welding, automated manufacturing, robotics
- Marketing: web designers, digital marketing, content writers, videographers, market research, social media, creative arts
- Business: sales and marketing, all entry levels, culinary, programmers
- Transportation: service technicians (diesel and auto), body shops, commercial drivers
- Agriculture: producers, agronomic technicians, animal science technicians, sales, ag mechanics, precision agriculture technicians, field techs, farm and ranch management
- Information Technology: network technicians, cyber security specialists, coders, web designers, programming
- Arts and Communications: varied occupations requiring creative skills, hospitality workers and management, culinary, technical writers, editing, entertainment industry
- Transfer Options: pre-programs for baccalaureate or professional degrees such as education, healthcare, criminal justice, engineering, computers, business

K-12 Input Session

The K-12 group was comprised of representatives from: Central Cass, Fargo, Northern Cass, Kindred, Northern Cass, Moorhead, and West Fargo. Stakeholders included superintendents, high school principals, and one counselor. Representatives reflected on proposed CWA cluster areas and were asked to consider student interest, current enrollments and industry needs for

potential CWA programs. A list of current class offerings by school district, M State-Moorhead, and NDSCS was supplied.

The following are K-12 group feedback, comments, or needs by career cluster:

- Agriculture received the lowest priority rating from most of the schools, although popular with schools currently offering the program. Schools reporting low interest do recognize an industry need and potential for course offerings through the “academy” to increase interest and access to classes for more students in the region. Many agriculture careers are intertwined with other career clusters, such as manufacturing; therefore, it was recommended that terminology and curriculum in this cluster be further defined with more input from industry input.
- Manufacturing showed moderate need by schools. Technology, engineering, automated systems and welding were listed as popular classes, with demand on the rise. Space and cost are an issue at district locations, as well as the need for qualified instructors. Stakeholder comments reveal that CWA offerings may contribute to student interest and the ability to fill classes with the sharing of students.
- Business and Finance most schools indicate high school students are interested in business. Marketing education was highly rated and popular as it fits with many cluster areas, including sales and hospitality. All schools have business course offerings on site. There is a desire to redesign course offerings at three high schools in the business areas. All agree business and marketing are high demand industry clusters. Some felt a comprehensive approach is needed in each high school because of the high student demand. There would be a need to evaluate how the “academy” could or would align with secondary, two-year and four-year programming in this cluster to create better alignment for programs.
- Construction introductory classes are currently offered at most schools. All rated this as a high need area, except for two high schools who currently offer advanced construction classes. Course offerings varied greatly by district based on course instructors. HVAC, plumbing, electrical, drafting, construction management, electrical technology are high areas of employment and were recommended as options to be considered at the “academy.”
- Transportation comments varied by district. Aviation was rated high by three high schools, with three indicating less interest. This program was not deemed cost-effective by some schools. Auto mechanics showed high interest at two high schools with others rating it lower. Diesel technology was also rated low due to cost of delivery. Two high schools confirmed interest in continuing recreational power sports due to high student success. Overall, comments reveal schools value transportation programs at a higher rate if they are a hosting site, as students can

participate. Hosting sites recognize the high cost of operation, along with concern in securing highly qualified staff. Non-hosting sites reveal student interest for programs, yet transportation and time as a barrier for student participation.

- Information Technology varied due to availability of instructional staff. All schools indicated high student interest and high industry need. Some schools are participating in the Microsoft TEALS, a Microsoft teacher training program, and are interested in exploring further advanced offerings. Both M State-Moorhead and NDSCS have significant course offerings in this area for alignment.
- Health Sciences is offered at most districts and there is a desire to keep courses at the high school due to a high concentration of student participation. High schools without direct access to health science curriculums reported a desire to have them available at their school or a central location. There are opportunities to provide advanced programming for students, yet staff qualifications, lab space, and teacher time create some limitations.
- Arts and Communications was suggested to change to hospitality and tourism. Introductory photography and graphic communications are offered at some high schools, yet programs do not fully exist at any site.
- General Education areas showed high interest in languages and varied rankings in science and math. One district expressed interest in exploring the integration of math and science – as they relate to the health sciences and business program areas.
- Other areas identified by the K-12 group included public safety (with high demand), veterinary (possible health science cluster), and sound system engineers. Most of the rankings indicated a desire for culinary courses. Cosmetology has also been suggested as an area of interest by some schools.

Program or Class Identification

The K-12 group provided preliminary input on courses that may be offered for grades 10, 11, 12, 13, and 14+. These suggestions will be incorporated with those provided by M State-Moorhead and NDSCS to develop a master list of current academic offerings in the region. This list is included in the combined meeting results area of this report.

NDSCS Input Session

Academic leadership from NDSCS also evaluated the cluster areas. Their overall indication of need was generally higher than the K-12 rankings.

- Agriculture received an average rating. Comments were related to the importance of agriculture in the region. It was noted that many other cluster areas support agriculture and a definition for agriculture is necessary.
- Manufacturing was rated high. Automated manufacturing indicated a strong need but needs more exposure in high schools. Welding has high needs currently but will go down as automation takes over more of the industry.
- Business and Finance was rated high. It was noted that there are numerous areas for two-year degrees within the cluster. Marketing careers had similar comments. Many career opportunities can be enhanced with a four-year degree which tends to be desired by many employers.
- Construction rated high and career opportunities are expanding rapidly in the FM area, but can be cyclical and it was indicated that high school's numbers in this area are down. Current classes have good enrollment but many of these occupations are trained on the job.
- Transportation received middle ratings for this group. Growing interest for aviation (drone) and diesel but needs career exposure at the high school level. This cluster has strong industry support. Automotive and recreational powersports are available at many high schools. Many of these occupations are trained on the job.
- Information Technology was rated high in need but lacks student interest and enrollment. This is a critical need area with more demand on the software engineering aspect of IT. Computer programming will continue to evolve. Cyber security is becoming an area of greater emphasis.
- Health Science has a high need in FM area. Critical shortages exist now and are projected well into the future. There is high student interest, and this should be a high priority offering. It is important to note that the health science cluster includes many health related careers in addition to nursing.
- Arts and Communications changed to Hospitality and Tourism. Culinary agreement with K-12 input.
- General Education rated high as many of the soft skills (language, ELL, oral and written communication, teamwork, etc.) are needed in all clusters. There are currently many offerings in this area.
- Other indication was public safety (e.g., law enforcement, criminal justice, education).

M State-Moorhead Input Session

This was a smaller group with limited time – many of the comments came after the group session. They did go through the rating assignment and course evaluation. The rating findings are below.

- Agriculture was rated the lowest by the group, finding little interest and shrinking need. There is a need for terminology clarity for ag career programs, as it covers many areas (e.g., IT, sales, GIS, science, etc.).
- Manufacturing saw a higher need in the technology and engineering area but only for the support careers associated with four-year degrees. All students are hired before graduation. In the automated area, robotics was mentioned but the area was rated low. Welding was perceived as a short-term need.
- Business and Finance was rated in the middle range of need with social and digital area called out as a high need in the marketing sector.
- Construction was rated high for immediate need and based on current enrollment. Currently M State-Moorhead offers a two-week summer Herdina intro to construction trades for ages 15-21. Certificates could be awarded in specialty areas taught at M State-Moorhead. Stackable certificates in framing, roofing, concrete, siding, and tile could be offered.
- Transportation areas rated the highest were auto and diesel. An intro to auto and diesel at high schools or the academy facility with transferability to M State-Moorhead was suggested. Automotive NitroX summer camp to be offered at M State-Moorhead summer of 2019 and they are exploring a diesel camp. Currently offer a two-year automotive program sponsored by business partners. They also indicated a need for more certificates in the auto and diesel area.
- Information Technology needs to develop a pipeline so there is clear understanding of career paths. There is high need and interest. Security area, network administration, and programming, etc.
- General Education was ranked higher in the math and science areas. M State-Moorhead is open to exploring this further as there are a lot of options in these two areas. Also, a need is recognized for languages as they are aligned with languages in our region.
- Health Science is a major area for M State-Moorhead offering a core curriculum. All are needed, and they could fill the day with classes.
- Arts and Communications noted two areas – culinary and criminal justice.

Joint Session – Curriculum Identification

The participants at the final combined input and feedback meeting were representatives from K-12, M State-Moorhead, and NDSCS. Flint reviewed the results from previous input sessions, by cluster groups, course/program ratings, and industry needs.

Discussion was held on the value of creating programs of study (POS) as an essential element of the CWA, career pathways, and the impact for all stakeholders.

Representative feedback indicates:

- The POS represent the effort to better align high school and post-secondary education with the demands of the changing economy and provide a more coherent pathway for youth as they move toward adulthood.
- Shaped by labor market demand, POS align secondary and post-secondary curricula and offer students the ability to explore careers, earn industry recognized credentials and participate in dual credit-earning opportunities, thus potentially shortening their time to a post-secondary degree.

Representatives noted some potential challenges for implementation of the CWA. Future scheduling issues will surface once initial career clusters and programs of study are confirmed, and location determined. School districts may have to move to block scheduling in some cases in order to accommodate CWA course offerings. The CWA will have to look at full- or half-day programs to accommodate high school scheduling and transportation to and from high schools.

Throughout the process, groups recognized that programming and curriculum currently exist across the region in all career clusters. The existence of the programs, facilities, and staffing may influence the recommendation and final programming.

A graphic was provided to illustrate cluster crossover of classes that support multiple program areas. Groups were challenged to discuss and identify potential CWA curriculum courses for initial implementation and future expansion.

Input was solicited on career awareness strategies starting in the lower grades and through high school as reflected in the CWA Learning Continuum. This information will be further refined by K-12 and post-secondary representatives and as the CWA continues to evolve.

RECOMMENDATIONS

The Association of Career and Technical Education (ACTE) has developed a research-based quality framework that identifies the key components of a high-quality CTE programming. The framework provides criteria for programming that spans secondary and post-secondary career and technical education.

The CWA will utilize the ACTE frameworks to guide recommendations based on our analysis of the input of all stakeholders. Further discussion will help refine the final report. We have broken the recommendations into five key areas.

1. Career Workforce Academy Concept – **The CWA will provide a highly coordinated and collaborative approach** that serves varied student learners while helping meet the workforce needs of the region.

The Career Workforce Academy is an educational delivery model that utilizes an organized, facilitated and collaborative approach for all levels of students to explore careers, establish a career pathway, gain or enhance employable skills, and secure employment. Offerings will be located at participating school district facilities, the CWA Center, NDSCS-Wahpeton, M State-Moorhead, and by remote delivery when appropriate.

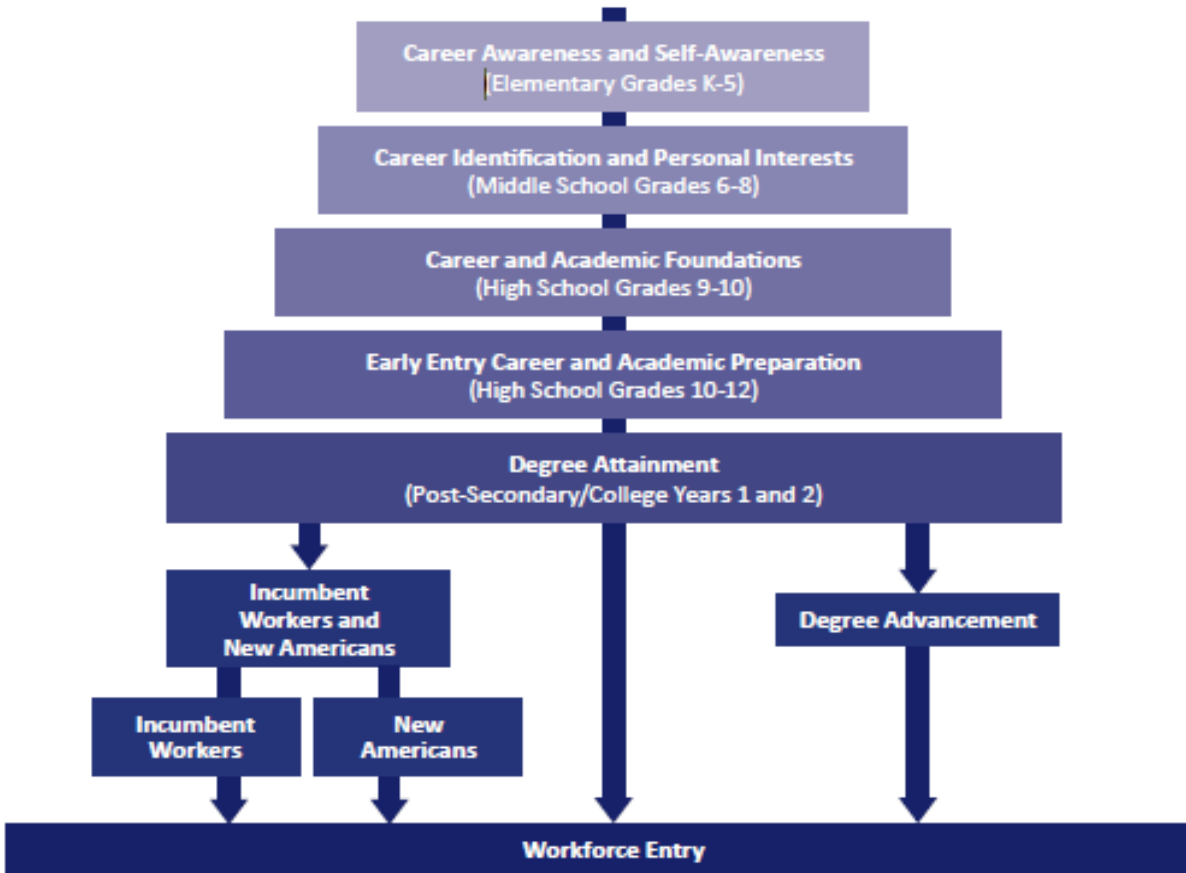
The CWA will provide needed coordination, support services and expanded delivery activities for secondary, post-secondary and adult worker classes in a new facility specifically designed for meeting the varied needs of the CWA. These needs are stated below:

- Provide exposure to multiple career paths for all levels of K-14 students.
- Present more opportunities for students to sample and experiment within a variety of careers.
- Create opportunity for those interested in a technical degree.
- Create a path for incumbent workers and new Americans for a new career.
- Provide appropriate facilities and equipment for hands-on career training.
- Focus on the region's workforce and employer.
- Engage with business and industry to strengthen K-14 relationships and programming.

The strength of the CWA will be based on the Career Pathway Model that draws upon collaboration between K-12 partners, business partners and post-secondary partners.



2. Career Pathway Learning Continuum – **The CWA will provide an integrated and developmental approach to serving all levels of learners.** It is based on serving students throughout the lifespan.

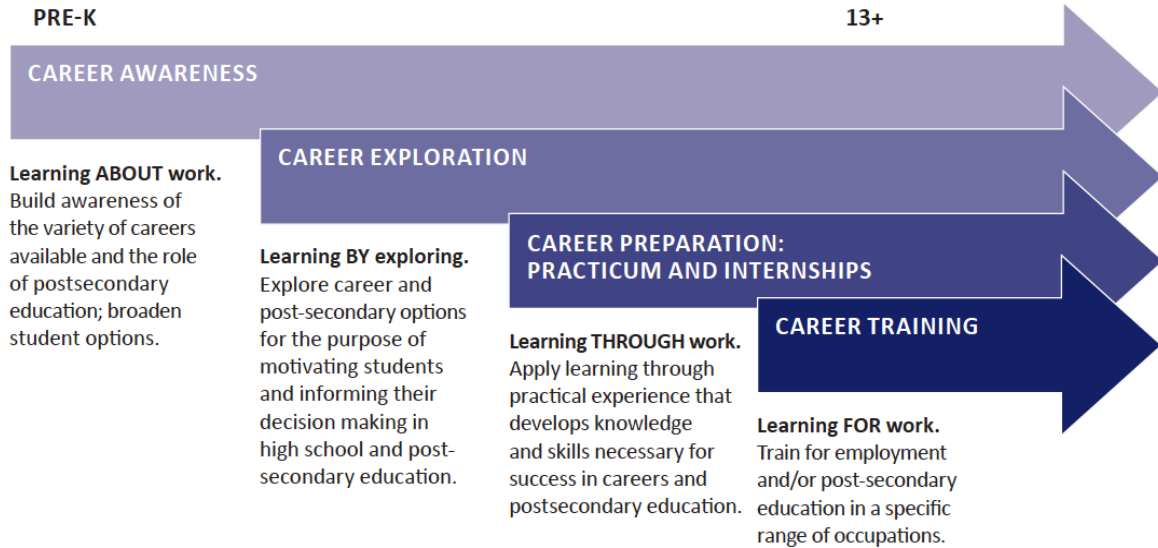


In developing our recommendation for the CWA delivery concept, we considered the courses and classes at all levels, from high school offerings through adults. This concept received a preliminary thumbs-up from participants in the input session.

Academic programming will follow the continuum as indicated in the graphic below. It will expose younger students to various jobs and begin identifying interest levels of the students; the next level will provide career choice exploration opportunities and help formulate their decision process of further career education; and lastly the program will give students the opportunity to have practical experience by learning through actual work experience. It will encourage students to participate in site visits and “on-the-job” training experiences. Opportunities for post-secondary degree attainment, industry certifications, and workforce training for New Americans or incumbent workers will also be facilitated through the CWA.

3. Delivery System – The CWA will provide a multi-faceted delivery system that leverages varied locations and delivery strategies.

Academy Learning Continuum



Instruction, educational activities and training will occur at the location and in the delivery mode that bests meets the needs of the learners and the activity being provided. Courses can be taught by the high school faculty, college faculty, via face to face, video, or online. Specifically, secondary offerings will be at participating high school facilities, at the CWA Center, at NDSCS-Wahpeton or at M State-Moorhead. Post-secondary offerings will be available at the CWA Center, NDSCS-Wahpeton or M State-Moorhead

Dual credit opportunities are a priority for CWA curriculum offerings, pathways for students to earn both high school and college credit toward a high school diploma, certificate or associate degree. Early entry coursework can motivate high school students to stay in school, improve high school graduation rates and creating a seamless transition from high school to college. Students who participate in dual credit have the opportunity to accelerate their college education as they engage in rigorous content and develop skills through advanced lab experiences, saving time and reducing their financial investment.

CAREER WORKFORCE ACADEMY Programming Model



CWA MODEL DEFINED

Career Workforce Academy - An overarching model for systemic coordination of curriculum, program alignment and business partnerships for the Center and satellite academies.

Satellite Academy - A school-based learning community providing academic and technical skills through a career-oriented pathway.

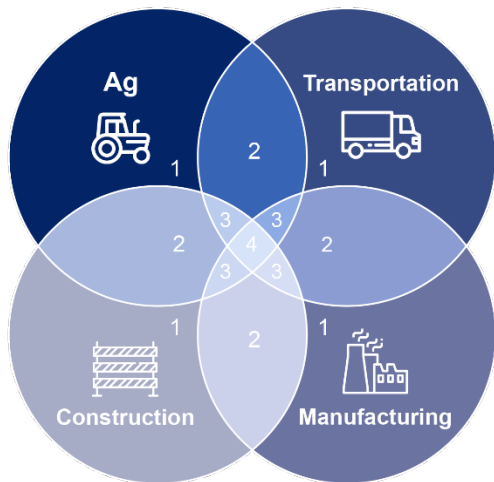
Career Workforce Center - A central location housing advanced secondary, post-secondary, adult workforce training solutions, and leadership coordination.

High School Satellites – CTE Foundations - Agriculture, Business, Construction, FACS, Graphics, Marketing, Health Science, Information Technology, Technology Education

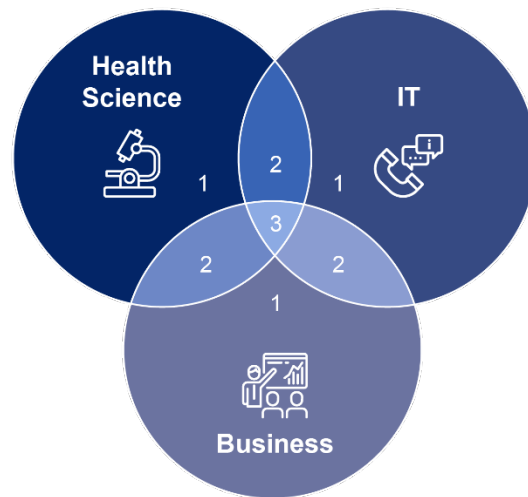
- Curriculum Offerings – A proposed listing of CWA courses, organized by industry cluster and delivery location, is attached as an appendix. In addition to the eight industry clusters, an additional cluster entitled Liberal Arts, Transfer and General Education was included. As stated previously, educational activities and training will occur at the location and in the delivery mode that best meets the needs of the learners and the activity being provided. Effectiveness of instruction and efficiency in delivery will be considered. Proposed offerings and locations listed in the appendix will be refined with the continued input of K-12, post-secondary and industry representatives. **See Appendix 1.**

Initial curriculum offerings were primarily identified through the input of K-12 and post-secondary participants. These are classes that would be initially offered through the CWA, with classes provided at varied locations. These offerings take into consideration both short- and long-term industry needs, institutional capabilities, and current student interest. In consideration of the courses recommended, we looked at cluster crossover. Many classes offered have educational and career implications in more than one cluster. This crossover happens as students explore all aspects of a career. A student interested in agriculture may look at courses in engineering and business and may want to learn more of the technical skills, like welding or UAS technology. This concept is reflected in the following diagram.

Cross Cluster Courses



Four Industry Clusters - Example



Three Industry Clusters - Example

1, 2, 3 and 4 indicate the number of industry clusters a selected course supports.

Academic offerings are dynamic in nature and will change to meet the evolving needs of the workplace. Although demand for a specific skill set may be recognized, student interest, space, instructor availability, and other resources will be weighed. Additionally, changes in industry needs may result in course offerings being modified. Flexibility and the ability to react quickly will be a hallmark of the CWA.

5. Advancing the Vision – Career Awareness and Education - The Career Workforce Academy will provide leadership and visibility in advancing the vision of a collaborative model focused on education and training workforce solutions. Building and sustaining community, industry and policy makers’ awareness and support for technical education, and the career opportunities available through such education, will be significantly enhanced by the creation of a CWA. The CWA and the resulting facility will provide an identifiable entity clearly focused on providing workforce education and training solutions.

Key components to successfully implement this recommendation include providing leadership and programming in the following areas:

- Actively involve community influencers
 - Chamber, GFMEDC, Marketplace for Kids, Fueling our Future, etc.
 - Community education groups, youth groups, Junior Achievement, etc.
- Actively involve parents, caregivers and other student influencers
 - Educate about career options and the impact on their children’s future
- Actively engage business and industry in career awareness, career exploration, career preparation, company specific training, and adult worker training or retraining
 - Work with all career cluster areas to identify and implement specific career exploration and awareness initiatives across the learner spectrum (K-12 through adult)
 - A wide array of potential activities were identified during the feedback sessions and will be made available to the CWA leadership for their consideration and use
- Actively provide programming designed to connect with high school graduates and/or young adults entering the workforce but lacking employable or technical skills
- Provide career pathway educational awareness activities for teachers, counselors and administrators in the broader educational community

Examples: roundtable discussions with industry experts, industry site tours, job shadows
- Provide coordinated and systematic career awareness and career exploration programming for K-12 students

Examples: industry presentations, industry site visits, hands on exploration activities, job shadowing, mentoring, enhancement activities, etc.

- Foster a strong connection between the secondary and post-secondary partners to ensure seamless and well-integrated programming

Examples: dual credit offerings, early college programs; curriculum alignment; shared professional learning; community and professional development activities; shared industry advisory committees, shared facilities/equipment, mentorships for new teachers, shared internship opportunities

- Shared marketing and public relations activities

Conclusion

The Career Workforce Academy is a proven, innovative educational model whose time has come for our region. The CWA has the potential to transform teaching and learning to the benefit of students, schools and colleges, the community, and employers. The identified proposed program offerings provide a foundation upon which to build the CWA model.

The Career Workforce Academy is a strong step in the journey to create an effective, efficient and enduring educational infrastructure that serves the needs of students, community, and the rapidly evolving workplace.

References and contributors

In the development of the Career Workforce Academy Program Priorities and Curriculum Development, background research and input sessions were facilitated by Flint Group. Additional information was obtained through CWA Steering Committee members, current career and technical education program advisory committee member feedback, and input from organizations engaged in coordinate input sessions, including:

- Cass County K-12 School Districts Superintendents and Secondary Principals
- M State – Moorhead President, Vice Presidents, Directors, and Faculty
- NDSCS Vice Presidents, Department Chairs, Deans, Instructional Leaders and Faculty

Career Workforce Academy

Proposed Listing of Academic Offerings



This document provides a proposed listing of courses, organized by industry cluster and delivery location. In addition to the eight industry clusters identified above, an additional cluster entitled Liberal Arts, Transfer and General Education is included. Proposed offerings and locations will be refined with the continued input of K-12, postsecondary and industry representatives.

March 28, 2019

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Agriculture Cluster

03/28/2019

Career Workforce Academy by Location

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo High	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
Secondary Courses													
Ag Intro Courses	C				C		C						
Foundations to Ag	C	VC	VC	VC	C		C	VC	VC	R			
World Ag	VC	VC	VC	VC	VC	VC	VC	VC	VC	R			
Plant Science I/Botany	C	VC	VC	VC	C		C	VC	VC	R			
Plant Science II/Botany	C	VC	VC	VC	C		C	VC	VC	R			
Small Animal Science I	C	VC	VC	VC	C		C	VC	VC	R			
Small Animal Science II	C	VC	VC	VC	C		C	VC	VC	R			
Vet Science I	C	VC	VC	VC	C		C	VC	VC	R			
Vet Science II	C	VC	VC	VC	C		C	VC	VC	R			
Ag Mechanical/Tech	C				C								
Post-Secondary Courses													
NDSCS													
AGRI 141 Principles of Ag Business										R		C	
ANSC 114 Intro to Animal Science										R		C	
PLSC 110 World Food Crops										R		C	
AGRI 275 Intro to Precision Ag										R		C	
MFG 110 Industrial Shop Practices										C-R		C	
M/State Moorhead													
BIOL 1107 Environmental Science Issues													C
BIOL 1108 Environmental Science Issues Lab													C
BIOL 1122 General Biology I													C
BIOL 1123 General Biology II													C
CHEM 1111 General Inorganic Chemistry I													C
CHEM 1112 General Inorganic Chemistry II													C
Post-Secondary Programs													
NDSCS													
Ag Business - AAS													C
Agronomy - AAS													C
Animal Science - AAS													C
Farm Management - AAS													C
Precision Agriculture - AAS													C
Ranch Management - AAS													C
M/State Moorhead													
Environmental Science - AS													C

Preliminary Recommendations

Business Management - Finance - Marketing - Hospitality Cluster

3/28/2019

Career Workforce Academy by Location													
Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
Secondary Courses													
Intro to Business OR Basics of Business		C	C	C				C	C				
Accounting	C	C	C	C	C	C	C	C	C				
Accounting II	C	C	C	C		C		C	C				
Business Law		C	C	C				C	C				
Personal Law & Ethics						C							
Business Finance													
Personal Finance		C	C	C		C		C	C				
Computer Applications	C	C	C	C		C		C	C				
Web Design										R			
Web Design II										R			
Marketing I	C	C	C	C	VCE		C	C	C				
Management/Entrepreneurship	C	C	C	C	VCE	C	C	C	C				
Sports Marketing		C	C	C	VCE	C		C	C				
Store Manager		C	C	C	VCE	C	C	C	C				
Culinary Arts Classes - TBD										R			
Post-Secondary Courses													
NDSCS													
Business Administration and Management Classes													
ACCT 118 Applied Accounting										C-R		C	
ACCT 200 Elements of Accounting I										C-R		C	
ACCT 201 Elements of Accounting II										C-R		C	
ACCT 215 Business in the Legal Environment										C-R		C	
BADM 103 Leadership Techniques										C-R		C	
BADM 201 Principles of Marketing										C-R		C	
BADM 202 Principles of Management										C-R		C	
BADM 217 Promotion and Advertising										C-R		C	
BADM 230 Marketing Information Analysis										C-R		C	
BADM 234 Customer Service										C-R		C	
BADM 240 Sales										C-R		C	
BADM 244 Sales Seminar										C-R		C	
BADM 251 Personal Finance										C-R		C	
BADM 281 Organizational Behavior										C-R		C	
BADM 282 Human Resource Management										C-R		C	
BADM 291 Career Seminar										C-R		C	
BUSN 120 Fundamentals of Business										C-R	R	C	
BUSN 170 Entrepreneurship										C-R	R	C	
BUSN 254 Financial Statement Analysis										C-R		C	
BUSN 282 Professional Development										C-R		C	
CIS 101 Computer Literacy										C-R	C-R	C	
CSCI 116 Business Use of Computers										C-R	R	C	
Culinary Arts Classes - TBD													
TBD										R			
TBD										R			

Preliminary Recommendations

Academic Offerings													
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor- head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
M/State Moorhead													
ACCT 1012 Principles of Bookkeeping													C
ACCT 1101 Payroll													C
ACCT 1108 Business Math and Calculators													C
ACCT 1120 Business Law													C
ACCT 1124 Spreadsheet Applications													C
ACCT 2201 Financial Accounting I Lab													C
ACCT 2202 Financial Accounting II Lab													C
ACCT 2203 Managerial Accounting Lab													C
ACCT 2210 Managerial Accounting													C
ACCT 2211 Financial Accounting I													C
ACCT 2212 Financial Accounting II													C
ACCT 2213 Managerial Accounting													C
ACCT 2215 Computerized Acct App													C
ACCT 2216 QuickBooks													C
ACCT 2217 Microsoft Dynamics GP													C
ACCT 2255 Income Tax-Individual													C
ACCT 2256 Income Tax-Business													C
ACCT 2620 Intermediate Accounting I													C
ACCT 2622 Intermediate Accounting II													C
ACCT 2640 Accounting Internship													C
ACCT 2800 Accreditation Council for Accountancy and Taxes or													C
ADMS 1100 Keyboarding I													C
ADMS 1110 Word Processing													C
ADMS 1112 Desktop Publishing													C
ADMS 1116 Business Communications I													C
ADMS 1120 Administrative Office Procedures													C
ADMS 1128 Records Management													C
ADMS 1130 Office Software Applications													C
ADMS 1190 Keyboarding II													C
ADMS 2124 Emerging Office Technologies													C
ADMS 2205 Advanced Word Processing													C
ADMS 2212 Integrated Office Software Applications													C
ADMS 2216 Business Communications II													C
ADMS 2240 Administrative Office Professional Internship II													C
BUS 1120 Spreadsheet & Database Concepts													C
BUS 1130 Introduction to Inventory Control and Purchasing													C
BUS 1141 Introduction to Business													C
BUS 1143 Office Procedures													C
BUS 1146 Personal Finance													C
BUS 1174 Principles of Banking													C
BUS 1175 Fundamentals of Investing													C
BUS 1300 Financial Statement Analysis													C
BUS 2150 Legal Environment of Business													C
BUS 2202 Management Information Systems													C
BUS 2204 Principles of Management													C
BUS 2206 Principles of Marketing													C

Preliminary
Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)													
E = Expanded offering (future) R = Recommended offering													
BUS 2220 Global Business													C
BUS 2275 Money and Banking													C
CULN 1200 Fundamentals of Baking and Pastry													C
CULN 1205 Theories of Baking and Pastry													C
CULN 1210 Fundamentals of Food Fabrication and Production													C
CULN 1215 Theory of Food Fabrication and Production													C
CULN 1220 Fundamentals of Pantry Production													C
CULN 1230 Introduction to Professional Food Service													C
CULN 1240 Sanitation Certification													C
CULN 1250 Kitchen Math and Measurements													C
CULN 1260 Meats													C
CULN 1270 Culinary Nutrition													C
ENTR 1100 Introduction to Entrepreneurship													C
ENTR 1400 Opportunity Analysis													C
ENTR 2200 Entrepreneurial Field Studies													C
ENTR 2220 Business Ethics/Professionalism													C
ENTR 2222 Business Plan Development													C
HRES 1122 Human Resource Management													C
HRES 1126 Employee Processes													C
HRES 1130 Benefits Administration													C
HRES 1134 Training and Development													C
HRES 2204 Policy Administration													C
HRES 2212 Wage/Salary Administration													C
HRES 2224 Employee/Labor Relations													C
HRES 2254 Human Resource Systems and Portfolio Evaluation													C
MKTG 1040 Consumer Behavior													C
MKTG 1106 Professional Selling													C
MKTG 1110 Customer Service													C
MKTG 1116 Advertising and Promotion													C
MKTG 2204 Advanced Professional Selling													C
MKTG 2214 E-Marketing													C
MKTG 2218 Retail Management													C
MKTG 2230 Marketing Research													C
MKTG 2234 Computer Marketing Applications													C
MKTG 2236 Small Business Management													C
MKTG 2250 Strategic Selling and Account Management													C
MKTG 2290 Management, Marketing and Sales Internship													C
MKTG 2410 Marketing, Management, and Sales Capstone													C

Preliminary
Recommendations

Academic Offerings														
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor- head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead	
Post-Secondary Programs														
NDSCS														
Administration and Finance - AAS										C-R		C		
Business Technology Mgmt - AAS (3rd year option)										C-R		C		
Marketing, Sales, and Hospitality - AAS										C-R		C		
Restaurant Management - AAS (3rd year option)										C-R		C		
Entrepreneurship - Certificate										C-R		C		
Finance - Certificate										C-R		C		
Management/Supervision - Certificate										C-R		C		
Sales - Certificate										C-R		C		
Culinary Arts - Diploma and AAS														
M/State Moorhead														
Business: Management, Marketing and Sales - AAS													C	
Business: Marketing and Sales - Diploma													C	
Fundamentals of Culinary Arts - Diploma													C	
Human Resources - AAS													C	
Human Resources - AS													C	
Payroll Specialist - Diploma													C	
Accounting - AAS													C	
Accounting - Diploma													C	
Accounting Clerk - Diploma													C	
Administrative Office Assistant - Finance - Certificate													C	
Administrative Office Assistant - Human Resources													C	
Administrative Office Assistant - Legal													C	
Administrative Support - Diploma													C	
Business Entrepreneurship - AAS													C	
Business Entrepreneurship - Diploma													C	
Professional Sales Skills - Certificate													C	
Purchasing and Inventory Management - Certificate													C	
Social Media Management - Certificate													C	
Supervisory Leadership Essentials - Certificate													C	

Preliminary
Recommendations

Construction Cluster

03/28/2019

Career Workforce Academy by Location													
Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)													
Secondary Courses													
Woods I	C	C	C	C				C	C				
Woods II	C	C	C	C				C	C				
Construction I	C	C	C	C				C	C				
Construction II	C	C	C	C				C	C				
Woodworking & Cabinetry						C							
Advanced Cabinetry						C							
Exploring Carpentry						C							
Drafting & Technical Drafting						C		C					
Civil Engineering & Architecture (PLTW)		VC	VC	C		C				R			
Post Secondary Courses													
NDSCS													
Electrical Classes													
ECAL 101 DC Fundamentals										R	R	C	
ECAL 102 AC Fundamentals										R	R	C	
MFG 110 Industrial Shop Practices										C-R	R	C	
Plumbing Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
MSYS 101 Safety for Mech Syst Tech										R	R	C	
Architectural Drafting Classes													
ARCT 120 AutoCAD for Architecture										R	R	C	
ARCT 121 Revit Architecture										R	R	C	
UAS 111 Intro to UAS										R	R	C	
UAS 112 UAS Pilot Certification										R	R	C	
Building Construction Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
BCT 102 Core Curriculum for Construction										R	R		
BCT 222 Construction Safety										R	R	C	
Construction Management Classes													
ARCT 121 Revit Architecture										R	R	C	
CAD 120 Intro to AutoCAD										R	R	C	
BCT 222 Construction Safety										R	R	C	
UAS 111 Intro to UAS										R	R	C	
UAS 112 UAS Pilot Certification										R	R	C	
Land Surveying Classes													
CAD 120 Introduction to AUTOCAD										R	R	C	
CT 113 Introduction to Civil Design Applications										R	R	C	
UAS 111 Intro to UAS										R	R	C	
M/State Moorhead													
CADD 1000 AutoCAD Basics													C
COMM 1120 Introduction to Public Speaking													C
COMM 1130 Small Group Communication													C
CONM 1101 Construction Documents and Codes													C
CONM 1102 Site/Building Layout													C
CONM 1104 Construction Management Principles													C
CONM 1108 Principles of Estimating													C

Preliminary Recommendations

Academic Offerings													
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)													
	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
CONM 1124 Building Systems													C
CONM 2204 Materials Testing													C
CONM 2210 Construction Scheduling													C
CONM 2212 Site Management													C
CONM 2213 Safety Management													C
CONM 2217 Computer Estimating and Bidding													C
CONM 2222 Construction Management Internship													C
ELEC 1100 Electrical Safety													C
ELEC 1102 Introduction to Electric Circuit Theory													C
ELEC 1104 Introduction to National Electrical Code													C
ELEC 1107 Introduction to Residential Wiring													C
ELEC 1108 Electrical Circuit Theory													C
ELEC 1110 Electric Motors and Generators													C
ELEC 1112 Residential Wiring													C
ELEC 1114 National Electrical Code													C
ELEC 1116 Conduit/Tool Applications													C
ELEC 1118 Electrical Services													C
ELEC 1122 Introduction to Electrical Materials													C
ELEC 1124 Introduction to Electrical Blueprint Reading													C
ELEC 1130 Electrical Blueprints													C
ELEC 2202 Heating/Cooling Controls													C
ELEC 2205 Introduction to Commercial Wiring													C
ELEC 2206 Introduction to Motor Control Applications													C
ELEC 2208 Programmable Logic Controllers													C
ELEC 2211 Electronic Motor Control													C
ELEC 2212 Commercial Wiring													C
ELEC 2214 Industrial Wiring													C
ELEC 2216 Motor Control Application													C
ELEC 2225 Transformers													C
ELEC 2248 Code Applications													C
ENGT 1126 Engineering Graphics													C
FIRE 1100 Introduction to Fire Service													C
FIRE 1106 Firefighter I and II													C
FIRE 1108 Firefighter I and II Skills													C
FIRE 1130 Technical Rescue													C
FIRE 1140 Fire Inspection and Code Enforcement													C
FIRE 1150 HazMat Operational													C
FIRE 1152 Building Construction													C
HVAC 1102 Duct Fitting Construction													C
HVAC 1103 Electricity for Heating, Ventilating and Air Conditioning													C
HVAC 1104 Heating, Ventilating, and Air Conditioning Electrical													C
HVAC 1128 Heating, Ventilating, and Air Conditioning Design													C
HVAC 1224 Gas and Oil Heating													C
HVAC 2202 Air Handling													C
HVAC 2212 Hot Water Heating													C
HVAC 2221 Heat Pump Theory and Operation													C
HVAC 2290 Heating, Ventilating, and Air Conditioning Internship													C
MCDD 2220 Mechanical Engineering Drawing IV													C
PLBG 1101 Piping and Job Safety													C
PLBG 1103 Plumbing Trade Tools													C
PLBG 1115 Faucets and Fixtures													C
PLBG 1119 Materials and Fittings													C

Preliminary
Recommendations

Academic Offerings													
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E = Expanded offering (future) R = Recommended offering	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
PLBG 1123 Plumbing Code I													C
PLBG 1125 Plumbing Lab I													C
PLBG 1131 Grade and Elevation													C
PLBG 1133 Blueprint Reading													C
PLBG 1135 Drainage, Waste and Venting													C
PLBG 1137 Water Distribution													C
PLBG 1139 Backflow Basics													C
PLBG 1141 Plumbing Code II													C
PLBG 145 Plumbing Lab II													C
REFR 1110 Refrigeration, Air Conditioning and Heating Principles													C
REFR 1112 Refrigeration, Air Conditioning and Heating Lab													C
REFR 2202 Commercial Refrig & A/C Principles													C
REFR 2204 Commercial Refrig & A/C Lab													C
REFR 2206 Commercial Electrical Principles													C
REFR 2208 Commercial Electrical Lab													C
REFR 2211 Advanced Refrigeration Principles													C
REFR 2212 Advanced Refrigeration Lab													C
REFR 2213 Advanced Electrical Theory													C
REFR 2215 Advanced Electrical Applications													C
REFR 2216 Refrigeration Internship													C
REFR 2217 Commercial Grocery Store Refrigeration													C
Post-Secondary Programs													
NDSCS													
Architectural Drafting & Estimating Technology - AAS													C
Building Construction Technology - AAS													C
Construction Management Technology - AAS													C
Land Surveying & Civil Engineering Technology - AAS													C
Electrical Technology - Electrical Construction - AAS													C
Electrical Technology - Industrial Electrical - AAS													C
HVAC/R Technology - Certificate & AAS													C
Plumbing - Certificate													C
Technical Studies - Certificate, Diploma, AAS										C-R			C
Technical Studies - Journeyworker Track - AAS										C-R			C
M/State Moorhead													
Construction Management - AAS													C
Electrical Technology: Electrician - Diploma													C
Fire Service Preparation - Certificate													C
Heating, Ventilation and Air Conditioning/Refrigeration - Diploma													C
Plumbing Technology - Diploma													C

Preliminary
Recommendations

Health Science Cluster

03/28/2019

Career Workforce Academy by Location

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Secondary Courses													
Health Science I	VCE	C	C	C	VCE	VCE	VCE	C	C	R			
Health Science II	VCE	VCE	VCE	VCE	VCE	VCE	VCE	VCE	VCE	R			
Medical Terminology	VC	C	C	C	VCE	VCE	VC	C	C	R			
Certified Nursing Assistant	VC	C	C	C	VCE	C	VC	C	C	R			
Prevention & Care of Athletic Injuries	VC	C-PE	C-PE	C-PE	VCE	VCE	VC	C	C	R			
Post-Secondary Courses													
NDSCS													
Emergency Medical Services (EMS) Classes													
EMS 100 Emergency Medical Responder										C-R			
EMS 101 Introduction into EMS										C-R			
EMS 110 EMT Fundamentals										C-R			
EMS 110L EMT Fundamentals Lab										C-R			
EMS 110P EMT Practicum										C-R			
EMS 150 AEMT Fundamentals										C-R			
EMS 150L AEMT Fundamentals Lab										C-R			
EMS 170 Trauma I										C-R			
EMS 180 Pharmacology I										C-R			
EMS 203 Pharmacology II										C-R			
EMS 204 Medical Emergencies I										C-R			
EMS 205 Medical Emergencies II										C-R			
EMS 207 Special Populations										C-R			
EMS 215 Cardiology										C-R			
EMS 217 Pulmonology										C-R			
EMS 218 Cardio-Pulmonology										C-R			
EMS 219 Trauma II										C-R			
EMS 231 Paramedic Lab I										C-R			
EMS 232 Paramedic Simulation Lab										C-R			
EMS 234 Paramedic Assessment Lab										C-R			
EMS 241 Advanced Provider Practicum I										C-R			
EMS 242 Advanced Practicum II										C-R			
EMS 243 Capstone in Paramedicine										C-R			
EMS 255 Leadership in EMS										C-R			
Health Information Classes													
BOTE 171 Medical Terminology										R	C-R	C	
Nursing Classes													
NURS 101 Introduction to Nursing										C-R		C	
NURS 102 Introduction to Adult Nursing										C-R		C	
NURS 231 Psychiatric Mental Health Nursing										C-R		C	
NURS 232 Adult Nursing										C-R		C	
NURS 233 Adult Nursing Clinical										C-R		C	
NURS 245 Maternal Child Nursing										C-R		C	
NURS 246 Maternal Child Nursing Clinical										C-R		C	
NURS 250 Leadership in Long-Term care setting										C-R		C	
NURS 251 NCLEX-PN Review										C-R		C	
NUTR 240 Principles of Nutrition & Diet Therapy										C-R		C	
PHRM 205 Pharmacology for Nursing										C-R		C	

Preliminary Recommendations

Academic Offerings														
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M/State Moorhead														
ADMM 1104 Medical Language Applications I														C
ADMM 1110 Medical Documentation Fundamentals														C
ADMM 1122 Medical Office Procedures														C
ADMM 1150 Medical Billing/Insurance														C
ADMM 1152 Outpatient Coding														C
ADMM 1160 Beginning Medical Transcription														C
ADMM 1200 Medical Office Technology Tools														C
ADMM 2104 Medical Language Applications II														C
ADMM 2122 Medical Office Management														C
ADMM 2130 Medical Office Career Insight														C
ADMM 2150 Medicare Coding and Billing Applications														C
ADMM 2152 Advanced Coding														C
ADMM 2154 Hospital Billing														C
ADMM 2256 Certified Professional Biller Examination														C
ADMM 2258 Certified Professional Coder Examination Review														C
ADMM 2320 Medical Office Capstone														C
ADMM 2500 Human Disease Applications for Administrative H														C
ADMS 1116 Business Communications I														C
CRJU 1101 Introduction to Criminal Justice														C
CRJU 1102 Policing and Practices														C
CRJU 1108 Physical Control Tactics for Corrections														C
CRJU 1109 Law Enforcement Behavioral Science														C
CRJU 2201 Criminal Law														C
CRJU 2206 Police Report Writing														C
CVRI 1100 Cardiovascular Technology Survey														C
CVRI 1105 Introduction to Cardiovascular Technology														C
CVRI 1110 Cardiovascular Anatomy and Physiology														C
CVRI 1120 Principles of Patient Care														C
CVRI 1130 Cardiovascular Technology I														C
CVRI 1136 Cardiovascular Technology Clinical														C
CVRI 2130 Cardiovascular Technology II														C
CVRI 2141 Pharmacology for Cardiovascular Technology														C
CVRI 2145 Intravenous Therapy														C
CVRI 2250 Radiation Safety														C
CVRI 2262 Cardiovascular Technology Practicum I														C
CVRI 2263 Cardiovascular Technology Practicum II														C
CVRI 2264 Cardiovascular Technology Practicum III														C
DENT 1100 Biomaterials														C
DENT 1102 Dental Anatomy														C
DENT 1103 Introduction for Dental Health Care Providers														C
HITM 1150 Introduction to Health Care Delivery														C
HITM 1152 Health Information Systems														C
HITM 1155 Medicolegal Aspects														C
HITM 1159 Professional Practice Experience Function														C
HITM 2204 Fundamentals of Electronic Health Records														C
HITM 2216 Introduction to Procedure Coding														C
HITM 2218 Intermediate Procedure Coding														C

Preliminary
Recommendations

Academic Offerings														
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HITM 2230 Medical Science for Health Information Profession														C
HITM 2250 Supervisory Leadership in Health														C
HITM 2253 Quality Management Studies														C
HITM 2263 Reimbursement Systems														C
HITM 2272 Professional Practice Experience III														C
HITM 2282 Introduction to Diagnosis Coding														C
HITM 2283 Intermediate Diagnosis Coding														C
HITM 2290 Health Care Data Management and Analysis														C
HLTH 1110 Introduction to Anatomy and Physiology														C
HLTH 1116 Medical Terminology														C
PHRM 1100 Personal and Professional Responsibilities of the														C
PHRM 1101 Personal and Professional Responsibility Applicat														C
PHRM 1110 Medication Processing, Handling, and Safety I														C
PHRM 1111 Medication Processing, Handling and Safety Lab I														C
PHRM 1120 Pharmaceutical Calculations														C
PHRM 2010 Experiential / Hospital														C
PHRM 2012 Experiential / Retail														C
PHRM 2100 Pharmacotherapy														C
PHRM 2110 Medication Processing, Handling and Safety II														C
PHRM 2111 Medication Processing, Handling and Safety Lab II														C
PHRM 2120 Professional Preparation														C
PSYC 2226 Behavior and Environmental Management														C
SURT 1200 Introduction to Surgical Technology														C
SURT 1210 Surgical Technology I														C
SURT 1215 Surgical Pharmacology														C
SURT 1220 Surgical Technology II														C
SURT 1230 Surgical Technology III														C
SURT 1250 Surgical Clinical I														C
SURT 1255 Surgical Clinical II														C

Preliminary
Recommendations

Academic Offerings														
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)	E = Expanded offering (future) R = Recommended offering	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor- head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Post-Secondary Programs														
NDSCS														
Dental														
Dental Assisting - Certificate, AAS														
Dental Hygiene - AAS														
Emergency Medical Services														
Emergency Medical Technician (EMT) - Certificate														
Advanced EMT - Certificate														
Paramedic Technology - Certificate, AAS														
Health Information														
Medical Coding - Certificate														
Health Information Technician - AAS														
Nursing														
Practical Nursing - AAS LPN														
Registered Nursing - ASN RN														
Registered Nursing - AAS RN														
Occupational Therapy Assistant - AAS														
Pharmacy Technician - Certificate, AAS														
M/State Moorhead														
Autism Spectrum Disorder - Certificate														
Cardiovascular Technology - Invasive - AAS														
Childcare and Education - Certificate														
Correctional Officer - Certificate														
Criminal Justice - AS														
Dental Assisting - AAS														
Dental Assisting - Diploma														
Dental Hygiene - AAS														
Health Information Technology/Coding - AAS														
Medical Administration Assistant - AAS														
Medical Coding and Insurance - Diploma														
Medical Office Assistant - Diploma														
Medical Receptionist - Diploma														
Pharmacy Technology - Diploma														
Surgical Technology - AAS														

Preliminary
Recommendations

Information Technology Cluster

03/28/2019

Career Workforce Academy by Location

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
Secondary Courses													
Intro to Coding	VC	C	C	C	C	C	C	C	C				
Mobile Apps & Security	VC	VC	VC	VC	VCE		VC	C	VC				
Computer Programming I - Java	VC	C	C	C			VC	C	C	R	E		
Advanced Programming - Java	VC	C	C	C			VC	C	C	R			
HTML													
IT Essentials I	VC	VC	VC	C			VC	C	VC	R	E		
IT Essentials II	VC	VC	VC	C			VC	C	VC	R	E		
Cisco I	VC	VC	VC	C			VC	VC	VC	R	E		
Cisco II	VC	VC	VC	C				VC	VC	R	E		
Cisco III		VC	VC	M				C	C	R	E		
Cisco IV		VC	VC	M						R	E		
Web Design		C				C				R			
Web Development						C				R			
Security Course (Future Course)										R			
Post-Secondary Courses													
NDSCS													
CIS 101 Computer Literacy										C-R	C	C	
CIS 128 IT Essentials I										C-R			
CIS 129 IT Essentials II										C-R			
CIS 164 Networking Fundamentals I										C-R		C	
CIS 165 Networking Fundamentals II										C-R		C	
CIS 180 HTML and CSS										C-R		C	
CIS 181 Web Authoring Software										C-R		C	
CIS 182 Image Editing Software										C-R		C	
CIS 197 Internship										C-R		C	
CIS 212 Microsoft Windows Operating System Client										C-R			
CIS 215 Implementing a Microsoft Windows Server										C-R			
CIS 216 Implementing a Microsoft Windows Network										C-R			
CIS 220 Operating Systems (Unix)										C-R		C	
CIS 232 Graphics Design										C-R		C	
CIS 241 IT Forensics I										C-R			
CIS 242 IT Forensics II										C-R			
CIS 244 Web Server Management										C-R			
CIS 267 Intermediate Networking I										C-R			
CIS 268 Intermediate Networking II										C-R			
CIS 279 Security Awareness and Policy										C-R		C	
CIS 280 Fundamentals of Network Security I										C-R			
CIS 282 Computer System Security										C-R			
CSCI 116 Business Use of Computers										C-R		C	
CSCI 160 Computer Science I										C-R		C	
CSCI 230 Web Database I (ASP/PHP)										C-R		C	
M/State Moorhead													
CPTR 1001 Introduction To Programming and Scripting													C
CPTR 1106 Microcomputer Databases													C
CPTR 1108 CISCO I													C

Preliminary Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)													
E = Expanded offering (future) R = Recommended offering													
CPTR 1110 Visual Basic Program I													C
CPTR 1115 COBOL Programming													C
CPTR 1118 CISCO II													C
CPTR 1122 Microcomputer Maintenance													C
CPTR 1129 RPG Programming													C
CPTR 1170 Web Engineering I													C
CPTR 1178 Robotics													C
CPTR 2000 Mobile Application Development													C
CPTR 2200 CISCO III													C
CPTR 2208 CISCO IV													C
CPTR 2210 Database Report Generation													C
CPTR 2224 Linux I													C
CPTR 2230 Structured Query Language													C
CPTR 2234 Linux II													C
CPTR 2236 Network Security													C
CPTR 2238 Database Integration													C
CPTR 2240 Database Administration													C
CPTR 2242 Java Programming													C
CPTR 2245 Enterprise Network Technologies													C
CPTR 2250 IT Supervised Occupational Experience													C
CPTR 2260 Advanced Structured Query Language													C
CPTR 2272 Network Operating Systems													C
CPTR 2275 Data Analytics													C
CPTR 2294 Internship													C
CPTR 2296 Topics in Computers													C
CSCI 1110 Informatics													C
CSCI 1121 Computer Science I													C
CSCI 1122 Computer Science II													C
CSEC 2204 Managing Directory Services													C
CSEC 2210 Security Breaches and Countermeasures													C
CSEC 2212 Web Security													C
CSEC 2214 Topics in Network Security													C
CSEC 2228 Network Defense													C
CVNP 2212													C
Post-Secondary Programs													
NDSCS													
IT Forensics and Security - Certificate										C-R			
Information Technology Support - Certificate										C-R			
Information Systems Administrator - AAS										C-R			
Web Design - Certificate										C-R		C	
Web Developer - AAS										C-R		C	
Technical Studies													
Technical Studies - Certificate, Diploma, AAS										C-R		C	
M/State Moorhead													
Cisco Networking - Certificate													C
Computer Programming - AAS													C
Information Technology - AS													C
Information Technology - Database Administration - AAS													C
Network Administration and Security - AAS													C
Network Security - Certificate													C

Preliminary
Recommendations

Manufacturing - Engineering Cluster

03/28/2019

Career Workforce Academy by Location													
Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Secondary Course Courses													
Metals I									C				
Metals II									C				
Welding I	VC	VC	VC	VC	VCE	C	VC	VC	VC	R	E		
Welding I	VC	VC	VC	VC	VCE	C	VC	VC	VC	R	E		
Automated Manufacturing I	VC	VC	VC	C	VCE		VC	VC	VC	R	E		
Automated Manufacturing II	VC	VC	VC	C	VCE		VC	VC	VC	R	E		
Automated Manufacturing III	VC	VC	VC	C	VCE		VC	VC	VC	R			
Intro to Engineering (PLTW)		C	C	C		C		C	C	R			
Principles of Engineering (PLTW)		C	C	C		C		C	C	R			
Digital Electronics (PLTW)									C	R			
Post-Secondary Courses													
NDSCS													
Manufacturing/Welding Classes													
MFGT 101 Robotics I										C-R		C	
MFGT 110 Industrial Shop Practices										C-R	C-R	C	
MFGT 123 Fabrication Methods I										C-R	C-R	C	
MFGT 135 Basic Metallurgy										C-R		C	
MFGT 137 Print Reading I										C-R		C	
MFGT 140 Fabrication Methods II										C-R		C	
MFGT 141 Print Reading II										C-R		C	
WELD 151 Welding Theory I										C-R		C	
WELD 152 Welding Theory II										C-R		C	
WELD 153 Welding Lab I										C-R		C	
WELD 154 Welding Lab II										C-R		C	
WELD 201 Welding Theory III										C-R		C	
WELD 202 Welding Theory IV										C-R		C	
WELD 211 Welding Lab III										C-R		C	
WELD 212 Welding Lab VI										C-R		C	
Robotics Classes													
RAMT 137 Print Reading, Drafting & Safety										R		C	
MFGT 110 Industrial Shop Practices										C-R	C-R	C	
Robotics Classes - TBD													
M/State Moorhead													
ENGR 2210 Engineering Mechanics I													C
ENGR 2220 Engineering Mechanics II													C
ENGR 2230 Mechanics of Materials													C
MATH 1134 Calculus I													C
MATH 1135 Calculus II													C
MATH 2231 Calculus III													C
MATH 2259 Differential Equations													C
PHYS 1412 University Physics II													C

Preliminary Recommendations

Academic Offerings													
Key: C = Currently offered Center (current) location VCE = Virtual Center expansion (future)	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor- head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Post-Secondary Programs													
NDSCS													
Precision Machining - Certificate, AAS													C
Robotics, Automation & Mechatronics (RAMT) - AAS													C
Welding - Certificate, AAS													C
Technical Studies													
Technical Studies - Certificate, Diploma, AAS										C-R			C
M/State Moorhead													
Drafting and 3D Technologies - Diploma													C
Drafting and 3D Technologies - AAS													C
Engineering - AS													C

Preliminary
Recommendations

Transportation Cluster

03/28/2019

Career Workforce Academy by Location

Career Workforce Academy by Location													
Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
Secondary Courses													
Aviation IA	VC	VC	VC	VC	VCE	VCE	VC	C	VC				
Aviation IB	VC	VC	VC	VC	VCE	VCE	VC	C	VC				
Aviation II	VC	VC	VC	VC	VCE	VCE	VC	C	VC				
Automotive I	VCE	VCE	VCE	C	VCE	VCE	VCE	VCE	VCE				
Automotive II	VCE	VCE	VCE	C	VCE	VCE	VCE	VCE	VCE				
Diesel I								C-M		M	R-E		
Diesel II								C-M		M	R-E		
Recreational Engines I	VCE	VCE	VCE	VCE	VCE	C	VCE	VCE	C				
Recreational Engines II	VCE	VCE	VCE	VCE	VCE	C	VCE	VCE	C				
UAS Introduction										R	R-E		
Post-Secondary Courses													
NDSCS													
Auto Body Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
Automotive Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
AUTO 133 Power Trains I											R	C	
AUTO 134 Power Trains II											R	C	
Diesel Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
DTEC 135 Medium/Heavy Duty Brakes										R	R	C	
DTEC 125 Intro to Heavy Duty Drive Sys										R	R	C	
Powersports Classes													
MFG 110 Industrial Shop Practices										C-R	R	C	
PST - TBD											R	C	
UAS Classes													
UAS 111 Intro to UAS										R	R	C	
UAS 112 UAS Pilot Certification										R	R	C	
UAS 121 UAS Advanced Data Collection										R		C	
UAS 122 UAS Photography and Videography										R		C	
UAS 132 Advanced UAS Flight										R		C	
Technical Studies													
Technical Studies - Certificate, Diploma, AAS										C-R		C	
M/State Moorhead													
AMST 1101 Automotive Equipment Fundamentals													C
AMST 1102 Alignment and Suspension I													C
AMST 1105 Brakes I													C
AMST 1110 Batteries, Starting and Charging Systems													C
AMST 1111 Automotive Electronics													C
AMST 1122 Engines I													C
AMST 1126 Engines II													C
AMST 1132 Drivetrains I													C
AMST 1136 Drivetrains II													C

Preliminary Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor-head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
AMST 2201 Alignment and Suspension II													C
AMST 2206 Body Electrical and Mechanical I													C
AMST 2210 Body Electrical and Mechanical II													C
AMST 2211 Exhaust Analysis and Fuel Systems													C
AMST 2214 Electronic Powertrain Control I													C
AMST 2218 Electronic Powertrain Control II													C
AMST 2220 Ignition Systems													C
AMST 2225 Brakes II													C
AMST 2233 Automatic Transmissions I													C
AMST 2237 Automatic Transmissions II													C
AMST 2240 Heating, Ventilation and Air Conditioning													C
BIOL 1107 Environmental Science Issues													C
COMM 1120 Introduction to Public Speaking													C
CPTR 1100 Fund Computer Concepts													C
DCNH 2210 Mobile Hydraulics													C
DCNH 2218 CNH (Case New Holland) Supervised Occupati													C
DCNH 2238 Transmissions and Drive Systems													C
DCNH 2242 Advanced Engines and Fuel Systems													C
DCNK 1116 CNH (Case New Holland) Supervised Occupati													C
DCNK 1118 CNH (Case New Holland) Supervised Occupati													C
DSET 1100 Diesel Equipment Fundamentals													C
DSET 1101 Software Systems in Transportation													C
DSET 1106 Fuel Systems													C
DSET 1110 Power Train I													C
DSET 1112 Hydraulics I													C
DSET 1114 Vehicle Brakes													C
DSET 1124 Diesel Shop Management													C
DSET 1130 Trans Elec/Start/Charge													C
DSET 1132 Introduction to Engine Theory													C
DSET 1134 Introduction to Engines													C
DSET 1144 Electrical Troubleshooting													C
DSET 2204 Advanced Electrical and Emission Systems													C
DSET 2206 Electronic Controls													C
DSET 2210 Mobile Hydraulics													C
DSET 2214 Suspension and Alignment													C
DSET 2218 Advanced Fuels													C
DSET 2220 Internship													C
DSET 2238 Transmissions & Drive Systems													C
DSET 2242 Advanced Engines and Fuel Systems													C
ENGL 1101 College Writing													C
TRNS 1112 Heating Ventilation A/C													C

Preliminary
Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered E = Expanded offering (future) VC = Virtual Center (current) R = Recommended offering M = Move from present location VCE = Virtual Center expansion (future)													
Post-Secondary Programs													
NDSCS													
Auto Body Repair & Refinishing Tech - AAS												C	
Automotive Technology - AAS												C	
Powersports Technology - Certificate & AAS												C	
Diesel Technology - AAS												C	
John Deere Tech - AAS												C	
Caterpillar Dealer Service Technician - AAS												C	
Unmanned Aircraft Systems (UAS) - Certificate										R		C	
M/State Moorhead													
Automotive Service Technology - AAS													C
Automotive Service Technology - Diploma													C
Diesel Equipment Technology - AAS													C
Diesel Equipment Technology - Diploma													C

Preliminary
Recommendations

Arts & Communications Cluster

03/28/2019

Career Workforce Academy by Location

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Secondary Course Courses													
Photography I		C	C	C				C	C				
Photography II		C	C	C				C	C				
DigiTools I						C							
DigiTools II						C							
Communications Tech		C	C	C									
Graphics Communication								C	C				
News Media													
Broadcasting								C	C				
TV Production						C							
Publications								C	C				
Performing Arts		C	C	C				C	C				
Visual Arts courses		C	C	C				C	C				
Post-Secondary Course Courses													
NDSCS													
Performing Arts													
MUSC 101 Music Appreciation										R		C	
MUSC 101 Fundamentals of Music										R		C	
MUSC 207 History of Rock and Roll										C-R		C	
Communication													
COMM 110 Fundamentals of Public Speaking										C-R		C	
COMM 212 Interpersonal Communication										R		C	
COMM 216 Intercultural Communication										R		C	
M/State Moorhead													
ASL 1111 American Sign Language and Deaf Culture I													C
ASL 1112 American Sign Language and Deaf Culture II													C
ASL 1113 American Sign Language and Deaf Culture III													C
ASL 1114 American Sign Language and Deaf Culture IV													C
ASLM 1110 Introduction to Medical Interpreting													C
ASLM 1111 Ethical Decision Making for Medical Interpreters													C
ASLM 1112 Medical Signs													C
ASLM 1113 Special Topics in the Field of Medical Interpretin													C
ASLM 1114 Introduction to Mental Health Interpreting													C
COMM 2230 Intercultural Communication													C
GDTC 1100 Macintosh Production Processes													C
GDTC 1105 Adobe Photoshop I													C
GDTC 1113 Design and Layout I													C
GDTC 1115 Design and Layout II													C
GDTC 1120 Adobe InDesign I													C
GDTC 1124 Interactive Design I													C
GDTC 1126 Digital Photography													C
GDTC 1135 Adobe Illustrator I													C
GDTC 1150 Process Printing Theory													C

Preliminary Recommendations

Academic Offerings													
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E = Expanded offering (future) R = Recommended offering	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moor- head	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
GDTC 2120 Adobe InDesign II													C
GDTC 2205 Adobe Photoshop II													C
GDTC 2212 Design and Layout III													C
GDTC 2224 Interactive Design II													C
GDTC 2230 Design Portfolio													C
GDTC 2245 Adobe Illustrator II													C
GDTC 2250 Design Campaigns													C
GDTC 2258 Graphic Design Prof Practice													C
GDTC 2278 Digital Preflight													C
HLTH 1110 Introduction to Anatomy and Physiology													C
HLTH 1116 Medical Terminology													C
Post-Secondary Programs													
NDSCS													
Liberal Arts - General - AA, AS										C-R		C	
Liberal Arts - Music - AA										R		C	
M/State Moorhead													
American Sign Language Studies - Certificate													C
Graphic Design Technology - AAS													C
Graphic Design Technology - Diploma													C
Sign Language Interpreter - Medical - Certificate													C

Preliminary
Recommendations

Liberal Arts, Transfer and General Education Cluster

03/28/2019

Career Workforce Academy by Location													
Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Secondary Course Courses													
English IV													
Foreign Language													
Psychology													
Mathematics													
Ramp Up - (Science of Success)?													
Sociology													
Sciences													
Post-Secondary Courses													
NDSCS													
Academic Services (Developmental)													
ASC 060 English Language and Grammar Skills										C-R		C	
ASC 067 English as a Second Language										C-R		C	
ASC 82 effective Reading										C-R		C	
ASC 84 Critical Reading										C-R		C	
ASC 86 College Writing Prep I										C-R		C	
ASC 87 College Writing Prep II										C-R		C	
ASC 88 Composition Lab										C-R		C	
ASC 90 Math Prep										C-R	C	C	
ASC 91 Algebra Prep I										C-R	C	C	
ASC 92 Algebra Prep II										C-R	C	C	
ASC 93 Algebra Prep III										C-R	C	C	
English, Communication, & Performing Arts													
COM 110 Fundamentals of Public Speaking										C-R	C	C	
ENGL 110 College Composition I										C-R	C	C	
ENGL 120 College Composition II										C-R	C	C	
ENGL 240 World Literature Masterpieces										C-R		C	
MUSC 207 History of Rock and Roll Music										C-R		C	
Mathematics and Science Classes													
BIOL 111 Concepts of Biology/Lab										C-R		C	
BIOL 150/L General Biology I/Lab										C-R	C	C	
BIOL 151/L General Biology II/Lab										C-R	C	C	
BIOL 220/L Anatomy & Physiology I/Lab										C-R	C	C	
BIOL 221/L Anatomy & Physiology II/Lab										C-R	C	C	
CHEM 121/L General Chemistry I/Lab										C-R	C	C	
CHEM 122/L General Chemistry II/Lab										C-R	C	C	
BOTE 108 Business Math										C-R		C	
MATH 103 College Algebra										C-R	C	C	
MATH 105 Trigonometry										C-R	C	C	
MATH 130 Technical Math										C-R		C	
MATH 132 Technical Algebra I										C-R		C	
MATH 136 Technical Trigonometry										C-R		C	
MATH 210 Elementary Statistics										C-R	C	C	
MICR 202/L Introductory Microbiology										C-R		C	
PHYS 211/L College Physics I										C-R		C	
Social & Behavioral Sciences													
CJ 160 The Legal System										C-R		C	
CJ 201 Introduction to Criminal Justice										C-R		C	
CJ 232 Administration of Justice										C-R		C	

Preliminary Recommendations

Academic Offerings	Central Cass	Fargo Davies	Fargo North	Fargo South	Kindred	Moorhead	Northern Cass	West Fargo Sheyenne	West Fargo HS	CWA Center	NDSCS Early Entry	NDSCS Wahpeton	M-State Moorhead
Key: C = Currently offered VC = Virtual Center (current) M = Move from present location VCE = Virtual Center expansion (future)													
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CJ 297 Internship: Field Studies										C-R		C	
CJ 297 CJ Internship										C-R		C	
ECON 105 Elements of Economics										C-R	C	C	
ECON 201 Principles of Microeconomics										C-R		C	
ECON 202 Principles of Macroeconomics										C-R		C	
HIST 103 United States History To 1877										C-R		C	
HIST 104 United States History Since 1877										C-R		C	
PHIL 210 Ethics										C-R		C	
POLS 115 American Government										C-R		C	
POLS 115 State and Local Government										C-R		C	
PSYC 100 Human Relations in Organizations										C-R		C	
PSYC 111 Introduction to Psychology										C-R		C	
PSYC 230 Educational Psychology										C-R		C	
PSYC 250 Developmental Psychology										C-R		C	
PSYC 270 Abnormal Psychology										C-R		C	
RELS 203 World Religions										C-R		C	
SOC 110 Introduction to Sociology										C-R		C	
SOC 115 Social Problems										C-R		C	
SOC 221 Minority Relations										C-R		C	
M/State Moorhead													
ACCT 1108 Business Math and Calculators													C
ACCT 2210 Managerial Accounting													C
ACCT 2211 Financial Accounting I													C
ACCT 2212 Financial Accounting II													C
ACCT 2213 Managerial Accounting													C
ACCT 2215 Computerized Acct App													C
ACCT 2255 Income Tax-Individual													C
ART 1107 Foundations of Art, 2-D													C
ART 1108 Foundations of Art, 3-D													C
ART 1110 Introduction to Art													C
ART 1111 Drawing I													C
ART 1112 Painting I													C
ART 1117 Printmaking I													C
ART 1118 Watercolor I													C
ART 1121 World of Art I													C
ART 1122 World of Art II													C
ART 1124 American Art													C
ART 1140 Handbuilt Ceramics													C
ART 2111 Drawing II													C
ART 2112 Painting II													C
ART 2114 Photographic Art I													C
ART 2115 Introduction to Digital Photography													C
ART 2116 Mixed Media I													C
ART 2201 Foundations on Digital Imaging													C
ART 2260 Art, Portfolio Design and Professional Development													C
ART 2261 Art, Portfolio Design and Professional Development Internsh													C
ART 2999 AFA-Visual Art Capstone Exhibition													C
BIOL 1107 Environmental Science Issues													C
BIOL 1108 Environmental Science Issues Lab													C
BIOL 1115 Introduction to Biotechnology													C
BIOL 1122 General Biology I													C
BIOL 1123 General Biology II													C

Preliminary Recommendations

Academic Offerings													
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BIOL 1152 Food Science													C
BIOL 1170 Essentials of Human Anatomy and Physiology													C
BIOL 2010 General Ecology													C
BIOL 2202 Principles of Nutrition													C
BIOL 2220 General Microbiology													C
BIOL 2240 Genetics													C
BIOL 2260 Human Anatomy and Physiology I													C
BIOL 2261 Human Anatomy and Physiology I Lab													C
BIOL 2262 Human Anatomy and Physiology II													C
BIOL 2263 Human Anatomy and Physiology II Lab													C
BIOL 2267 Medical Microbiology													C
BIOL 2268 Medical Microbiology Lab													C
BIOL 1104 Biology of Human Concerns													C
BUS 1120 Spreadsheet & Database Concepts													C
BUS 1146 Personal Finance													C
BUS 2150 Legal Environment of Business													C
BUS 2204 Principles of Management													C
BUS 2206 Principles of Marketing													C
CHEM 1100 Fundamental Concepts of Chemistry													C
CHEM 1101 Principles of General Chemistry													C
CHEM 1111 General Inorganic Chemistry I													C
CHEM 1112 General Inorganic Chemistry II													C
CHEM 1115 Introduction to Organic and Biochemistry													C
CHIN 1101 Introduction to Chinese													C
COMM 1100 Power and Communications in Human Relations													C
COMM 1120 Introduction to Public Speaking													C
COMM 1130 Small Group Communication													C
COMM 1140 Interpersonal Communication													C
COMM 2220 Oral Interpretation													C
COMM 2230 Intercultural Communication													C
COMM 2240 Family Communication													C
COMM 2250 Gender Communication													C
COMM 2260 Computer-Mediated Communication													C
CPTR 1104 Introduction to Computer Technology													C
ECON 1150 Essentials of Economics													C
ECON 2210 Macroeconomics													C
ECON 2222 Microeconomics													C
ENGL 1101 College Writing													C
ENGL 1205 Writing About Literature													C
ENGL 1210 Writing About Current Issues													C
ENGL 1215 Professional and Technical Writing													C
ENGL 2234 Introduction to Literature: Short Stories													C
ENGL 2236 Introduction to Literature: Novel													C
ENGL 2238 Literature, Illness and the Human Condition													C
ENGL 2310 Introduction to Mythology													C
ENGL 2321 Women in Literature													C
ENGL 2325 Contemporary World Literature													C
ENGL 2372 Children's Literature													C
GEOG 1160 Global Physical Geography													C
HIST 1101 Western Civilization: Ancient to 1600s													C
HIST 1102 Western Civilization: 1600's to the Present													C
HIST 1113 Western Civilization: 20th Century													C
HIST 1201 American History to 1877													C

Preliminary
Recommendations

Academic Offerings													
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HIST 1202 American History since 1877													C
HIST 1600 History of Baseball													C
HIST 1700 The History of America's National Parks													C
HIST 2212 American History 19th Century													C
HIST 2213 American History: 20th Century													C
HIST 2220 Minnesota and Northern Plains History													C
HUM 1101 Introduction to the Humanities													C
HUM 1105 Religion in the Humanities													C
HUM 1201 Religion and the American Experience													C
HUM 2236 Technology in the Humanities													C
HUM 2301 Heroes, Moral and Cultural													C
MATH 1100 World of Math													C
MATH 1102 Finite Math													C
MATH 1114 College Algebra													C
MATH 1115 Functions/Trigonometry													C
MATH 1116 College Trigonometry													C
MATH 1118 Precalculus													C
MATH 1122 Applied Calculus and Linear Algebra													C
MATH 1134 Calculus I													C
MATH 1135 Calculus II													C
MATH 1207 Elementary Statistics													C
MATH 1213 Introduction to Statistics													C
MATH 2200 Principles of Arithmetic													C
MATH 2231 Calculus III													C
MATH 2257 Linear Algebra													C
MCOM 1122 Introduction to Mass Communication													C
MCOM 1142 Popular Culture and Social Media													C
MCS 2230 Multicultural America													C
MIS 1100 Business Computers													C
MUSC 1117 Beginning Class Guitar													C
MUSC 1160 Music Business: Creating and Promoting Music													C
MUSC 1191 Individual Piano Lessons													C
MUSC 2214 Class Piano II													C
PHIL 1130 Critical Thinking													C
PHIL 1200 Applied and Professional Ethics													C
PHIL 1201 Ethics													C
PHIL 1211 Introduction to Philosophy													C
PHIL 2220 Environmental Ethics													C
PHIL 2225 Bioethics													C
PHIL 2230 Existentialism													C
PHIL 2235 Symbolic Logic													C
PHIL 2240 Non-Western Philosophical Perspectives													C
PHIL 2300 Political and Social Philosophy													C
PHYS 1105 Fundamental Concepts in Physics													C
PHYS 1106 Fund of Physics - Mechanics													C
PHYS 1107 Physics of Music													C
PHYS 1108 Physics of Flight													C
PHYS 1120 Introduction to Astronomy													C
PHYS 1401 College Physics I													C
PHYS 1402 College Physics II													C
PHYS 1411 University Physics I													C
PHYS 1412 University Physics II													C
POLS 1120 American National Government													C

Preliminary
Recommendations

Academic Offerings														
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POLS 1130 State and Local Government														C
POLS 2204 Comparative Government														C
POLS 2206 Global Politics														C
POLS 2220 Introduction to Constitutional Theory														C
POLS 2310 Ideas and Ideologies														C
POLS 2950 Introduction to Social Research														C
PSYC 1101 Human Interaction														C
PSYC 1200 General Psychology														C
PSYC 1202 Introduction to Autism Spectrum Disorders														C
PSYC 1500 Positive Psychology														C
PSYC 2220 Abnormal Psychology														C
PSYC 2222 Lifespan Development														C
PSYC 2224 Social Psychology														C
PSYC 2226 Behavior and Environmental Management														C
PSYC 2230 Personality Psychology														C
PSYC 2302 Cross-Cultural Psychology														C
PSYC 2900 Statistics for Behavioral and Social Sciences														C
PSYC 2950 Introduction to Social Research														C
SOC 1111 Introduction to Sociology														C
SOC 1113 Social Problems														C
SOC 1114 Sociology Service Learning														C
SOC 2210 Social Deviance														C
SOC 2950 Introduction to Social Research														C
SPAN 2211 Intermediate Spanish I														C
SPAN 2212 Intermediate Spanish II														C
SW 2250 Introduction to Social Work/Social Welfare														C
THTR 1100 Introduction to Theatre														C
THTR 1105 Acting I														C
THTR 1120 Theatre Performance Practicum														C
THTR 1125 Theatre Technical Practicum														C
THTR 1130 Stage Make-up														C
THTR 1140 Stagecraft														C
THTR 2120 Script Analysis														C
THTR 2130 Design for the Stage														C
WMST 1136 Global Perspectives of Women														C

Preliminary
Recommendations

Academic Offerings														
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Post-Secondary Programs														
NDSCS														
Liberal Arts - AA, AS														
Agriculture Transfer													C	
Biotechnology Transfer													C	
Business Administration Transfer													C	
Chemistry Transfer													C	
Chiropractic Transfer													C	
Clinical Laboratory Science Transfer													C	
Computer Science Transfer											C-R		C	
Criminal Justice Transfer											C-R		C	
Dental Transfer													C	
Early Childhood Education Transfer													C	
Education Transfer													C	
Engineering Transfer													C	
General Liberal Arts Transfer											C-R		C	
Health, Physical Ed & Recreation Transfer													C	
Law Transfer													C	
Management Information Systems Transfer											C-R		C	
Mathematics Transfer													C	
Medical Transfer													C	
Music Transfer													C	
Natural Science Transfer													C	
Nursing Transfer													C	
Optometry Transfer													C	
Paralegal Transfer													C	
Pharmacy Transfer													C	
Physical Science Transfer													C	
Psychology Transfer													C	
Social Work Transfer													C	
Wildlife Management Transfer													C	
M/State Moorhead														
Accounting Transfer Pathway - AS														C
Associate of Arts (AA) Degree														C
Associate of Arts Degree: Social Science Emphasis - AA														C
Biology Transfer Pathway - AS														C
Business Transfer Pathway - AS														C
History Transfer Pathway - AA														C
Individualized Studies - AAS														C
Political Science Transfer Pathway - AA														C
Psychology Transfer Pathway - AA														C
Theatre Transfer Pathway														C

Preliminary
Recommendations

**House Appropriations Subcommittee
Chairman David Monson
March 11, 2021**

SB 2019

Chairman Monson and members of the House Appropriations Committee, my name is Mark Vollmer. I proudly serve as Superintendent of Minot Public School District #1 and Minot Air Force Base #160. I am presenting today with MPS Career and Technical Education Director, Pam Stroklund. We stand in front of you today to offer our support for SB 2019.

I realize this bill has generated a lot of excitement and hesitation, so we will do our best to keep our comments concise to ensure times for questions you may have.

Minot Public Schools and the community of Minot support SB 2019 and ask the House Appropriations Committee to retain the \$45 million appropriated as one-time funding for Career Academy grants.

As North Dakota's public workforce education and training delivery system, the ND Department of Career & Technical Education is the best agency to approve, support and monitor programs and funding for the Career Academy grants. NDCTE is committed to providing youth with exploration opportunities and the foundation skills needed to enter the world of work, while providing adults with skills needed to enter, re-enter, or advance in the workforce.

According to the February 2021 Online Job Openings Report published by Job Service ND, we have 15,237 jobs open in North Dakota. Approximately 65% of the jobs open in North Dakota require an associate degree or less. The ND Workforce Development Council reported in October 2018 North Dakota has a shortage of workers prepared to fill these technical or "middle-skill" jobs requiring beyond high school but not a four-year degree. Business, industry and the economy all depend on high-quality career and technical education to sufficiently train workers to fill these jobs.

The Minot area is no exception when it comes to a shortage of trained workers. Coordinating efforts to provide short-term CTE training to fill our job openings is necessary. Building on the strengths and existing facilities of our community to ***train local to retain local***, a partnership has been developed with Minot Public Schools, Adult Learning Center, Quentin Burdick Job Corps Center, Dakota College of Bottineau, Minot State University, the City of Minot, and local business and industry.

Simply put, the **Minot Area Workforce Academy** is a one-stop shop designed to:

- Advance career and technical education throughout the Minot area,
- Provide quick re-tooling of unemployed workers,
- Provide opportunities for advancement of education, including GED services, certification programs, and access to association, undergraduate and graduate programs.
- Improve access of existing facilities to be used by local businesses for training, and to
- Remove barriers to employment, and meet the workforce needs of our community.

The one stop shop, staffed by a Director, Administrative Assistant, Social Worker, and Career Guidance/Work-based Learning Liaison, will meet the academic, social/emotional and career needs of area students and adults, including those who may be recovering from addiction issues.

A three-year plan has been developed to address the career and technical workforce needs of the Minot area. Each community partner, facility and offered program is identified on the Minot Area Workforce Academy graphic (attached). Local CTE programs are well positioned to equip students and adults with the educational opportunities and work-based learning they will need for career success starting Year One. Career Academy funding is needed to advance the programming and open up more opportunities for Year Two and Year Three. Dollars will be used for retrofitting existing facilities, purchasing equipment, and partnering with business/ industry to make available more apprenticeships and short-term on-the-job training.

On behalf of Minot Public Schools and the community of Minot, we request your support of SB 2019, the ND Department of CTE and the Career Academy grant funding.

SB 2019 is a game changer. In my nearly 30 years in North Dakota schools, I have never seen a more creative, innovative, or holistic approach to meeting the needs of a community in need. Therefore, we encourage a “DO PASS” recommendation.

Thank you for allowing us to share our story and our plan – a plan that exemplifies community collaboration to promote success. We will stand for any questions you may have.

Federal Impact Aid - Minot Public Schools

Impact Aid is a federal education program that reimburses school districts for the lost revenue and additional costs associated with the presence of nontaxable federal property. Because most public school districts are funded largely through local taxes and fees, and because federal land is exempt from taxation, as are many of the businesses and facilities located on that land, districts containing federal property are at a financial disadvantage in funding their schools. Impact Aid is the federal government paying its taxes — if it did not exist, local taxpayers would be burdened to make up the difference or students would have to go without the resources and opportunities the funding provides.

Impact Aid funding for construction and facilities has totaled \$22.25 million for each of the last five years for all 1,016 impacted school districts. Divided evenly amongst the districts, the average would be \$21,900 per year. In 1950 (and in 1950 dollars), the Impact aid construction and facilities allocation was \$99 million. Minot received \$180,901 during the 2019-2020 year. Minot received \$171,065 in the 2018-2019 year.

	Minot Public School District #1 City of Minot	Minot Public School District #1 MAFB
General Fund Mill Levy:		
General Fund Property Tax Levy	69.04	-
Tuition Fund Levy	4.77	-
Miscellaneous Fund Levy	11.58	-
Total General Fund Mills	85.39	-
Special Reserve Levy	2.99	-
Building Fund Levy (Up to 20 mills allowable)	-	-
Mills Related to Referendum Bonding (Potential Referendum June 2021)		
Special Assessments Levy	1.00	-
Total Capital Projects Levy	1.00	-
Sinking and Interest Levy	19.95	-
Total Mill Levy	109.33	-

As a federally impacted school district, MAFB School District has no bonding capacity for construction or capital improvements

Minot Public Schools
Federal Impact Payments
2019-2020

*Funding Received		\$ 7,659,649
MAFB Instruction Costs Paid to Minot Dist. #1	\$ 5,000,000	
75% State Aid Reduction for Tuition	\$ (3,750,000)	\$ (3,750,000)
Net Federal Impact Aid Payment		\$ 3,909,649

*Separate annual Federal Impact Aid payments related to students with disabilities vary between \$78,000 and \$140,000

North Dakota deducts 75% of Federal Impact Aid payments used as tuition payments to local school districts in determining ND per pupil payments

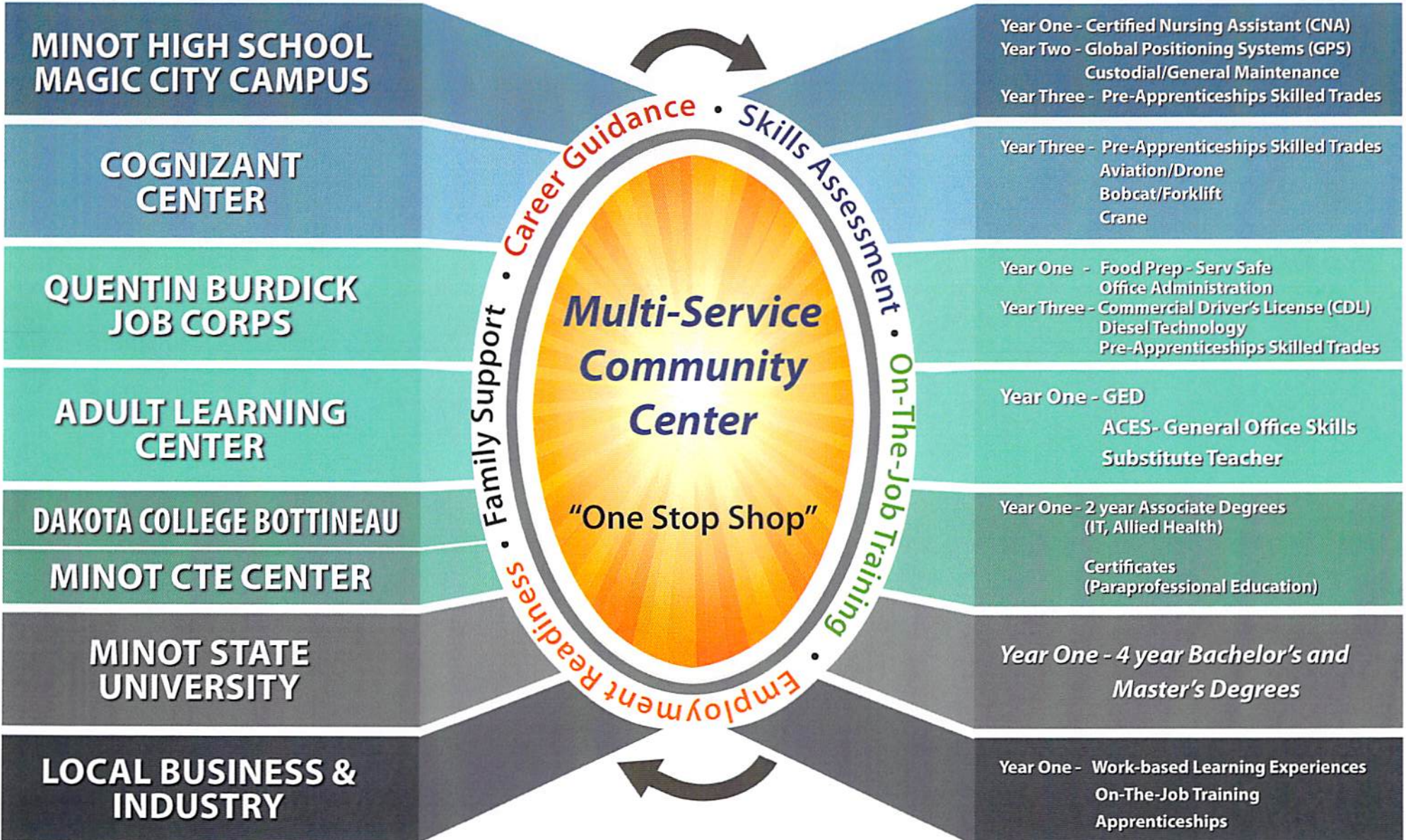
Timing of Federal payments can be variable - some payments are received one to two fiscal years later

Minot Area Workforce Academy

Meeting the Academic, Social/Emotional, and Career Needs of Area Students and the Community.

FACILITIES and COMMUNITY PARTNERS

PROGRAM GOALS





Quentin Burdick Job Corps Center

1500 University Ave W
Minot, ND 58703



Phone (701) 857-9600
Fax (701) 857-9621

To: North Dakota Legislative Branch
From: Jackson Pierce Public Affairs, Quentin N. Burdick JCC Operator
Date: March 4th, 2021
RE: Proposed CTE Center


This letter is to formally announce our support of the Community CTE Center, located in Minot, serving Western North Dakota.


The Job Corps program has been in existence for over 50 years, and in Minot for over 25. There are regular, comprehensive, LMI reviews and analysis done on a local, regional, and national level to ensure that the vocations offered, match with local needs.


There is a crucial need to develop and train more skilled workers in Western North Dakota. We understand that the rigid structure and enrollment requirements of Job Corps, leave some left out in the cold. This CTE Center would create new opportunities for new citizens to begin a career. The partnerships already discussed would cast a net of service and training so large that employers would now have a selection of pre-trained applicants, rather than the unfortunate impromptu OJT some are forced to do now.

The proposed skills training creates overlap with Job Corps in some areas where the need for workers is unbelievably vast (C.N.A.), and perfectly complements Job Corps mission in others (Diesel Mechanics). Because of this, Jackson Pierce, operator of the Quentin N. Burdick Job Corps Center, lends its complete support to this project. Whether it be through manpower and hours, partnerships, and allies, or use of property and equipment, we are committed to long-term success of not only the CTE Center, but Minot and all Western North Dakota as well.

Thank you,


Daniel T. Budzyn
Director of Student Progress and Accountability
Jackson Pierce Public Affairs, Inc., Quentin Burdick JCC


Fred Williams
Center Director
Quentin Burdick JCC


Edna L. Jackson
President & CEO
Jackson Pierce Public Affairs, Inc.



Date: March 4, 2021
To: House Appropriations – Education and Environment Division
From: Jerry Migler, Campus Dean/CEO
Dakota College at Bottineau
RE: SB 2019
State Board for Career and Technical Education
Career Academy Grants

This letter is to provide testimony regarding the funding of Career Academy Grants as described in SB 2019. The provision for Career Academy Grants would be a tremendous boost for the development of human talent that would benefit both individuals and the state's employers. The expansion of Career and Technical Education programs will lead to more people with the skills needed for the state's front-line workforce.

The community of Minot has demonstrated its support for career and technical education by providing funding for the establishment of a postsecondary career and technical education center. However, the available funding for this project – while critically important – is just a step toward meeting much larger workforce development needs in the community and region.

Minot Public Schools is currently spearheading an effort to approach these needs for career and technical education in a very comprehensive and inclusive manner. This approach recognizes that there are multiple organizations that have resources and capabilities to further develop career and technical education in the community and region. In addition to Minot Public Schools, these organizations include Job Service North Dakota, Burdick Job Corps Center, the North Dakota Building and Construction Trades Council, Dakota College at Bottineau and Minot State University. By coordinating and leveraging the capabilities of these various agencies, the community of Minot would have access to a wide array of workforce development programs and support services. The establishment of a Career Academy in Minot would provide the framework for bringing all of these groups together to share programs, develop new programs, and establish career ladders that enable individuals to move from short-term training to college degrees. More importantly, having a Career Academy in Minot would help the community and region retain its talent, which in turn helps grow local businesses and industries.

Dakota College at Bottineau, in its affiliate relationship with Minot State University, is committed to providing the Career Academy partnership in Minot with postsecondary career and technical education programs and training.



Marketplace for Kids 2021-23

The Entrepreneurs of Tomorrow
Are in Our Schools and Homes Today!



Mission:

To encourage youth to explore entrepreneurship and self-employment through the recognition and development of their inventive, creative thinking and problem-solving skills.

Vision:

Our vision is for every student to receive entrepreneurship education and encouragement to become a lifelong partner in building stronger communities.



2021/22 Goals

- ✓ Host First Virtual Education Day at DSU 2/15/21
- ✓ First "LIVE Virtual" Education Day Fargo 3/15/21
- ✓ Regular "In-Person" Education Day Williston 4/27/21
- ✓ Regular "In-Person" Education Day Jamestown 5/11/21
- ✓ Regular "In-Person" Education Day Wahpeton 5/17/21

HOW DOES MFK ALIGN WITH CTE'S VISION?

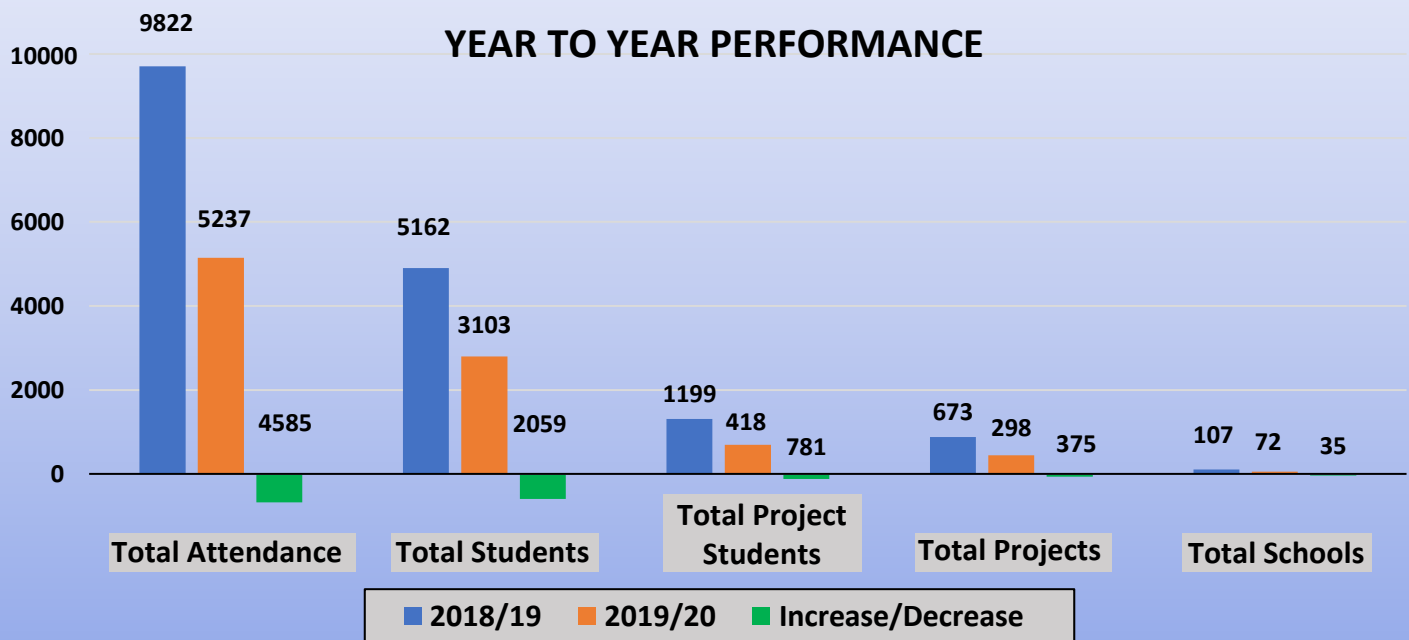
MFK, in partnership with CTE, annually provides ***“entrepreneurial educational experiences based on labor market information relating to the needs of North Dakota's business, industry and the private sector”***. This is accomplished using feedback from students, presenters, business and industry. This information is used to target future programming in the greatest needs areas AND careers that students WANT to get involved with. MFK is ***“committed to providing career awareness”*** by partnering directly with Career & Tech Centers, Colleges, and industry leaders using their knowledge, equipment and processes to introduce these career choices to thousands of students across the state who may never have this opportunity. This allows our students to use ***“the latest methods of instruction while using up-to-date technology”***. MFK's focus on elementary students in grades 3-8 is the only Statewide program that ***“provides youth with exploration opportunities and the foundation skills needed to enter the world of work”***.

Covid-19 Affects

Registered attendance was 46.7% lower - 3 Education Days were held, 2 - new. With expected attendance including ALL Education Days scheduled - an increase of 1,439 or 14.7% would have been realized.

2020 Donation Reductions

- ✓ **Private donations were down February 1st through December 31 in 2019-20 period (year on year) \$-21,155.99**
- ✓ **Decrease Percentage (Not including CTE) - 46.4%**



WHERE IS MARKETPLACE FOR KIDS NOW (during/after Covid-19)?

- ❖ In 2021/22 Marketplace for Kids has **5 Education Days tentatively scheduled**
- ❖ Currently we are in the testing phase of **"A-Synchronous and Synchronous" Education Days** (3,500 est. attendance this year!)
- ❖ A schedule will be set in the coming weeks for the year including 3 In-Person Education Days (dependent on guidelines).
- ❖ Classes such as **"Electrical Circuits"**, **"Power Plant Puzzle"**, and **"WHAT DO LAND SURVEYORS REALLY DO?"** at all Education Days for the 20/21 year.
- ❖ Covid-19 virus has had a **Massive Impact** to MFK attendance and finances. A **reduction of nearly 47%** in both total attendance and private sponsor donations.
- ❖ MFK staff and grant writers have been working feverishly to overcome the financial deficit by applying for new grants and reaching out to past and new supporters.

MFK AND OPPORTUNITY:

Dear Chairman Monson,

December 28, 2020

My name is Mary Haugo and I have been a Region 5 co-chair on the Marketplace for Kids (MFK) Leadership Team since 1995 and currently a Board Member for MFK.

I am writing to request sustaining our regular funding for MFK. Governor Burgum suggested a \$50,000 cut for the biennium but due to Covid-19 our private funding for the year is down. If we lose that funding, we will fall short next year.

MFK is an amazing and worthwhile program for young entrepreneurs. The Education Day provides learning and hands-on activities for teachers, parents, and students helping them discover entrepreneurship, explore career fields, new technology and self-employment.

Students can showcase their inventions that they've designed. Each inventor creates a project board that requires using reading, language, and technology skills. They also practice their skills on public speaking, meeting new friends, and listening to others, following the Standards of North Dakota and National Standards in Science, Technology, Entrepreneurship Education, Arts, Math, and Language in all attending grades.

Our vision is for students to become lifelong partners building stronger communities in ND. Showing students these possibilities, they will realize the opportunities in our great state.

I urge you to continue with our regular funding for this worthwhile program. We are investing in the future of North Dakota by educating and keeping the leaders of tomorrow in ND.

Dear Chairman Monson,

December 28, 2020

I am Roger Demers, (Partner Acct. Exec.-Wex Health) and I'm asking you to continue to fund the Marketplace for Kids (MFK) at the **same level or even greater** in your next budget round.

I have had the Pleasure of speaking at this event a few years ago. I can tell you that it was a Great day of learning for all of the students, parents and School faculty that attended.

Among the many other skills that Marketplace for Kids teaches these young students, they also focus on Career Opportunities that are available right here in North Dakota. Our goal should be to continually educate your Young Students about the great diversity of career opportunities in our Home state.

Did you know that the many teachers and former teachers who run this program are Volunteers who never take any Salary for their work with this Great program? We should acknowledge these founding members for their Great work over the years!

I urge all North Dakota Legislators to strongly consider funding this program at their current levels, or even digging deeper to add some additional funding to this Great program for the Students of North Dakota!

Respectfully submitted,
Roger Demers



Marketplace for Kids

"The Entrepreneurs of Tomorrow Are Preparing Today!"

WHY DOES MARKETPLACE FOR KIDS HAPPEN?

ND CTE and MFK believe that ***"every student has the right to receive entrepreneurship education and encouragement to become a lifelong partner in building stronger communities."*** We strive to ***"encourage youth to explore entrepreneurship and self-employment through the recognition and development of their inventive, creative thinking and problem-solving skills."***

HISTORY:

- ✓ Marketplace for Kids started in 1995 as a pilot.
- ✓ Elementary teachers designed a concept to encourage students to showcase their innovative ideas and attend age appropriate experiential classes of all types.
- ✓ The Advisory Leadership Team elected Jamestown as the site for that first Education Day was a success with over 600 students/teachers/dvisorsparticipating.
- ✓ 1997 the regional concept was developed, expanding to 12 Education Days in 2015

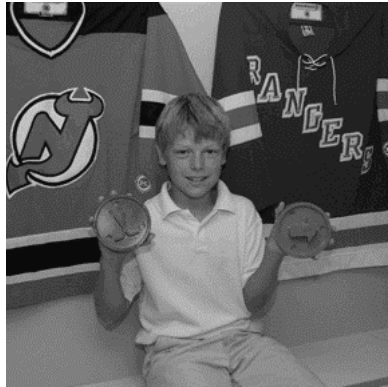
STANDARDS:

- ✓ MFK meets State and National Standards in Science, Technology, Entrepreneurship Education, Arts, Math, and Language.
- ✓ Numerous MFK representatives reviewed the standards and provided feedback to the Consortium for Entrepreneurship Education to validate and/or improve the content and organization of the National Content Standards for Entrepreneurship Education. These standards represent a framework for all organizations to work together to "Accelerate Entrepreneurship in America."

RESOURCES:

- ✓ MFK provides continuing education credit to the education network.
- ✓ Does classroom outreach sessions to help students and teachers get started with planning.
- ✓ Supplies lesson plans (from teachers), Learning Guide and resources to meet the demand of a growing/changing education network.

Success Stories



Riley Giauque is an Ambassador for the MFK Program and has represented the program as a Keynote Speaker at the Consortium for Entrepreneurship Education Annual Meeting and numerous Marketplace for Kids Education Days. Riley's passion for hockey and creativity led him to invent the EZPUCK and ONETIMER. EZPUCK is a stationary disk that allows users to improve their stickhandling and puck control on the ice. ONETIMER is a hockey training device that allows users to practice passing both on and off the ice. Riley featured his EZPUCK invention at Marketplace for Kids when he was in the fourth grade and has since filed and received a patent for both the EZPUCK and ONETIMER. He currently markets his products online through his website www.ezpuck.com and has sold his products across

the globe. Riley was also the recipient of the 2018 Scholarship for Entrepreneurship at North Dakota State University.



Ethan Bowman is an Ambassador for the MFK Program. Ethan's invention, EZGRO, a self-watering system was the 1st Place winner of the Bright Ideas Showcase and Contest in 2012. He has gained national recognition with an interview in a National Agriculture magazine and his garden concept was used at a nursery in his hometown of Jamestown, ND where he also volunteered his time to improve his concept. You can view his EZGRO invention on YouTube at:

<https://bit.ly/3nu6iIi>



Joshua Boen is an Ambassador for the MFK Program. In 2014, his love of competitive swimming and technology came together in the invention, iCoach, a real-time coach-athlete communication tool. iCoach is an app that enables coaches to directly communicate with their athletes while they're in action. The app connects with the athlete's headpiece via Bluetooth allowing the coach to speak to the athlete and gives the coach control over who is receiving their communication. iCoach allows the coach to pick recipients by displaying a list of all the athletes and allowing them to select one or all. Josh's iCoach invention was the 2014 1st Place winner of the Marketplace for Kids Bright Ideas Showcase and Contest held at Minot State University. Also, in 2014, Marketplace for Kids arranged for

Joshua to present his invention to Microsoft, Myriad Mobile, and One Million Cups in Fargo.



Marketplace for Kids

“The Entrepreneurs of Tomorrow Are Preparing Today!”

WHAT’S AN EDUCATION DAY?

Education Days are unique, one-of-a-kind experience where students **explore careers, technology, and the future through hands-on activities** that are rooted in **entrepreneurship and innovation**. We have Education Days scheduled throughout North Dakota each year and will be in Dickinson, Bowman (Virtual events), Williston, Jamestown, and Wahpeton (tentative In-person events)!

WHAT DOES MARKETPLACE FOR KIDS TEACH?

MFK has a primary focus on **Entrepreneurship** and is many times a student’s first look at **business ownership, career choices, innovative technology and even college settings**. The vast array of class choices at all Education Days are nothing short of **phenomenal, including STEAM classes, HANDS-ON LEARNING ACTIVITIES** such as **Financial Literacy, Starting a Business, Wildlife, Industry Safety, Railroad, Energy Resources etc., Agriculture, Automotive, Aerospace, Construction, Plumbing, HVAC, Robotics, Electronics, Drones and Virtual Reality applications**.

WHO MAKES MARKETPLACE FOR KIDS HAPPEN?

MFK (in partnership with ND CTE) begins with the programming created and approved by **Regional Advisory Leadership Teams and Marketplace staff**. Hundreds of volunteers including people from **business, Chambers of Commerce, Economic Development Corps., Score, Retired Teachers Associations, students from DECA, 4-H, Honor Societies** etc. present classes and provide guidance, direction, and hands-on help to presenters, students and staff throughout the day. Volunteer hours during the 2018-19 Education Day season amounted to over **2,001.5 hours (\$51,578.67)**.



Marketplace for Kids

“The Entrepreneurs of Tomorrow Are Preparing Today!”

RECOGNITION:

- MFK has been recognized as a program that should be replicated by the Consortium for Entrepreneurship Education.
- Featured in the national publication “Education Update” (a publication of ASCD Association for Supervision and Curriculum Development) as a program to begin teaching entrepreneurship early.
<http://www.ascd.org/publications/newsletters/education-update/jun09/vol51/num06/Educating-Emerging-Entrepreneurs.aspx>
- Recognized in the Midwestern Office of the Council of State Governments Newsletter as “**One of the best youth Entrepreneurship programs in the nation.**” (MFK students have presented at their annual Conference)
- Collaborates with the Consortium for Entrepreneurship Education on National Entrepreneurship Education Standards to provide entrepreneurial education programs to all Americans.

SUMMARY:

Entrepreneurship education positively impacts learners at all levels in a wide number of contexts. Marketplace for Kids is the **only** Elementary (Grades 3-8) Entrepreneurship Education Program (provided in partnership with CTE) in North Dakota. We support entrepreneurship education and the Consortium for Entrepreneurship, CTE and all programs that fall under the framework of the National Standards for Entrepreneurship Education. The North Dakota Legislature has supported Elementary Entrepreneurship Education since 2005 with a total number benefiting from that funding surpassing **155,000**.



Marketplace for Kids

“The Entrepreneurs of Tomorrow Are Preparing Today!”

REMARKS:

My experience, while limited to the one year, has shown me that the Marketplace for Kids program has merit as an instructional tool for a large group of students in a very short period of time.

The diversity of the material and presentations, the interaction between students and presenters, and maybe most importantly, the enthusiasm of the children/students is something that I certainly feel is beneficial for our North Dakota kids. It's an experience worth having and an experience worth funding.

Jim Murphy, Executive Director
Traill County Economic Development Commission

“Fantastic Entrepreneurial day for 3-8th grade students”; “we believe the future of our state’s economy lies in the innovative spirit of our children.”; “It’s a day where students learn that they can do and be anything they want to, and they can do it in North Dakota”; “those contributions do not cover the cost of the event. CTE funding is critical to the continuation of the program”; “there is something for everyone, some students want to showcase business plans, inventions, bring ideas to life and create something”; “MFK allows for both in a non-competitive environment. MFK is something our area students and teachers look forward to year after year”; “It is a program that greatly contributes to the future Workforce Development goals that the state has.” “My son attended one of the first Marketplace for Kids when it was held in Jamestown. He now owns and operates his own home design service. This is one example of how this program is beneficial to the North Dakota population.”; “since 2005 we have had over 7,500 students, teachers, chaperones and parents walk the halls of Dakota College to enjoy a large variety of classes”; “Our community is actively building tomorrow’s workforce with the help of this educational program, which needs the CTE grant to be able to continue.”; “North Dakota’s economy is changing, and we’re seeing the emergence of new solutions built on innovative ideas.”; “My granddaughter is in elementary school (third grade) and she is a builder. Her dad, our son, is a house designer and he attended one of the early Marketplace for Kids in Jamestown while he was a student. When she gets to grades 5-6, I sure hope that she can attend a Marketplace for Kids! This is an age group who really needs to have opportunities like Marketplace for Kids available to them.”

ND SmartLab Program

CDE has partnered with a curriculum provider called Creative Learning Systems (CLS) to provide a blended, project-based learning program designed for North Dakota schools and their students in grades K-12. The program is often described as STEAM focused, but blends curriculum content from all core areas. ND SmartLabs is a turn-key approach to bringing learning opportunities to students that focus on the development of problem-solving skills, critical thinking, collaboration, creativity, and design principals. The ND SmartLab has been customized for ND schools regardless of their size or location.

In a SmartLab, students learn content through cloud based information contained in a “learning launchers” A learning launcher contains all the information that the student and their partner will need for successful project completion including; content knowledge, project instructions, and extension activities. Each SmartLab also comes with designed templates to authentically assess students using journals, presentations, and self-reflections.

SmartLabs come equipped with Dell all-in-one computers, additional hardware, software, and fully assembled project kits that are needed for a successful completion of the learning launchers. The only thing supplied by the local school is room to place the SmartLab, tables and chairs needed for students and equipment and an onsite learning facilitator that will be trained in the environment.

The SmartLab project began during the 2015 school year. Since then, CDE has provided curriculum, support, and training to over 50 facilitators. In 2015, no SmartLabs existed in ND, at the end of the 2020 school year there were 19 operational SmartLabs statewide. Table 5 shows a breakdown of where these SmartLabs are currently in operation and how many students they serve.

Table 5

ND SmartLab locations, grade levels, lab size, and impacted students

District	School	Grades	Lab Size	Year Purchased	Students Exposed to SmartLab
Drake-Anamoose	Drake-Anamoose High School	K-12	18 Learner	2018	191
Fargo Catholic Schools	Nativity Elementary	K-5	24 Learner	2016	186
Fargo Catholic Schools	Trinity Elementary	K-5	24 Learner	2017	240
Fargo Catholic Schools	Holy Spirit Elementary	K-5	18 Learner	2017	72
Fargo Catholic Schools	Sullivan Middle School	6-12	30 Learner	2017	255
Kulm	Kulm Public Schools	K-12	12 Learner	2018	123
LaMoure	LaMoure Public Schools	K-12	24 Learner	2016	298
Lisbon	Lisbon Middle School	K-12	24 Learner	2017	591
Litchville-Marion	Litchville Elementary	K-6	12 Learner	2017	59
Litchville-Marion	Marion High School	6th - 12th	12 Learner	2018	48
Pingree-Buchanan	Pingree High School	6th - 12th	12 Learner	2018	61

Sawyer	Sawyer Public Schools	K-6	6 Learner	2018	25
University of Jamestown	School of Education	K-12	18 Learner	2018	50
New Town	New Town Middle School	6th - 8th	24 Learner	2019	224
Edgeley	Edgeley High School	K-12	12 Learner	2019	113
Gackle	Gackle High School	K-12	12 Learner	2019	19
Devils Lake	Devils Lake Middle School	6th - 8th	24 Learner	2019	525
Minto	Minto Public School	K-12	18 Learner	2019	64
NDCDE	NDCDE	K-12	18 Learner	2015	0

Map Hyperlink: <https://goo.gl/maps/kgkeAgrmuofNGLkeA>



House Appropriations Committee (Education and Environment Division) - SB 2019

Representative David Monson, Chair

March 11, 2021

Chairman Monson, Members of the Committee:

My name is Brian Ritter and I'm President the Bismarck Mandan Chamber EDC. I am here today on behalf of our organization's approximately 1,200 members in support of SB 2019.

As the organization dedicated to expanding the economy of Bismarck-Mandan and the surrounding area, we are well aware of the single greatest barrier to us doing so; workforce. Specifically, Job Service North Dakota estimates that there are currently 2,736 open jobs between Burleigh and Morton Counties. Furthermore, not all of those jobs are in one specific industry or occupational group; they're stratified across several different ones.

To try and fill those thousands of open jobs, in the short term, Bismarck-Mandan has enacted strategies such as social media campaigns in select cities and targeted mailings to Bismarck-Mandan expatriates in out-of-state markets to entice them to move to our community. In the long term, we have developed workforce development initiatives such as a job shadow program and experiential learning opportunities for educators, but more is needed.

Enter our state's career academies.

More specifically, Bismarck Public Schools has already constructed a Career Academy on the campus of Bismarck State College that is the model for the rest of the State. High school students from across Bismarck-Mandan can take career and technical education (CTE) courses at the

Bismarck Career Academy in fields ranging from welding and auto body to healthcare and graphic design. And that diversity is important because as I noted previously, our community has open jobs in both 'white collar' and 'blue collar' fields, alike.

What's more is that students can do so during the course of their regular school day by taking required courses at their home school and CTE courses at the Bismarck Career Academy. Doing so can not only prepare them for the workforce should they not choose to pursue a post-secondary education, but also put them in a position to reach a post-secondary certification that much sooner if they choose to do so. All at a cost that's affordable and attainable for our community's residents.

Admittedly, SB 2019 is much more than just funding for career academies across the State. Whether CTE courses are taught in facilities like this, a classroom or somewhere else entirely, all of North Dakota will benefit once more and more students have access to them (CTE courses). However, a new or expanded career academy here in Bismarck-Mandan directly addresses our business community's greatest need and for that reason, we strongly support SB 2019.

We would respectfully ask that this Committee give a DO PASS recommendation to SB 2019.

Respectfully submitted,

Brian Ritter, President
Bismarck Mandan Chamber EDC



DEPARTMENT OF CAREER AND TECHNICAL EDUCATION

State Capitol, 15th Floor, 600 East Boulevard Ave., Dept. 270, Bismarck ND 58505-0610
701-328-3180 www.cte.nd.gov email: cte@nd.gov

March 10, 2021

Legislative Assembly:

I am Gwen Ferderer, Budget & Finance Administrator for the Department of Career & Technical Education, and support of SB 2019. I am available for any questions.

Thank you,

A handwritten signature in black ink that reads "Gwen Ferderer".

Gwen Ferderer, Budget & Finance Administrator
Department of Career & Technical Education
State Capitol Building, 15th Floor
Bismarck, ND 58505-0610
(701) 326-3168
gferderer@nd.gov



TESTIMONY Neutral SB 2019

PRESENTED BY JAMES SCHMIDT

EXECUTIVE DIRECTOR, NORTH DAKOTA STATE ELECTRICAL BOARD

Chairman Monson and members of the House Appropriations – Education and Environment Division Committee:

I am providing neutral testimony for Senate Bill 2019. Career and Technical Education (CTE) is a necessary agency to the electrical industry in North Dakota for the programs it provides to high schoolers interested in the construction trade, especially the electrical industry.

I have had the privilege of meeting with Wayde Sick and his staff, several times, on ways the North Dakota State Electrical Board (NDSEB) could participate with CTE to promote the electrical trade to school age students. We haven't come to any definite conclusion yet, but I expect to continue communications with Mr. Sick and his staff on an instructional component for students to take as a possible elective high school class.

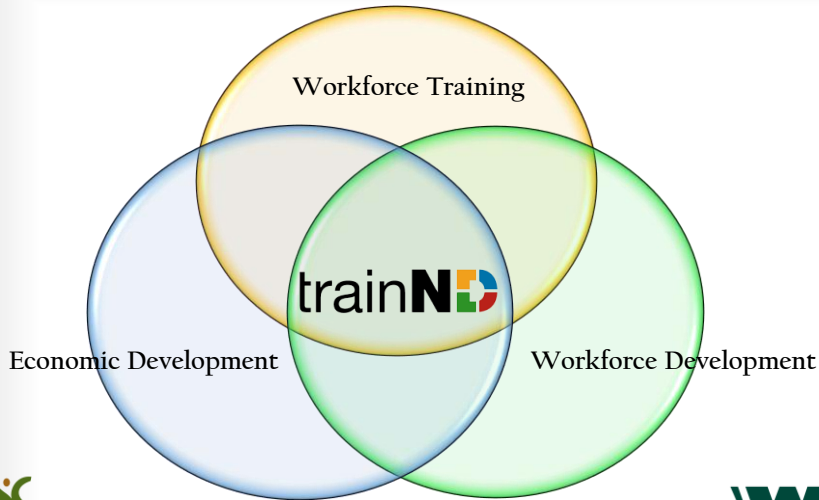
It has been noted that the average age of an electrician in North Dakota is nearly 55 years. We need to promote the electrical trade to students so we can replace that workforce. CTE has also assisted our office in ensuring instructors are properly vetted for teaching required continuing education classes for electricians.

I am not sure how Senate Bill 2019 affects CTE, but I want to advocate for keeping CTE funded to maintain CTE's ability to continue creating career opportunities to our school age residents of North Dakota. We therefore take a neutral position on SB 2019 and we thank the Committee for the opportunity to testify.

Respectfully submitted,
James Schmidt, Executive Director
North Dakota State Electrical Board.

An Investment into North Dakota

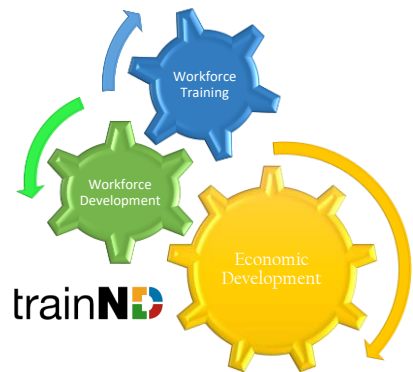
Building a Sustainable Workforce



1

A Return on Investment

- Workforce Development
 - Brings Trained People Into the Workforce
- Workforce Training
 - Brings greater skills to incumbent workers
- Economic Development
 - Brings growth to communities and state



2

Need is Greater than Ever

- Short term programming for workforce development
- Qualified workers help drive economic development
- Incumbent workers to gain new skills for enhanced work
- Economic recovery amid a pandemic
- Continued funding to assist with program expansion
- Economic diversity within North Dakota
- Investment in our workforce and business growth
- 74% of businesses in North Dakota have less than 10 people



3

Workforce Program Impacts

- Certified Nursing Assistant (CNA Programs)
 - Statewide programming
 - Stackable Certificate & Pathway to Education
 - Job Service WIOA Funding Eligible
 - 326 students
 - 36 classes
 - 636 CNA State Board Exams (Registered Students & Challenge Exams)
 - Pre CNA
 - Fast Track Temporary CNA
 - Quality Service Provider (In Home Care)



4

Workforce Program Impacts

- Commercial Drivers License (CDL Programs)
 - Statewide programming
 - Stackable Certificate & Pathway to Education
 - Job Service WIOA Funding Eligible/Veterans Funding
 - ND Commerce Grant to Expand CDL programming
 - 134 students
 - 22 classes

Williston, Dickinson, Minot, Fargo, Bismarck, Devils Lake



5



NDUS Annual Enrollment Summary FY20

• Non-Credit TrainND Headcount	19,008
• Total Community College Headcount	35,038
• Percentage of Headcount from TrainND	54%
• Total NDUS Headcount (11 Institutions)	74,014
• Percentage Headcount from TrainND	26%

TrainND Annual Report FY20

• Number of Businesses Receiving Training in FY20	1,412
• Number of Businesses with less than 50 employees	1,026
• Number of Unduplicated Employees receiving Training	19,008



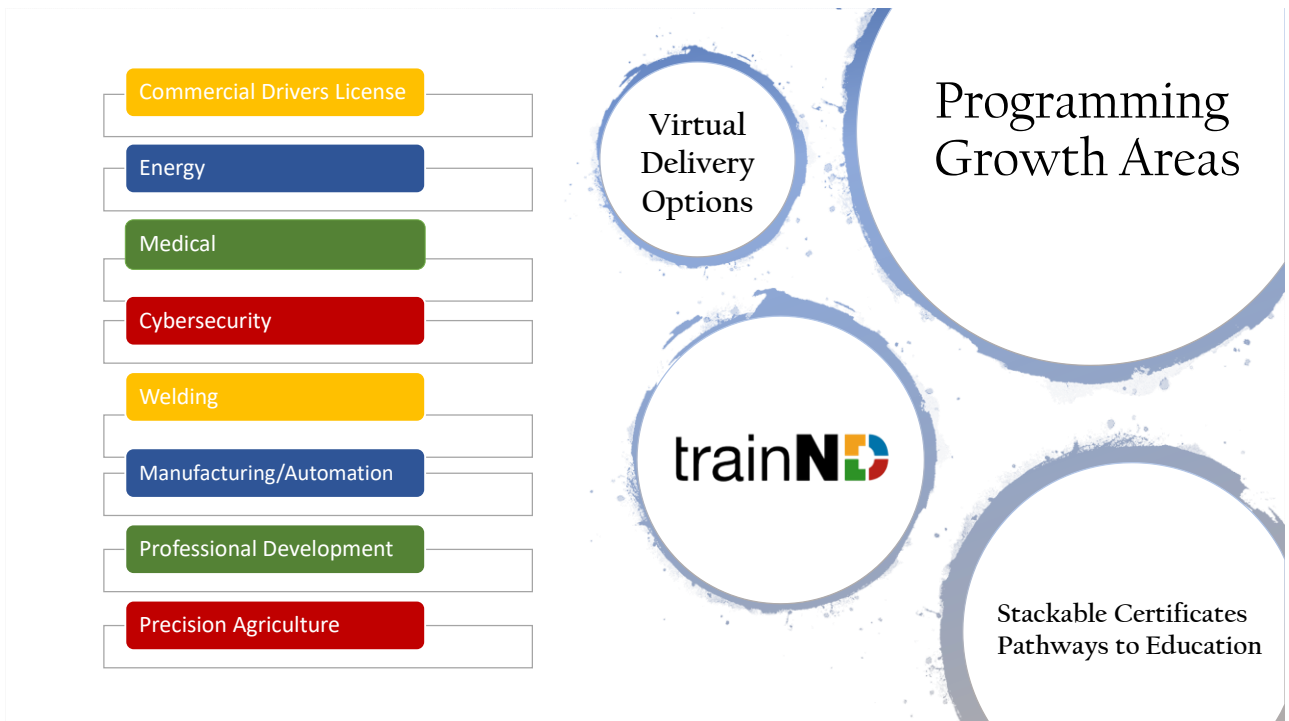
6

Changing Modes of Delivery

- Accelerated changes to the way people learn
- Flexible with new costs in transition
- Increased options for companies and workers
 - Distance Learning
 - Synchronous/Asynchronous
 - Virtual
 - Hybrid
 - Recorded Presentations
 - Traditional Face-to-Face/In person
 - Mobile labs



7



8

TrainND Request

Request to continue funding at \$2 million based on recommendation from Workforce Development Council

- Reinvention to education
- Expansion of programming
- Flexible modes of delivery
- Delivery at the speed of business



TESTIMONY Support SB 2019

PRESENTED BY JAMES SCHMIDT

EXECUTIVE DIRECTOR, NORTH DAKOTA STATE ELECTRICAL BOARD

Chairman Monson and members of the House Appropriations – Education and Environment Division Committee:

I am providing updated testimony in support for Senate Bill 2019. Career and Technical Education (CTE) is a necessary agency to the electrical industry in North Dakota for the programs it provides to high schoolers interested in the construction trade, especially the electrical industry.

I have had the privilege of meeting with Wayde Sick and his staff, several times, on ways the North Dakota State Electrical Board (NDSEB) could participate with CTE to promote the electrical trade to school age students. We haven't come to any definite conclusion yet, but I expect to continue communications with Mr. Sick and his staff on an instructional component for students to take as a possible elective high school class.

It has been noted that the average age of an electrician in North Dakota is nearly 55 years. We need to promote the electrical trade to students so we can replace that workforce. CTE has also assisted our office in ensuring instructors are properly vetted for teaching required continuing education classes for electricians.

I am not sure how Senate Bill 2019 affects CTE, but I want to advocate for keeping CTE funded to maintain CTE's ability to continue creating career opportunities to our school age residents of North Dakota. We therefore want to show support for SB 2019 and we thank the Committee for the opportunity to testify.

Respectfully submitted,
James Schmidt, Executive Director
North Dakota State Electrical Board.

Department of Career and Technical Education - Budget No. 270
 Senate Bill No. 2019
 Base Level Funding Changes

	Executive Budget Recommendation				Senate Version				Senate Changes to Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2021-23 Biennium Base Level	52.30	\$40,064,988	\$14,703,121	\$54,768,109	52.30	\$40,064,988	\$14,703,121	\$54,768,109	0.00	\$0	\$0	\$0
2021-23 Ongoing Funding Changes												
Base payroll changes		(\$1)	\$23,018	\$23,017		(\$1)	\$23,018	\$23,017				\$0
Salary increase		256,821		256,821		248,896		248,896		(\$7,925)		(7,925)
Health insurance increase		2,442		2,442		2,442		2,442				0
Retirement contribution increase		32,132		32,132				0		(32,132)		(32,132)
Removes 1 FTE assistant program supervisor position	(1.00)	(174,335)		(174,335)	(1.00)	(174,335)		(174,335)				0
Removes 1 FTE administrative assistant II position	(1.00)	(118,279)		(118,279)	(1.00)	(118,279)		(118,279)				0
Reduces funding for temporary salaries		(17,688)	(8,712)	(26,400)		(17,688)	(8,712)	(26,400)				0
Reduces funding for operating expenses		(62,207)		(62,207)		(62,207)		(62,207)				0
Adds funding for state agency Capitol grounds rent proposal		169,313		169,313				0		(169,313)		(169,313)
Adds funding for Microsoft Office 365 license expenses		474	2,390	2,864		474	2,390	2,864				0
Transfers STEM funding from operating to secondary grants				0				0				0
Adds federal funding for an apprenticeship grant program			300,000	300,000			300,000	300,000				0
Adds funding for costs to continue school reimbursement rates		1,000,000		1,000,000		1,500,000		1,500,000		500,000		500,000
Adds funding for new and expanding CTE programs				0		1,000,000		1,000,000		1,000,000		1,000,000
Reduces funding for Marketplace for Kids		(50,000)		(50,000)		(50,000)		(50,000)				0
Remove funding for postsecondary grants		(256,982)		(256,982)		(256,982)		(256,982)				0
Reduces funding for adult farm management		(138,111)		(138,111)		(138,111)		(138,111)				0
Reduces funding for workforce training		(100,000)		(100,000)		(100,000)		(100,000)				0
Reduces funding for Center for Distance Education rent			(152,500)	(152,500)			(152,500)	(152,500)				0
Adds funding for Center for Distance Education IT expenses			152,500	152,500			152,500	152,500				0
Removes temporary Center for Distance Education salaries		(630,119)		(630,119)				0		630,119		630,119
Total ongoing funding changes	(2.00)	(\$86,540)	\$316,696	\$230,156	(2.00)	\$1,834,209	\$316,696	\$2,150,905	0.00	\$1,920,749	\$0	\$1,920,749
One-time funding items												
Adds funding to bond for a career academy grant program			\$45,000,000	\$45,000,000			\$45,000,000	\$45,000,000			\$0	\$0
Total one-time funding changes	0.00	\$0	\$45,000,000	\$45,000,000	0.00	\$0	\$45,000,000	\$45,000,000	0.00	\$0	\$0	\$0
Total Changes to Base Level Funding	(2.00)	(\$86,540)	\$45,316,696	\$45,230,156	(2.00)	\$1,834,209	\$45,316,696	\$47,150,905	0.00	\$1,920,749	\$0	\$1,920,749
2021-23 Total Funding	50.30	\$39,978,448	\$60,019,817	\$99,998,265	50.30	\$41,899,197	\$60,019,817	\$101,919,014	0.00	\$1,920,749	\$0	\$1,920,749
<i>Total ongoing changes as a percentage of base level</i>	(3.8%)	(0.2%)	2.2%	0.4%	(3.8%)	4.6%	2.2%	3.9%				
<i>Total changes as a percentage of base level</i>	(3.8%)	(0.2%)	308.2%	82.6%	(3.8%)	4.6%	308.2%	86.1%				

Other Sections in Department of Career and Technical Education - Budget No. 270

Executive Budget Recommendation

Senate Version

Career academy competitive matching grant program

Section 3 would identify \$45 million of one-time funding from bonding proceeds to the Department of Career and Technical Education for the purpose of providing competitive workforce development grants to build career academies, with a maximum of \$15 million being allowed per project, for the 2021-23 biennium. A committee consisting of the leaders or designees of the Department of Career and Technical Education, Department of Commerce, Job Service North Dakota, and Department of Public Instruction would develop a competitive process in consultation with the Workforce Development Council, Economic Development Foundation, and the Career and Technical Education Board, to distribute the funds with a required 1-to-1 match from private sector or political subdivision funds.

Line item transfers

Section 4 would authorize the Office of Management and Budget to transfer funds between line items in Section 1 as requested by the Department of Career and Technical Education during the 2021-23 biennium.

2021 HOUSE STANDING COMMITTEE MINUTES

Appropriations - Education and Environment Division
Prairie Room, State Capitol

SB 2019
3/18/2021

House Appropriations Committee - Education and Environment

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Vice Chairman Jim Schmidt called the meeting to order at 8:30 a.m.

Representative	Present	Absent
Chairman Monson	P	
Vice Chairman Schmidt	P	
Representative Martinson	P	
Representative Nathe	P	
Representative Sanford	P	
Representative Schatz	P	
Representative Boe	P	

Discussion Topics:

- Esser funds
- Base level funding changes

Wayde Sick (8:33 a.m.) testified in favor.

Additional written testimony: #10047

Vice Chairman Jim Schmidt adjourned the meeting at 9:20 a.m.

Klarissa Pudwill, Committee Clerk

Department of Career and Technical Education - Budget No. 270
Senate Bill No. 2019
Base Level Funding Changes

	Senate Version				House Changes to Senate Version			
	FTE Positions	General Fund	Other Funds	Total	Increase (Decrease) - Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2021-23 Biennium Base Level	52.30	\$40,064,988	\$14,703,121	\$54,768,109	0.00	\$0	\$0	\$0
2021-23 Ongoing Funding Changes								
Base payroll changes		(\$1)	\$23,018	\$23,017				\$0
Salary increase		248,896		248,896				0
Health insurance increase		2,442		2,442				0
Removes 1 FTE assistant program supervisor position	(1.00)	(174,335)		(174,335)				0
Removes 1 FTE administrative assistant II position	(1.00)	(118,279)		(118,279)				0
Reduces funding for temporary salaries		(17,688)	(8,712)	(26,400)				0
Reduces funding for operating expenses		(62,207)		(62,207)				0
Adds funding for Microsoft Office 365 license expenses		474	2,390	2,864				0
Transfers \$100,000 of STEM funding between line items				0				0
Adds federal funding for an apprenticeship grant program			300,000	300,000				0
Adds funding for costs to continue school reimbursement rates		1,500,000		1,500,000				0
Adds funding for new and expanding CTE programs		1,000,000		1,000,000				0
Adjusts funding for Marketplace for Kids		(50,000)		(50,000)				0
Remove funding for postsecondary grants		(256,982)		(256,982)				0
Reduces funding for adult farm management		(138,111)		(138,111)				0
Reduces funding for workforce training		(100,000)		(100,000)				0
Reduces funding for Center for Distance Education rent			(152,500)	(152,500)				0
Adds funding for Center for Distance Education IT expenses			152,500	152,500				0
Total ongoing funding changes	(2.00)	\$1,834,209	\$316,696	\$2,150,905	0.00	\$0	\$0	\$0
One-time funding items								
Adds funding to bond for a career academy grant program			\$45,000,000	\$45,000,000				\$0
Total one-time funding changes	0.00	\$0	\$45,000,000	\$45,000,000	0.00	\$0	\$0	\$0
Total Changes to Base Level Funding	(2.00)	\$1,834,209	\$45,316,696	\$47,150,905	0.00	\$0	\$0	\$0
2021-23 Total Funding	50.30	\$41,899,197	\$60,019,817	\$101,919,014	0.00	\$0	\$0	\$0
<i>Total ongoing changes as a percentage of base level</i>	(3.8%)	4.6%	2.2%	3.9%				
<i>Total changes as a percentage of base level</i>	(3.8%)	4.6%	308.2%	86.1%				

2021 HOUSE STANDING COMMITTEE MINUTES

Appropriations - Education and Environment Division Prairie Room, State Capitol

SB 2019
4/1/2021

House Appropriations Committee - Education and Environment

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Chairman David Monson called the meeting to order at 10:57 a.m.

Representative	Present	Absent
Chairman Monson	P	
Vice Chairman Schmidt	P	
Representative Martinson	P	
Representative Nathe	P	
Representative Sanford	P	
Representative Schatz	P	
Representative Boe	P	

Discussion Topics:

- Committee work

Representative Mark Sanford moved to verbally amend to add legislative intent. Amendment 21.0301.02002.

Vice Chairman Jim Schmidt seconded

Voice Vote taken: Motion Carried

Representative Bob Martinson moved Do Pass as amended

Representative Mark Sanford seconded

Roll Call Vote taken:

Representative	Yea	Nay	Absent
Chairman Monson	X		
Vice Chairman Schmidt	X		
Representative Martinson	X		
Representative Nathe			X
Representative Sanford	X		
Representative Schatz		X	
Representative Boe	X		

Motion Carried: 5-1-1

Representative Mark Sanford will carry the bill.

Chairman David Monson adjourned the meeting at 11:07 a.m.
Klarissa Pudwill, Committee Clerk

21.0301.02002
Title.

Prepared by the Legislative Council staff for
the House Appropriations - Education and
Environment Division Committee
April 1, 2021

Fiscal No. 2

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2019

Page 1, line 2, replace "a report" with "for a statement of legislative intent"

Page 1, remove lines 12 through 24

Page 2, replace lines 1 through 13 with:

"Salaries and wages	\$4,812,765	(\$168,859)	\$4,643,906
Operating expenses	2,357,796	(159,343)	2,198,453
Grants	9,207,349	300,000	9,507,349
Grants - secondary	24,587,780	2,000,000	26,587,780
Marketplace for kids	300,000	0	300,000
Science, technology, engineering, and mathematics initiative	0	100,000	100,000
Grants - postsecondary	256,982	(256,982)	0
Adult farm management	1,894,249	(188,111)	1,706,138
Workforce training	2,000,000	0	2,000,000
Center for distance education	<u>9,351,188</u>	<u>110,066</u>	<u>9,461,254</u>
Total all funds	\$54,768,109	\$1,736,771	\$56,504,880
Less estimated income	<u>14,703,121</u>	<u>316,696</u>	<u>15,019,817</u>
Total general fund	\$40,064,988	\$1,420,075	\$41,485,063
Full-time equivalent positions	52.30	(2.00)	50.30

SECTION 2. LEGISLATIVE INTENT - SECONDARY GRANTS FOR THE 2023-25 BIENNIUM. It is the intent of the sixty-seventh legislative assembly that secondary grant funding provided from the department of career and technical education to schools and area career and technical centers during the 2023-25 biennium not exceed \$26,587,780."

Re-number accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2019 - Dept. of Career and Technical Education - House Action

	Base Budget	Senate Version	House Changes	House Version
Salaries and wages	\$4,812,765	\$4,654,641	(\$10,735)	\$4,643,906
Operating expenses	2,357,796	2,198,453		2,198,453
Grants	9,207,349	54,507,349	(45,000,000)	9,507,349
Grants - Secondary	24,587,780	27,187,780	(600,000)	26,587,780
Marketplace for kids	300,000	250,000	50,000	300,000
Grants - Postsecondary	256,982			
Adult farm management	1,894,249	1,756,138	(50,000)	1,706,138
Workforce training	2,000,000	1,900,000	100,000	2,000,000
Center for distance education	9,351,188	9,464,653	(3,399)	9,461,254
STEM initiative			100,000	100,000
Total all funds	\$54,768,109	\$101,919,014	(\$45,414,134)	\$56,504,880
Less estimated income	<u>14,703,121</u>	<u>60,019,817</u>	<u>(45,000,000)</u>	<u>15,019,817</u>
General fund	\$40,064,988	\$41,899,197	(\$414,134)	\$41,485,063
FTE	52.30	50.30	0.00	50.30

Department 270 - Dept. of Career and Technical Education - Detail of House Changes

	Adjusts Funding for Salary Increases¹	Transfers STEM Funding²	Reduces Funding for Cost to Continue Reimbursement Rates³	Restores Funding for Marketplace for Kids⁴	Reduces Funding for Adult Farm Management⁵	Restores Funding for Workforce Training⁶
Salaries and wages	(\$10,735)					
Operating expenses						
Grants						
Grants - Secondary		(\$100,000)	(\$500,000)			
Marketplace for kids				\$50,000		
Grants - Postsecondary						
Adult farm management					(\$50,000)	
Workforce training						\$100,000
Center for distance education	(3,399)					
STEM initiative		100,000				
Total all funds	(\$14,134)	\$0	(\$500,000)	\$50,000	(\$50,000)	\$100,000
Less estimated income	0	0	0	0	0	0
General fund	(\$14,134)	\$0	(\$500,000)	\$50,000	(\$50,000)	\$100,000
FTE	0.00	0.00	0.00	0.00	0.00	0.00

	Removes One-Time Funding for Career Academies⁷	Total House Changes
Salaries and wages		(\$10,735)
Operating expenses		
Grants	(\$45,000,000)	(45,000,000)
Grants - Secondary		(600,000)
Marketplace for kids		50,000
Grants - Postsecondary		
Adult farm management		(50,000)
Workforce training		100,000
Center for distance education		(3,399)
STEM initiative		100,000
Total all funds	(\$45,000,000)	(\$45,414,134)
Less estimated income	(45,000,000)	(45,000,000)
General fund	\$0	(\$414,134)
FTE	0.00	0.00

¹ Salaries and wages funding is adjusted for 2021-23 biennium salary increases of 1.5 percent on July 1, 2021, with a minimum monthly increase of \$100 and 2 percent on July 1, 2022. The Senate provided salary adjustments of 2 percent with a minimum monthly increase of \$80 and a maximum monthly increase of \$300 on July 1, 2021, and 2 percent on July 1, 2022.

² Science, technology, engineering, and mathematics (STEM) funding of \$100,000 from the general fund is transferred from the secondary grants line item to a newly created science, technology, engineering, and mathematics initiative line item. The Senate transferred this funding from the operating expenses line item to the secondary grants line item.

³ Funding for the cost to continue career and technical education course cost reimbursement rates for schools (27 percent) and area career and technical centers (40 percent) is reduced by \$500,000 from the general fund to provide a total of \$1,000,000. The Senate approved \$1,500,000 from the general fund.

⁴ Funding of \$50,000 is restored for the Marketplace for Kids program to provide a total of \$300,000 from the general fund, the same as provided during the 2019-21 biennium. The Senate provided \$250,000 from the general fund.

⁵ Funding for the adult farm management program is reduced by \$50,000, to provide a total of \$1,706,138 from the general fund. The Senate reduced funding for the program by \$138,111 to provide a total of \$1,756,138 from the general fund. The additional \$50,000 reduction approved by the House results in a total reduction of \$188,111 from the 2019-21 biennium appropriation of \$1,894,249 from the general fund.

⁶ Funding of \$100,000 is restored for workforce training to provide a total of \$2,000,000 from the general fund, the same as provided for the 2019-21 biennium. The Senate approved a reduction of \$100,000 to provide a total of \$1,900,000 from the general fund.

⁷ One-time funding of \$45,000,000 from bond proceeds for competitive workforce development grants to build career academies approved by the Senate is removed by the House. This amendment also removes Section 2 from the bill related to one-time funding, which was added by the Senate.

This amendment also adds a section of legislative intent that secondary grant funding provided from the Department of Career and Technical Education to schools and area career and technical centers during the 2023-25 biennium not exceed \$26,587,780, the same amount provided for the 2021-23 biennium.

2021 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee Brynhild Haugland Room, State Capitol

SB 2019
4/2/2021

BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education
--

9:25 Chairman Delzer- Opened the meeting for SB 2019

Attendance	P/A
Representative Jeff Delzer	P
Representative Keith Kempenich	P
Representative Bert Anderson	P
Representative Larry Bellew	P
Representative Tracy Boe	P
Representative Mike Brandenburg	P
Representative Michael Howe	P
Representative Gary Kreidt	P
Representative Bob Martinson	P
Representative Lisa Meier	P
Representative Alisa Mitskog	P
Representative Corey Mock	P
Representative David Monson	P
Representative Mike Nathe	P
Representative Jon O. Nelson	P
Representative Mark Sanford	P
Representative Mike Schatz	P
Representative Jim Schmidt	P
Representative Randy A. Schobinger	P
Representative Michelle Strinden	P
Representative Don Vigesaa	P

Discussion Topics:

- **Budget**
- **Amendment**

9:27 Representative Sanford- Explains the budget and the amendment 21.0301.02003

9:55 Representative Sanford Makes a motion to adopt the amendment

Representative Martinson Second

Further discussion

9:55 Voice Vote- Motion Carries

Representative Sanford Makes a motion for a Do Pass as Amended

Representative Martinson Second

Further discussion

Roll Call Vote was Taken;

Representatives	Vote
Representative Jeff Delzer	Y
Representative Keith Kempenich	Y
Representative Bert Anderson	Y
Representative Larry Bellew	Y
Representative Tracy Boe	Y
Representative Mike Brandenburg	Y
Representative Michael Howe	Y
Representative Gary Kreidt	Y
Representative Bob Martinson	Y
Representative Lisa Meier	Y
Representative Alisa Mitskog	Y
Representative Corey Mock	Y
Representative David Monson	Y
Representative Mike Nathe	Y
Representative Jon O. Nelson	Y
Representative Mark Sanford	Y
Representative Mike Schatz	Y
Representative Jim Schmidt	Y
Representative Randy A. Schobinger	Y
Representative Michelle Strinden	Y
Representative Don Vigesaa	Y

Motion Carries 21-0-0 Representative Sanford will carry the bill

Additional written testimony: No Additional Testimony

9: 57 Chairman Delzer- Closes the meeting for SB 2019

Risa Berube,

House Appropriations Committee Clerk

Committee reconsidered their action for SB 2019 on April 6th 2021

CU
4/2/21
1 of 3

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2019

Page 1, line 2, replace "report" with "statement of legislative intent"

Page 1, remove lines 12 through 24

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Grants - secondary	24,587,780	2,000,000	26,587,780
Marketplace for kids	300,000	0	300,000
Science, technology, engineering, and mathematics initiative	0	100,000	100,000
Grants - postsecondary	256,982	(256,982)	0
Adult farm management	1,894,249	(188,111)	1,706,138
Workforce training	2,000,000	0	2,000,000
Center for distance education	<u>9,351,188</u>	<u>110,066</u>	<u>9,461,254</u>
Total all funds	\$54,768,109	\$1,736,771	\$56,504,880
Less estimated income	<u>14,703,121</u>	<u>316,696</u>	<u>15,019,817</u>
Total general fund	\$40,064,988	\$1,420,075	\$41,485,063
Full-time equivalent positions	52.30	(2.00)	50.30

SECTION 2. LEGISLATIVE INTENT - SECONDARY GRANTS. It is the intent of the sixty-seventh legislative assembly that secondary grant funding provided by the state not be increased in future bienniums from the \$26,587,780 authorized in section 1 of this Act for the purpose of defraying the expenses of new or expanded area career and technical centers."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2019 - Dept. of Career and Technical Education - House Action

	<u>Base Budget</u>	<u>Senate Version</u>	<u>House Changes</u>	<u>House Version</u>
Salaries and wages	\$4,812,765	\$4,654,641	(\$10,735)	\$4,643,906
Operating expenses	2,357,796	2,198,453		2,198,453
Grants	9,207,349	54,507,349	(45,000,000)	9,507,349
Grants - Secondary	24,587,780	27,187,780	(600,000)	26,587,780
Marketplace for kids	300,000	250,000	50,000	300,000
Grants - Postsecondary	256,982			
Adult farm management	1,894,249	1,756,138	(50,000)	1,706,138
Workforce training	2,000,000	1,900,000	100,000	2,000,000
Center for distance education STEM initiative	9,351,188	9,464,653	(3,399)	9,461,254
			100,000	100,000
Total all funds	\$54,768,109	\$101,919,014	(\$45,414,134)	\$56,504,880
Less estimated income	<u>14,703,121</u>	<u>60,019,817</u>	<u>(45,000,000)</u>	<u>15,019,817</u>
General fund	\$40,064,988	\$41,899,197	(\$414,134)	\$41,485,063
FTE	52.30	50.30	0.00	50.30

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Department 270 - Dept. of Career and Technical Education - Detail of House Changes

	Adjusts Funding for Salary Increases¹	Transfers STEM Funding²	Reduces Funding for Cost to Continue Reimbursement Rates³	Restores Funding for Marketplace for Kids⁴	Reduces Funding for Adult Farm Management⁵	Restores Funding for Workforce Training⁶
Salaries and wages	(\$10,735)					
Operating expenses						
Grants						
Grants - Secondary		(\$100,000)	(\$500,000)			
Marketplace for kids				\$50,000		
Grants - Postsecondary						
Adult farm management					(\$50,000)	
Workforce training						\$100,000
Center for distance education	(3,399)					
STEM initiative		100,000				
Total all funds	(\$14,134)	\$0	(\$500,000)	\$50,000	(\$50,000)	\$100,000
Less estimated income	0	0	0	0	0	0
General fund	(\$14,134)	\$0	(\$500,000)	\$50,000	(\$50,000)	\$100,000
FTE	0.00	0.00	0.00	0.00	0.00	0.00

	Removes One-Time Funding for Career Academies⁷	Total House Changes
Salaries and wages		(\$10,735)
Operating expenses		
Grants	(\$45,000,000)	(45,000,000)
Grants - Secondary		(600,000)
Marketplace for kids		50,000
Grants - Postsecondary		
Adult farm management		(50,000)
Workforce training		100,000
Center for distance education		(3,399)
STEM initiative		100,000
Total all funds	(\$45,000,000)	(\$45,414,134)
Less estimated income	(45,000,000)	(45,000,000)
General fund	\$0	(\$414,134)
FTE	0.00	0.00

¹ Salaries and wages funding is adjusted for 2021-23 biennium salary increases of 1.5 percent on July 1, 2021, with a minimum monthly increase of \$100 and 2 percent on July 1, 2022. The Senate provided salary adjustments of 2 percent with a minimum monthly increase of \$80 and a maximum monthly increase of \$300 on July 1, 2021, and 2 percent on July 1, 2022.

² Science, technology, engineering, and mathematics (STEM) funding of \$100,000 from the general fund is transferred from the secondary grants line item to a newly created science, technology, engineering, and mathematics initiative line item. The Senate transferred this funding from the operating expenses line item to the secondary grants line item.

³ Funding for the cost to continue career and technical education course cost reimbursement rates for schools (27 percent) and area career and technical centers (40 percent) is reduced by \$500,000 from the general fund to provide a total of \$1,000,000. The Senate approved \$1,500,000 from the general fund.

⁴ Funding of \$50,000 is restored for the Marketplace for Kids program to provide a total of \$300,000 from the general fund, the same as provided during the 2019-21 biennium. The Senate provided \$250,000 from the general fund.

⁵ Funding for the adult farm management program is reduced by \$50,000, to provide a total of \$1,706,138 from the general fund. The Senate reduced funding for the program by \$138,111 to provide a total of \$1,756,138 from the general fund. The additional \$50,000 reduction approved by the House results in a total reduction of \$188,111 from the 2019-21 biennium appropriation of \$1,894,249 from the general fund.

⁶ Funding of \$100,000 is restored for workforce training to provide a total of \$2,000,000 from the general fund, the same as provided for the 2019-21 biennium. The Senate approved a reduction of \$100,000 to provide a total of \$1,900,000 from the general fund.

⁷ One-time funding of \$45,000,000 from bond proceeds for competitive workforce development grants to build career academies approved by the Senate is removed by the House. This amendment also removes Section 2 from the bill related to one-time funding, which was added by the Senate.

This amendment also adds a section of legislative intent that secondary grant funding provided by the state not be increased in future bienniums from the \$26,587,780 authorized in Section 1 for the purpose of defraying the expenses of new or expanded area career and technical centers.

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2021 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee Brynhild Haugland Room, State Capitol

SB 2019
4/6/2021

BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education; and to provide a report.

3:02 Chairman Delzer- Opened the meeting for SB 2019

Attendance	P/A
Representative Jeff Delzer	P
Representative Keith Kempenich	A
Representative Bert Anderson	P
Representative Larry Bellew	A
Representative Tracy Boe	A
Representative Mike Brandenburg	P
Representative Michael Howe	P
Representative Gary Kreidt	P
Representative Bob Martinson	P
Representative Lisa Meier	P
Representative Alisa Mitskog	P
Representative Corey Mock	P
Representative David Monson	P
Representative Mike Nathe	P
Representative Jon O. Nelson	P
Representative Mark Sanford	A
Representative Mike Schatz	P
Representative Jim Schmidt	P
Representative Randy A. Schobinger	P
Representative Michelle Strinden	P
Representative Don Vigesaa	P

Discussion Topics:

- Reconsider action
- Amendment

Chairman Delzer – Recaps the budget and the committees previous action along with the proposed new amendment 21.0301.02004

Representative Monson - Makes a motion to reconsider SB 2019

Representative Schmidt -Second

Further Discussion

3:05 Voice Vote- Motion Carries

Representative Monson - Makes a motion to adopt the amendment

Representative Schmidt Second

Further discussion

3:07 Voice Vote- Motion Carries

Representative Monson Makes a motion for a Do Pass as Amended

Representative Schmidt Second

Further discussion

3:08 Roll Call Vote was Taken;

Representatives	Vote
Representative Jeff Delzer	Y
Representative Keith Kempenich	A
Representative Bert Anderson	Y
Representative Larry Bellew	A
Representative Tracy Boe	Y
Representative Mike Brandenburg	Y
Representative Michael Howe	Y
Representative Gary Kreidt	Y
Representative Bob Martinson	Y
Representative Lisa Meier	Y
Representative Alisa Mitskog	Y
Representative Corey Mock	Y
Representative David Monson	Y
Representative Mike Nathe	Y
Representative Jon O. Nelson	Y
Representative Mark Sanford	Y
Representative Mike Schatz	Y
Representative Jim Schmidt	Y
Representative Randy A. Schobinger	Y
Representative Michelle Strinden	Y
Representative Don Vigesaa	Y

Motion Carries 19-0-2 Representative Sanford will carry the bill

Additional written testimony: No Additional Testimony

3:08 Chairman Delzer- Closes the meeting for SB 2019

Risa Berube,

House Appropriations Committee Clerk

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 4/16/21
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PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2019

Page 1, line 2, replace "report" with "statement of legislative intent"

Page 1, remove lines 12 through 24

Page 2, replace lines 1 through 13 with:

"Salaries and wages	\$4,812,765	(\$168,859)	\$4,643,906
Operating expenses	2,357,796	(159,343)	2,198,453
Grants	9,207,349	300,000	9,507,349
Grants - secondary	24,587,780	2,000,000	26,587,780
Marketplace for kids	300,000	0	300,000
Science, technology, engineering, and mathematics initiative	0	100,000	100,000
Grants - postsecondary	256,982	(256,982)	0
Adult farm management	1,894,249	(188,111)	1,706,138
Workforce training	2,000,000	0	2,000,000
Center for distance education	<u>9,351,188</u>	<u>110,066</u>	<u>9,461,254</u>
Total all funds	\$54,768,109	\$1,736,771	\$56,504,880
Less estimated income	<u>14,703,121</u>	<u>316,696</u>	<u>15,019,817</u>
Total general fund	\$40,064,988	\$1,420,075	\$41,485,063
Full-time equivalent positions	52.30	(2.00)	50.30

SECTION 2. LEGISLATIVE INTENT - AREA CAREER AND TECHNICAL CENTERS - SECONDARY GRANTS. It is the intent of the sixty-seventh legislative assembly that school districts:

1. Use federal funds available from the elementary and secondary school emergency relief fund to effectively benefit students;
2. Develop plans to provide for any future operating and maintenance costs relating to new or expanded programs resulting from the expenditure of these federal funds because state funds will not be provided to replace these federal funds; and
3. Develop plans to provide increased local support for area career and technical centers since state secondary grant funding is limited and the share of state assistance for these programs may decrease if new or expanded programs are established."

Re-number accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2019 - Dept. of Career and Technical Education - House Action

	Base Budget	Senate Version	House Changes	House Version
Salaries and wages	\$4,812,765	\$4,654,641	(\$10,735)	\$4,643,906
Operating expenses	2,357,796	2,198,453		2,198,453
Grants	9,207,349	54,507,349	(45,000,000)	9,507,349
Grants - Secondary	24,587,780	27,187,780	(600,000)	26,587,780
Marketplace for kids	300,000	250,000	50,000	300,000

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Grants - Postsecondary	256,982			
Adult farm management	1,894,249	1,756,138	(50,000)	1,706,138
Workforce training	2,000,000	1,900,000	100,000	2,000,000
Center for distance education	9,351,188	9,464,653	(3,399)	9,461,254
STEM initiative			100,000	100,000
Total all funds	\$54,768,109	\$101,919,014	(\$45,414,134)	\$56,504,880
Less estimated income	14,703,121	60,019,817	(45,000,000)	15,019,817
General fund	\$40,064,988	\$41,899,197	(\$414,134)	\$41,485,063
FTE	52.30	50.30	0.00	50.30

Department 270 - Dept. of Career and Technical Education - Detail of House Changes

	Adjusts Funding for Salary Increases¹	Transfers STEM Funding²	Reduces Funding for Cost to Continue Reimburse- ment Rates³	Restores Funding for Marketplace for Kids⁴	Reduces Funding for Adult Farm Management⁵	Restores Funding for Workforce Training⁶
Salaries and wages	(\$10,735)					
Operating expenses						
Grants						
Grants - Secondary		(\$100,000)	(\$500,000)			
Marketplace for kids				\$50,000		
Grants - Postsecondary						
Adult farm management					(\$50,000)	
Workforce training						\$100,000
Center for distance education	(3,399)					
STEM initiative		100,000				
Total all funds	(\$14,134)	\$0	(\$500,000)	\$50,000	(\$50,000)	\$100,000
Less estimated income	0	0	0	0	0	0
General fund	(\$14,134)	\$0	(\$500,000)	\$50,000	(\$50,000)	\$100,000
FTE	0.00	0.00	0.00	0.00	0.00	0.00

	Removes One- Time Funding for Career Academies⁷	Total House Changes
Salaries and wages		(\$10,735)
Operating expenses		
Grants	(\$45,000,000)	(45,000,000)
Grants - Secondary		(600,000)
Marketplace for kids		50,000
Grants - Postsecondary		
Adult farm management		(50,000)
Workforce training		100,000
Center for distance education		(3,399)
STEM initiative		100,000
Total all funds	(\$45,000,000)	(\$45,414,134)
Less estimated income	(45,000,000)	(45,000,000)
General fund	\$0	(\$414,134)
FTE	0.00	0.00

¹ Salaries and wages funding is adjusted for 2021-23 biennium salary increases of 1.5 percent on July 1, 2021, with a minimum monthly increase of \$100 and 2 percent on July 1, 2022. The Senate provided salary adjustments of 2 percent with a minimum monthly increase of \$80 and a maximum monthly increase of \$300 on July 1, 2021, and 2 percent on July 1, 2022.

² Science, technology, engineering, and mathematics (STEM) funding of \$100,000 from the general fund is transferred from the secondary grants line item to a newly created science, technology, engineering, and mathematics initiative line item. The Senate transferred this funding from the operating expenses line item to the secondary grants line item.

³ Funding for the cost to continue career and technical education course cost reimbursement rates for schools

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(27 percent) and area career and technical centers (40 percent) is reduced by \$500,000 from the general fund to provide a total of \$1,000,000. The Senate approved \$1,500,000 from the general fund.

⁴ Funding of \$50,000 is restored for the Marketplace for Kids program to provide a total of \$300,000 from the general fund, the same as provided during the 2019-21 biennium. The Senate provided \$250,000 from the general fund.

⁵ Funding for the adult farm management program is reduced by \$50,000, to provide a total of \$1,706,138 from the general fund. The Senate reduced funding for the program by \$138,111 to provide a total of \$1,756,138 from the general fund. The additional \$50,000 reduction approved by the House results in a total reduction of \$188,111 from the 2019-21 biennium appropriation of \$1,894,249 from the general fund.

⁶ Funding of \$100,000 is restored for workforce training to provide a total of \$2,000,000 from the general fund, the same as provided for the 2019-21 biennium. The Senate approved a reduction of \$100,000 to provide a total of \$1,900,000 from the general fund.

⁷ One-time funding of \$45,000,000 from bond proceeds for competitive workforce development grants to build career academies approved by the Senate is removed by the House. This amendment also removes Section 2 from the bill related to one-time funding, which was added by the Senate.

This amendment also adds a section of legislative intent that school districts use federal funds available from the elementary and secondary school emergency relief fund to effectively benefit students, develop plans to provide for any future operating and maintenance costs relating to new or expanded programs resulting from the expenditure of these federal funds, and develop plans to provide increased local support for area career and technical centers since state secondary grant funding is limited and the share of state assistance for these programs may decrease if new or expanded programs are established.

REPORT OF STANDING COMMITTEE

SB 2019, as engrossed: Appropriations Committee (Rep. Delzer, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (19 YEAS, 0 NAYS, 2 ABSENT AND NOT VOTING). Engrossed SB 2019 was placed on the Sixth order on the calendar.

Page 1, line 2, replace "report" with "statement of legislative intent"

Page 1, remove lines 12 through 24

Page 2, replace lines 1 through 13 with:

"Salaries and wages	\$4,812,765	(\$168,859)	\$4,643,906
Operating expenses	2,357,796	(159,343)	2,198,453
Grants	9,207,349	300,000	9,507,349
Grants - secondary	24,587,780	2,000,000	26,587,780
Marketplace for kids	300,000	0	300,000
Science, technology, engineering, and mathematics initiative	0	100,000	100,000
Grants - postsecondary	256,982	(256,982)	0
Adult farm management	1,894,249	(188,111)	1,706,138
Workforce training	2,000,000	0	2,000,000
Center for distance education	<u>9,351,188</u>	<u>110,066</u>	<u>9,461,254</u>
Total all funds	\$54,768,109	\$1,736,771	\$56,504,880
Less estimated income	<u>14,703,121</u>	<u>316,696</u>	<u>15,019,817</u>
Total general fund	\$40,064,988	\$1,420,075	\$41,485,063
Full-time equivalent positions	52.30	(2.00)	50.30

SECTION 2. LEGISLATIVE INTENT - AREA CAREER AND TECHNICAL CENTERS - SECONDARY GRANTS. It is the intent of the sixty-seventh legislative assembly that school districts:

1. Use federal funds available from the elementary and secondary school emergency relief fund to effectively benefit students;
2. Develop plans to provide for any future operating and maintenance costs relating to new or expanded programs resulting from the expenditure of these federal funds because state funds will not be provided to replace these federal funds; and
3. Develop plans to provide increased local support for area career and technical centers since state secondary grant funding is limited and the share of state assistance for these programs may decrease if new or expanded programs are established."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2019 - Dept. of Career and Technical Education - House Action

	Base Budget	Senate Version	House Changes	House Version
Salaries and wages	\$4,812,765	\$4,654,641	(\$10,735)	\$4,643,906
Operating expenses	2,357,796	2,198,453		2,198,453
Grants	9,207,349	54,507,349	(45,000,000)	9,507,349
Grants - Secondary	24,587,780	27,187,780	(600,000)	26,587,780
Marketplace for kids	300,000	250,000	50,000	300,000
Grants - Postsecondary	256,982			
Adult farm management	1,894,249	1,756,138	(50,000)	1,706,138
Workforce training	2,000,000	1,900,000	100,000	2,000,000
Center for distance education	9,351,188	9,464,653	(3,399)	9,461,254
STEM initiative			100,000	100,000
Total all funds	\$54,768,109	\$101,919,014	(\$45,414,134)	\$56,504,880

Less estimated income	14,703,121	60,019,817	(45,000,000)	15,019,817
General fund	\$40,064,988	\$41,899,197	(\$414,134)	\$41,485,063
FTE	52.30	50.30	0.00	50.30

Department 270 - Dept. of Career and Technical Education - Detail of House Changes

	Adjusts Funding for Salary Increases ¹	Transfers STEM Funding ²	Reduces Funding for Cost to Continue Reimburse- ment Rates ³	Restores Funding for Marketplace for Kids ⁴	Reduces Funding for Adult Farm Management ⁵	Restores Funding for Workforce Training ⁶
Salaries and wages	(\$10,735)					
Operating expenses						
Grants						
Grants - Secondary		(\$100,000)	(\$500,000)			
Marketplace for kids				\$50,000		
Grants - Postsecondary						
Adult farm management					(\$50,000)	
Workforce training						\$100,000
Center for distance education	(3,399)					
STEM initiative		100,000				
Total all funds	(\$14,134)	\$0	(\$500,000)	\$50,000	(\$50,000)	\$100,000
Less estimated income	0	0	0	0	0	0
General fund	(\$14,134)	\$0	(\$500,000)	\$50,000	(\$50,000)	\$100,000
FTE	0.00	0.00	0.00	0.00	0.00	0.00

	Removes One-Time Funding for Career Academies ⁷	Total House Changes
Salaries and wages		(\$10,735)
Operating expenses		
Grants		
Grants - Secondary	(\$45,000,000)	(45,000,000)
Marketplace for kids		(600,000)
Grants - Postsecondary		50,000
Adult farm management		(50,000)
Workforce training		100,000
Center for distance education		(3,399)
STEM initiative		100,000
Total all funds	(\$45,000,000)	(\$45,414,134)
Less estimated income	(45,000,000)	(45,000,000)
General fund	\$0	(\$414,134)
FTE		0.00

¹ Salaries and wages funding is adjusted for 2021-23 biennium salary increases of 1.5 percent on July 1, 2021, with a minimum monthly increase of \$100 and 2 percent on July 1, 2022. The Senate provided salary adjustments of 2 percent with a minimum monthly increase of \$80 and a maximum monthly increase of \$300 on July 1, 2021, and 2 percent on July 1, 2022.

² Science, technology, engineering, and mathematics (STEM) funding of \$100,000 from the general fund is transferred from the secondary grants line item to a newly created science, technology, engineering, and mathematics initiative line item. The Senate transferred this funding from the operating expenses line item to the secondary grants line item.

³ Funding for the cost to continue career and technical education course cost reimbursement rates for schools (27 percent) and area career and technical centers (40 percent) is reduced by \$500,000 from the general fund to provide a total of \$1,000,000. The Senate approved \$1,500,000 from the general fund.

⁴ Funding of \$50,000 is restored for the Marketplace for Kids program to provide a total of \$300,000 from the general fund, the same as provided during the 2019-21 biennium. The Senate provided \$250,000 from the general fund.

⁵ Funding for the adult farm management program is reduced by \$50,000, to provide a total

of \$1,706,138 from the general fund. The Senate reduced funding for the program by \$138,111 to provide a total of \$1,756,138 from the general fund. The additional \$50,000 reduction approved by the House results in a total reduction of \$188,111 from the 2019-21 biennium appropriation of \$1,894,249 from the general fund.

⁶ Funding of \$100,000 is restored for workforce training to provide a total of \$2,000,000 from the general fund, the same as provided for the 2019-21 biennium. The Senate approved a reduction of \$100,000 to provide a total of \$1,900,000 from the general fund.

⁷ One-time funding of \$45,000,000 from bond proceeds for competitive workforce development grants to build career academies approved by the Senate is removed by the House. This amendment also removes Section 2 from the bill related to one-time funding, which was added by the Senate.

This amendment also adds a section of legislative intent that school districts use federal funds available from the elementary and secondary school emergency relief fund to effectively benefit students, develop plans to provide for any future operating and maintenance costs relating to new or expanded programs resulting from the expenditure of these federal funds, and develop plans to provide increased local support for area career and technical centers since state secondary grant funding is limited and the share of state assistance for these programs may decrease if new or expanded programs are established.

2021 CONFERENCE COMMITTEE

SB 2019

2021 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Roughrider Room, State Capitol

SB 2019
4/15/2021

Senate Appropriations Conference Committee

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Senator Poolman opened the hearing at 3:37 PM.

Senators present: **Poolman, Erbele and Heckaman.**

Representatives present: **Sanford, Schmidt and Boe.**

Discussion Topics:

- Legislative Intent vs mandated plans
- Salaries

Rep. Sanford explained the House changes to the bill.

Senator Poolman closed the hearing at 4:04 PM.

Rose Laning, Committee Clerk

2021 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Roughrider Room, State Capitol

SB 2019
4/19/2021

Senate Appropriations Conference Committee

A BILL for an Act to provide an appropriation for defraying the expenses of the department of career and technical education.

Senator Poolman opened the hearing at 10:03 AM.

Senators present: **Poolman, Erbele and Heckaman.**

Representatives present: **Sanford, Schmidt and Boe.**

Discussion Topics:

- Amendment

Rep. Sanford moved that the House recede from House amendments and amend; LC 21.0301.02006.

Rep. Schmidt second.

Roll Call vote – Motion passed.

Senator Poolman – Y

Senator Erbele – Y

Senator Heckaman – Y

Representative Sanford – Y

Representative Schmidt – Y

Representative Boe – Y

Senator Poolman closed the hearing at 10:07 AM.

Rose Laning, Committee Clerk

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4/19

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2019

That the House recede from its amendments as printed on pages 1365-1367 of the Senate Journal and pages 1495-1498 of the House Journal and that Engrossed Senate Bill No. 2019 be amended as follows:

Page 1, line 2, replace "report" with "statement of legislative intent"

Page 1, remove lines 12 through 24

Page 2, replace lines 1 through 13 with:

"Salaries and wages	\$4,812,765	(\$168,859)	\$4,643,906
Operating expenses	2,357,796	(159,343)	2,198,453
Grants	9,207,349	300,000	9,507,349
Grants - secondary	24,587,780	2,250,000	26,837,780
Marketplace for kids	300,000	0	300,000
Science, technology, engineering, and mathematics initiative	0	100,000	100,000
Grants - postsecondary	256,982	(256,982)	0
Adult farm management	1,894,249	(188,111)	1,706,138
Workforce training	2,000,000	0	2,000,000
Center for distance education	<u>9,351,188</u>	<u>110,066</u>	<u>9,461,254</u>
Total all funds	\$54,768,109	\$1,986,771	\$56,754,880
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Total general fund	\$40,064,988	\$1,670,075	\$41,735,063
Full-time equivalent positions	52.30	(2.00)	50.30

SECTION 2. LEGISLATIVE INTENT - AREA CAREER AND TECHNICAL CENTERS - SECONDARY GRANTS. It is the intent of the sixty-seventh legislative assembly that school districts:

1. Use federal funds available from the elementary and secondary school emergency relief fund to effectively benefit students;
2. Prepare to provide for any future operating and maintenance costs relating to new or expanded programs resulting from the expenditure of these federal funds because state funds will not be provided to replace these federal funds; and
3. Prepare to provide increased local support for area career and technical centers since state secondary grant funding is limited and the share of state assistance for these programs may decrease if new or expanded programs are established."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2019 - Dept. of Career and Technical Education - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Salaries and wages	\$4,812,765	\$4,654,641	(\$10,735)	\$4,643,906	\$4,643,906	
Operating expenses	2,357,796	2,198,453		2,198,453	2,198,453	
Grants	9,207,349	54,507,349	(45,000,000)	9,507,349	9,507,349	
Grants - Secondary	24,587,780	27,187,780	(350,000)	26,837,780	26,587,780	\$250,000
Marketplace for kids	300,000	250,000	50,000	300,000	300,000	
Grants - Postsecondary	256,982					
Adult farm management	1,894,249	1,756,138	(50,000)	1,706,138	1,706,138	
Workforce training	2,000,000	1,900,000	100,000	2,000,000	2,000,000	
Center for distance education	9,351,188	9,464,653	(3,399)	9,461,254	9,461,254	
STEM initiative			100,000	100,000	100,000	
Total all funds	\$54,768,109	\$101,919,014	(\$45,164,134)	\$56,754,880	\$56,504,880	\$250,000
Less estimated income	14,703,121	60,019,817	(45,000,000)	15,019,817	15,019,817	0
General fund	\$40,064,988	\$41,899,197	(\$164,134)	\$41,735,063	\$41,485,063	\$250,000
FTE	52.30	50.30	0.00	50.30	50.30	0.00

Department 270 - Dept. of Career and Technical Education - Detail of Conference Committee Changes

	Adjusts Funding for Salary Increases ¹	Transfers STEM Funding ²	Reduces Funding for Cost to Continue Reimbursement Rates ³	Restores Funding for Marketplace for Kids ⁴	Reduces Funding for Adult Farm Management ⁵	Restores Funding for Workforce Training ⁶
Salaries and wages	(\$10,735)					
Operating expenses						
Grants						
Grants - Secondary		(\$100,000)	(\$250,000)			
Marketplace for kids				\$50,000		
Grants - Postsecondary						
Adult farm management					(\$50,000)	
Workforce training						\$100,000
Center for distance education	(3,399)					
STEM initiative		100,000				
Total all funds	(\$14,134)	\$0	(\$250,000)	\$50,000	(\$50,000)	\$100,000
Less estimated income	0	0	0	0	0	0
General fund	(\$14,134)	\$0	(\$250,000)	\$50,000	(\$50,000)	\$100,000
FTE	0.00	0.00	0.00	0.00	0.00	0.00

	Removes One-Time Funding for Career Academies ⁷	Total Conference Committee Changes
Salaries and wages		(\$10,735)
Operating expenses		
Grants	(\$45,000,000)	(45,000,000)
Grants - Secondary		(350,000)
Marketplace for kids		50,000
Grants - Postsecondary		
Adult farm management		(50,000)
Workforce training		100,000
Center for distance education		(3,399)
STEM initiative		100,000
Total all funds	(\$45,000,000)	(\$45,164,134)
Less estimated income	(45,000,000)	(45,000,000)
General fund	\$0	(\$164,134)
FTE	0.00	0.00

¹ Salaries and wages funding is adjusted for 2021-23 biennium salary increases of 1.5 percent on July 1, 2021, with a minimum monthly increase of \$100 and 2 percent on July 1, 2022, the same as provided by the House. The Senate provided salary adjustments of 2 percent with a minimum monthly increase of \$80 and a maximum monthly increase of \$300 on July 1, 2021, and 2 percent on July 1, 2022.

² Science, technology, engineering, and mathematics (STEM) funding of \$100,000 from the general fund is transferred from the secondary grants line item to a newly created science, technology, engineering, and mathematics initiative line item, the same as provided by the House. The Senate transferred this funding from the operating expenses line item to the secondary grants line item.

³ Funding for the cost to continue career and technical education course cost reimbursement rates for schools (27 percent) and area career and technical centers (40 percent) is reduced by \$250,000 from the general fund to provide a total of \$1,250,000. The Senate approved \$1,500,000 from the general fund. The House approved \$1,000,000 from the general fund.

⁴ Funding of \$50,000 is restored for the Marketplace for Kids program to provide a total of \$300,000 from the general fund, the same as provided during the 2019-21 biennium and by the House. The Senate provided \$250,000 from the general fund.

⁵ Funding for the adult farm management program is reduced by \$50,000, to provide a total of \$1,706,138 from the general fund. The Senate reduced funding for the program by \$138,111 to provide a total of \$1,756,138 from the general fund. The additional \$50,000 reduction approved by the House results in a total reduction of \$188,111 from the 2019-21 biennium appropriation of \$1,894,249 from the general fund.

⁶ Funding of \$100,000 is restored for workforce training to provide a total of \$2,000,000 from the general fund, the same as provided for the 2019-21 biennium and by the House. The Senate approved a reduction of \$100,000 to provide a total of \$1,900,000 from the general fund.

⁷ One-time funding of \$45,000,000 from bond proceeds for competitive workforce development grants to build career academies approved by the Senate is removed. The House also removed the funding. This amendment removes Section 2 from the bill related to one-time funding, which was added by the Senate.

This amendment also adds a section of legislative intent that school districts use federal funds available from the elementary and secondary school emergency relief fund to effectively benefit students, prepare to provide for any future operating and maintenance costs relating to new or expanded programs resulting from the expenditure of these federal funds, and prepare to provide increased local support for area career and technical centers since state secondary grant funding is limited and the share of state assistance for these programs may decrease if new or expanded programs are established. This section was also included by the House, but amended by the Conference Committee to include the word "prepare" rather than "develop plans".

**2021 SENATE CONFERENCE COMMITTEE
ROLL CALL VOTES**

BILL/RESOLUTION NO SB 2019 as (re) engrossed

Senate Appropriations Committee

- Action Taken**
- SENATE accede to House Amendments
 - SENATE accede to House Amendments and further amend
 - HOUSE recede from House amendments
 - HOUSE recede from House amendments and amend as follows
 - Unable to agree**, recommends that the committee be discharged and a new committee be appointed

Motion Made by: Sanford Seconded by: Schmidt

Senators					Representatives				
			Yes	No				Yes	No
Poolman			X		Sanford			X	
Erbele			X		Schmidt			X	
Heckaman			X		Boe			X	
Total Senate Vote			3	0	Total Rep. Vote			3	0

Vote Count Yes: 6 No: 0 Absent: 0

Senate Carrier Poolman House Carrier Sanford

LC Number 21.0301 . 02006 of amendment

LC Number 21.0301 . 05000 of engrossment

Emergency clause added or deleted

Statement of purpose of amendment

Insert LC: 21.0301.02006
 Senate Carrier: Poolman
 House Carrier: Sanford

REPORT OF CONFERENCE COMMITTEE

SB 2019, as engrossed: Your conference committee (Sens. Poolman, Erbele, Heckaman and Reps. Sanford, Schmidt, Boe) recommends that the **HOUSE RECEDE** from the House amendments as printed on SJ pages 1365-1367, adopt amendments as follows, and place SB 2019 on the Seventh order:

That the House recede from its amendments as printed on pages 1365-1367 of the Senate Journal and pages 1495-1498 of the House Journal and that Engrossed Senate Bill No. 2019 be amended as follows:

Page 1, line 2, replace "report" with "statement of legislative intent"

Page 1, remove lines 12 through 24

Page 2, replace lines 1 through 13 with:

"Salaries and wages	\$4,812,765	(\$168,859)	\$4,643,906
Operating expenses	2,357,796	(159,343)	2,198,453
Grants	9,207,349	300,000	9,507,349
Grants - secondary	24,587,780	2,250,000	26,837,780
Marketplace for kids	300,000	0	300,000
Science, technology, engineering, and mathematics initiative	0	100,000	100,000
Grants - postsecondary	256,982	(256,982)	0
Adult farm management	1,894,249	(188,111)	1,706,138
Workforce training	2,000,000	0	2,000,000
Center for distance education	<u>9,351,188</u>	<u>110,066</u>	<u>9,461,254</u>
Total all funds	\$54,768,109	\$1,986,771	\$56,754,880
Less estimated income	<u>14,703,121</u>	<u>316,696</u>	<u>15,019,817</u>
Total general fund	\$40,064,988	\$1,670,075	\$41,735,063
Full-time equivalent positions	52.30	(2.00)	50.30

SECTION 2. LEGISLATIVE INTENT - AREA CAREER AND TECHNICAL CENTERS - SECONDARY GRANTS. It is the intent of the sixty-seventh legislative assembly that school districts:

1. Use federal funds available from the elementary and secondary school emergency relief fund to effectively benefit students;
2. Prepare to provide for any future operating and maintenance costs relating to new or expanded programs resulting from the expenditure of these federal funds because state funds will not be provided to replace these federal funds; and
3. Prepare to provide increased local support for area career and technical centers since state secondary grant funding is limited and the share of state assistance for these programs may decrease if new or expanded programs are established."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2019 - Dept. of Career and Technical Education - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Salaries and wages	\$4,812,765	\$4,654,641	(\$10,735)	\$4,643,906	\$4,643,906	

Insert LC: 21.0301.02006
 Senate Carrier: Poolman
 House Carrier: Sanford

Operating expenses	2,357,796	2,198,453		2,198,453	2,198,453	
Grants	9,207,349	54,507,349	(45,000,000)	9,507,349	9,507,349	
Grants - Secondary	24,587,780	27,187,780	(350,000)	26,837,780	26,587,780	\$250,000
Marketplace for kids	300,000	250,000	50,000	300,000	300,000	
Grants - Postsecondary	256,982					
Adult farm management	1,894,249	1,756,138	(50,000)	1,706,138	1,706,138	
Workforce training	2,000,000	1,900,000	100,000	2,000,000	2,000,000	
Center for distance education	9,351,188	9,464,653	(3,399)	9,461,254	9,461,254	
STEM initiative			100,000	100,000	100,000	
Total all funds	\$54,768,109	\$101,919,014	(\$45,164,134)	\$56,754,880	\$56,504,880	\$250,000
Less estimated income	14,703,121	60,019,817	(45,000,000)	15,019,817	15,019,817	0
General fund	\$40,064,988	\$41,899,197	(\$164,134)	\$41,735,063	\$41,485,063	\$250,000
FTE	52.30	50.30	0.00	50.30	50.30	0.00

Department 270 - Dept. of Career and Technical Education - Detail of Conference Committee Changes

	Adjusts Funding for Salary Increases ¹	Transfers STEM Funding ²	Reduces Funding for Cost to Continue Reimbursement Rates ³	Restores Funding for Marketplace for Kids ⁴	Reduces Funding for Adult Farm Management ⁵	Restores Funding for Workforce Training ⁶
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Center for distance education	(3,399)					
STEM initiative		100,000				
Total all funds	(\$14,134)	\$0	(\$250,000)	\$50,000	(\$50,000)	\$100,000
Less estimated income	0	0	0	0	0	0
General fund	(\$14,134)	\$0	(\$250,000)	\$50,000	(\$50,000)	\$100,000
FTE	0.00	0.00	0.00	0.00	0.00	0.00

	Removes One-Time Funding for Career Academies ⁷	Total Conference Committee Changes
Salaries and wages		(\$10,735)
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secondary grants line item.

³ Funding for the cost to continue career and technical education course cost reimbursement rates for schools (27 percent) and area career and technical centers (40 percent) is reduced by \$250,000 from the general fund to provide a total of \$1,250,000. The Senate approved \$1,500,000 from the general fund. The House approved \$1,000,000 from the general fund.

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Engrossed SB 2019 was placed on the Seventh order of business on the calendar.