

## HIGHER EDUCATION STUDY - BACKGROUND MEMORANDUM

### STUDY RESPONSIBILITIES

The Legislative Management has assigned the following studies to the 2017-18 interim Higher Education Committee:

1. Section 34 of Senate Bill No. 2003 provides for a study of the relationship between the University of North Dakota (UND) and the Energy and Environmental Research Center. The study must include a review of the working relationship between the entities, including financial responsibilities and expectations of each entity, including potential alternative administrative reporting lines and business models.
2. The Legislative Management provided for a study of higher education finances and the overall financial stability of institutions under the control of the State Board of Higher Education. The study must include a review of the finances of each institution, including short- and long-term debt obligations, operating income margins, estimated future tuition income, institutional reserves, and anticipated future funding changes through the higher education funding formula.

### BACKGROUND

The North Dakota University System consists of 11 higher education institutions under the control of the State Board of Higher Education. Of the 11 institutions, 2 are doctoral-granting institutions, 2 are master's-granting institutions, 2 are universities that offer baccalaureate degrees, and 5 are colleges that offer associate and technical degrees. Each institution is unique in its mission to serve the people of North Dakota.

Legislative appropriations for the 2017-19 biennium for higher education institutions and the University System office total \$2,685,747,055, of which \$625,796,780 is from the general fund. The following is a history of legislative appropriations for higher education since the 1997-99 biennium:

Biennium	General Fund	Special Funds	Total
1997-99	\$306,825,098	\$323,595,863	\$630,420,961
1999-2001	\$334,449,287	\$713,538,799	\$1,047,988,086
2001-03	\$366,953,836	\$80,367,201	\$447,321,037
2003-05	\$364,029,938	\$110,546,775	\$474,576,713
2005-07	\$387,157,893	\$178,552,108	\$565,710,001
2007-09	\$472,036,237	\$165,419,701	\$637,455,938
2009-11	\$593,355,047	\$202,764,364	\$796,119,411
2011-13	\$657,838,539	\$108,817,759	\$766,656,298
2013-15	\$910,632,494	\$177,980,941	\$1,088,613,435
2015-17 - Adjusted	\$837,849,212	\$66,644,264	\$904,493,476
2017-19	\$625,796,780	\$2,059,950,275	\$2,685,747,055

**NOTE:** The special funds amounts for the 1997-99 biennium reflect the appropriation of tuition income. The special funds amounts for the 1999-2001 and 2017-19 bienniums reflect the appropriation of tuition and local funds.

The following is a summary of ongoing and one-time general fund appropriations for the University System since the 2007-09 biennium:

General Fund Appropriations			
Biennium	Ongoing Appropriations	One-Time Appropriations	Total
2007-09	\$443,654,169	\$28,382,068	\$472,036,237
2009-11	\$534,062,895	\$59,292,152	\$593,355,047
2011-13	\$606,525,437	\$51,313,102	\$657,838,539
2013-15	\$679,271,846	\$231,360,648	\$910,632,494
2015-17 - Adjusted	\$681,876,059	\$155,973,153	\$837,849,212
2017-19	\$613,242,154	\$12,554,626	\$625,796,780

The University System is authorized 6,767.76 full-time equivalent (FTE) positions for the 2017-19 biennium, 4,337.41 FTE positions more than the 2015-17 biennium authorized level. The schedule below summarizes the FTE changes by campus.

In response to the 2015-17 biennium general fund budget reductions approved by the Legislative Assembly during the August 2016 special legislative session and the 90 percent 2017-19 biennium budgets requested by Governor Dalrymple, the University System made a number of FTE position reductions; however, the University System budget for the 2017-19 biennium now recognizes all FTE positions rather than only those supported by the general fund.

Institution/Agency	2015-17 Biennium FTE Positions Appropriated	FTE Reductions		Other FTE Adjustments <sup>1</sup>	2017-19 Biennium FTE Positions Appropriated
		Faculty	Non- Faculty		
University System office	104.39		(19.00)	64.01	149.40
Bismarck State College	133.53	(10.00)	(9.00)	243.82	358.35
Lake Region State College	50.19	(2.50)	(7.50)	89.42	129.61
Williston State College	49.96	(12.50)	(7.40)	70.69	100.75
University of North Dakota	630.20	(89.50)	(74.00)	1,751.37	2,218.07
UND School of Medicine and Health Sciences	184.58	(14.00)	(14.00)	279.17	435.75
North Dakota State University	537.10	(69.90)	(25.10)	1,453.56	1,895.66
North Dakota State College of Science	168.30	(6.00)	(31.00)	213.74	345.04
Dickinson State University	120.26	(27.24)	(27.26)	103.14	168.90
Mayville State University	66.23	(7.00)	(3.33)	154.63	210.53
Minot State University	204.10	(15.50)	(8.70)	261.75	441.65
Valley City State University	105.59	(5.16)	(9.10)	111.42	202.75
Dakota College at Bottineau	46.96	(3.00)	(5.50)	45.84	84.30
Forest Service	28.96		(2.00)	0.04	27.00
<b>Total</b>	<b>2,430.35</b>	<b>(262.30)</b>	<b>(242.89)</b>	<b>4,842.60</b>	<b>6,767.76</b>

<sup>1</sup>These adjustments include the recognition of non-general fund FTE positions which were not recognized prior to the 2017-19 biennium.

The University System reported a total degree credit headcount enrollment of 47,236 students and a total degree credit FTE enrollment of 37,873 students in the fall 2016 enrollment report. The following is a summary of University System degree credit headcount and FTE fall enrollments for 2007 through 2016:

Fall Headcount Enrollment <sup>1</sup>										
Institution	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bismarck State College	3,591	3,788	4,020	4,177	4,392	4,109	4,062	4,002	4,078	3,976
Dickinson State University	2,670	2,730	2,767	2,485	2,346	1,837	1,449	1,479	1,317	1,386
Lake Region State College	1,520	1,657	1,702	1,913	2,056	1,974	1,898	1,988	1,918	1,947
Mayville State University	769	789	887	982	970	1,020	1,065	1,081	1,110	1,130
Minot State University	3,424	3,432	3,649	3,866	3,657	3,560	3,533	3,410	3,348	3,412
Dakota College at Bottineau	637	655	748	863	812	774	793	753	692	811
North Dakota State College of Science	2,417	2,545	2,651	2,833	3,127	3,066	3,168	3,033	3,123	3,003
North Dakota State University	12,527	13,229	14,189	14,407	14,399	14,443	14,629	14,747	14,516	14,432
University of North Dakota	12,559	12,748	13,172	14,194	14,697	15,250	15,143	14,906	14,951	14,648
Valley City State University	982	1,019	1,083	1,285	1,384	1,362	1,366	1,378	1,422	1,452
Williston State College	731	850	949	932	993	808	909	883	1,038	1,039
<b>Total</b>	<b>41,827</b>	<b>43,442</b>	<b>45,817</b>	<b>47,937</b>	<b>48,833</b>	<b>48,203</b>	<b>48,015</b>	<b>47,660</b>	<b>47,513</b>	<b>47,236</b>

<sup>1</sup>Headcount enrollment includes all students enrolled at an institution regardless of the number of credit-hours the student is enrolled in.

Fall Full-Time Equivalent Enrollment <sup>1</sup>										
Institution	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bismarck State College	2,792	2,937	3,160	3,208	3,209	2,990	2,955	2,909	2,912	2,860
Dickinson State University	2,158	2,294	2,187	2,054	1,959	1,454	1,201	1,176	1,070	1,114
Lake Region State College	764	784	868	921	988	973	943	978	981	971
Mayville State University	586	563	662	704	704	759	749	798	796	782
Minot State University	2,730	2,720	2,832	3,002	2,795	2,731	2,710	2,600	2,570	2,592
Dakota College at Bottineau	402	440	490	540	524	474	502	518	459	490
North Dakota State College of Science	2,097	2,041	2,076	2,217	2,366	2,354	2,295	2,272	2,305	2,298
North Dakota State University	11,221	11,794	12,577	12,708	12,606	12,707	12,797	12,934	12,834	12,783
University of North Dakota	10,967	11,137	11,306	12,018	12,319	12,729	12,606	12,420	12,455	12,182
Valley City State University	807	824	833	957	1,011	995	975	990	1,031	1,044

Fall Full-Time Equivalent Enrollment <sup>1</sup>										
Institution	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Williston State College	551	562	573	570	608	537	593	579	738	756
Total	35,075	36,096	37,564	38,899	39,089	38,703	38,326	38,174	38,151	37,872

<sup>1</sup>In order to be more consistent with common practice in enrollment reporting, the State Board of Higher Education changed the definition of undergraduate FTE to 15 credit-hours from 16 credit-hours in August 2006. The FTE enrollment of an institution is calculated by dividing undergraduate student credit-hours by 15 and by dividing graduate student credit-hours by 12. Full-time professional program students are counted as one FTE enrollment.

## ENERGY AND ENVIRONMENTAL RESEARCH CENTER

Section 34 of Senate Bill No. 2003 ([appendix](#)) provides for a study of the relationship between UND and the Energy and Environmental Research Center. The study must include a review of the working relationship between the entities, including financial responsibilities and expectations of each entity, including potential alternative administrative reporting lines and business models. The Higher Education Committee was assigned responsibility for this study for the 2017-18 interim.

The Energy and Environmental Research Center was officially founded in 1951 as the Robertson Lignite Research Laboratory, a federal facility under the United States Bureau of Mines. The center became a federal energy technology center under the United States Department of Energy in 1977 and was defederalized in 1983, at which time it became part of UND. Since its defederalization, the Energy and Environmental Research Center has evolved to conduct research on all fossil fuels, as well as renewable and alternative fuels, and has become a leader in the field of pollution prevention and environmental cleanup technologies. The center is operated by UND on a self-sustaining basis and does not receive an appropriation from the state.

## PREVIOUS AND CURRENT HIGHER EDUCATION FUNDING METHODS Long-Term Financing Plan and Resource Allocation Model (2001-03 Biennium Through 2011-13 Biennium)

The 1999-2000 Higher Education Roundtable recommended the State Board of Higher Education and the Chancellor of the University System develop a long-term financing plan and resource allocation model. As a result, the board contracted with the National Center for Higher Education Management Systems for assistance with the development of the plan and model. The board reviewed the recommendations of the National Center for Higher Education Management Systems and adopted a long-term financing plan consisting of base operating funding, incentive funding, and capital asset funding components. The following is a description of the long-term financing plan and resource allocation model that was used prior to the 2013-15 biennium appropriation.

**Base operating funding component** - The base operating funding component of the long-term financing plan provided funding to each higher education institution to support core campus functions, such as instruction, research, and public service. The funding for each institution was based on the institution's current state general fund appropriation with general fund appropriation increases to address parity and equity. Parity funding was to be used to continue current programs and services, including salaries, benefits, and inflationary increases. Equity funding was to be distributed to institutions based on a funding comparison to peer institutions.

**Incentive funding component** - The incentive funding component of the long-term financing plan included funding for the State Board of Higher Education to support state and system priorities consistent with the goals of the Higher Education Roundtable.

**Capital asset funding component** - The capital asset funding component of the long-term financing plan provided funding to each of the higher education institutions for maintenance and replacement of facilities and infrastructure. The funding provided to each of the institutions was left to the discretion of the institution with appropriate approvals by the State Board of Higher Education for projects greater than \$250,000. Institutions were given the authority to allocate funds for repair and replacement priorities for both deferred maintenance and regular repair and replacement projects as determined by the institution. Institutions were allowed to continue unspent capital asset funding from one biennium to the next in order to complete the projects started in one biennium but not completed until the next and to accumulate funds to complete large projects that require multiyear funding. The capital asset funding component was applied to new state buildings built on campuses; however, no new operating funds were added to the base operating budget for operating costs if the operating base was already at the benchmark target.

**Adjusted Student Credit-Hour Funding Method (2013-15 Biennium Through 2017-19 Biennium)**

The Legislative Assembly, through 2013 Senate Bill No. 2200, adopted a new higher education funding method beginning with the 2013-15 biennium based on an adjusted student credit-hour calculation. The calculation involves multiplying a base amount per student credit-hour by an adjusted student credit-hour calculation for each institution. The resulting equalized base budget is then adjusted for inflation to determine total funding for an institution.

The adjusted student credit-hour amount for an institution is determined as follows:

1. Completed student credit-hours are determined for each institution. A completed credit-hour is one for which a student met all institutional requirements and obtained a passing grade.
2. A weighted completed student credit-hour calculation is determined by multiplying each institution's completed student credit-hours by an instructional program classification factor. The factor amount for each program classification is based upon historical costs of instruction in each program.
3. The weighted completed student credit-hour amount for each institution is then adjusted for:
  - a. A credit completion factor which is based on total credits completed at an institution. Institutions that have a lower credit-hour output receive a greater weighting factor.
  - b. An institutional size factor based on the square footage of facilities at an institution. Institutions that have a large amount of infrastructure may receive an additional factor adjustment.

The adjusted student credit-hours are then multiplied by a base per credit amount which varies based on institution type. The following is a summary of the base rates for each institution:

Institutions	Biennial Base Rate Per Credit-Hour		
	2013-15	2015-17	2017-19
North Dakota State University, University of North Dakota	\$66.35	\$72.63	\$58.65
Dickinson State University, Mayville State University, Valley City State University	\$95.57	\$107.33	\$86.95
Minot State University	\$98.75	\$107.33	\$86.95
Bismarck State College, Dakota College at Bottineau, Lake Region State College, North Dakota State College of Science	\$101.73	\$114.88	\$93.03
Williston State College	\$104.88	\$114.88	\$93.03

Through June 30, 2019, an institution may not receive less than 96 percent of the state funding to which the institution was entitled during the previous biennium. Under the adjusted student credit-hour funding method funding for major capital projects is appropriated separately from the formula.

**HIGHER EDUCATION DELIVERY METHODS**

Higher education institutions offer course delivery through several different methods. The following is a summary of various delivery methods:

Delivery Method	Description
Face-to-face on campus	A traditional classroom environment where both the instructor and students are physically located in the same classroom.
Face-to-face off campus	Both the instructor and students are physically located in the same classroom in an off-campus facility.
Correspondence	Instruction is provided through mail, email, or fax.
One-way video	A video connection that allows for the faculty member to be heard and seen by students.
Two-way video	A video and audio connection among two or more sites that allows for communication between faculty members and students.
Synchronous Internet	Online classes that require faculty members and students to be online at the same time for interactive learning.
Asynchronous Internet	Online classes in which faculty members and students are not required to be online at the same time. Faculty members provide learning materials and assignments that may be completed by a student anytime during a specified time period.
Hybrid/blended	Classes in which multiple delivery methods are utilized.

During the fall 2016 semester, the total degree credit headcount enrollment of the University System was 47,236 students. Of the total enrollment, 35,018, or 74.1 percent of students, were enrolled in at least one traditional

classroom course while 12,218, or 25.9 percent of students, did not have an on-campus presence. The following schedule details the number of students at each institution that had an on-campus presence:

	Students With an On-Campus Presence		Students Without an On-Campus Presence	
	Count	Percentage	Count	Percentage
Bismarck State College	2,274	57.2%	1,702	42.8%
Dakota College at Bottineau	405	49.9%	406	50.1%
Lake Region State College	390	20.0%	1,557	80.0%
North Dakota State College of Science	1,573	52.4%	1,430	47.6%
Williston State College	650	62.6%	389	37.4%
Dickinson State University	1,082	78.1%	304	21.9%
Mayville State University	570	50.4%	560	49.6%
Minot State University	2,302	67.5%	1,110	32.5%
Valley City State University	818	56.3%	634	43.7%
North Dakota State University	13,652	94.6%	780	5.4%
University of North Dakota	11,302	77.2%	3,346	22.8%
<b>Total</b>	<b>35,018</b>	<b>74.1%</b>	<b>12,218</b>	<b>25.9%</b>

### Electronic Course Enrollment

During the fall 2016 semester, 17,917 students enrolled in at least one degree-credit course with an electronic delivery method. The following table summarizes the enrollment in each type of distance delivery method.

Enrollment in Courses With Electronic Delivery Methods (Fall 2016)					
	Interactive Video	Synchronous Internet	Asynchronous Internet	Hybrid	Total <sup>1</sup>
Bismarck State College	116	40	1,839		1,995
Dakota College at Bottineau	181		280		461
Lake Region State College	84		694		778
North Dakota State College of Science	93		729	260	1,082
Williston State College	100		503	264	867
Dickinson State University	72		567	19	658
Mayville State University	137		534		671
Minot State University	74	15	1,160		1,249
Valley City State University	32		845		877
North Dakota State University	66	62	3,492	1,496	5,116
University of North Dakota	40	782	4,325	2	5,149
<b>Total</b>	<b>995</b>	<b>899</b>	<b>14,968</b>	<b>2,041</b>	<b>18,903</b>

<sup>1</sup>Duplicated total in which students taking courses through multiple delivery methods are counted more than once.

ATTACH:1