HIGHER EDUCATION STUDY - BACKGROUND MEMORANDUM

STUDY RESPONSIBILITIES

The Legislative Management has assigned the following studies to the 2013-14 interim Higher Education Funding Committee:

1. Section 39 of 2013 Senate Bill No. 2018 provides for a study of the intellectual property policies and procedures at research institutions in the state, including consideration of the current and potential income generated through the commercialization of intellectual property, consideration of the best practices related to intellectual property, and related federal Bayh-Dole and Patent Reform Acts. The Judiciary Committee, through direction from the Chairman of Legislative Management, is also studying intellectual property policies and procedures.
2. Section 3 of 2013 Senate Bill No. 2200 provides for a study of higher education funding methods, including options to implement a funding method that is not based on existing levels of funding at institutions. As part of the study, the committee is to consult with representatives of the State Board of Higher Education, the North Dakota University System office, higher education institutions, and other appropriate entities. The section also identifies specific areas that are to be reviewed as part of the study.
3. House Concurrent Resolution No. 3009 provides for a study of the use of open textbooks in the University System, including options to develop partnerships with other states to use open textbooks.

A copy of Section 39 (Appendix A) of Senate Bill No. 2018, Section 3 (Appendix B) of Senate Bill No. 2200, and House Concurrent Resolution 3009 (Appendix C) are attached.

BACKGROUND

The University System consists of 11 higher education institutions under the control of the State Board of Higher Education. Of the 11 institutions, two are doctoral-granting institutions, two are master's-granting institutions, two are universities that offer baccalaureate degrees, and five 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 2013-15 biennium for higher education institutions and the University System office total $1,075,110,856, of which $902,629,915 is from the general fund. The following is a history of higher education legislative appropriations 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	$902,629,915	$172,480,941	$1,075,110,856

NOTE: The special funds amounts for the 1997-99 biennium reflect the appropriation of tuition income and the 1999-2001 biennium 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:

Biennium	General Fund Appropriations		
	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	$223,358,069	$902,629,915

The University System reported a total degree credit headcount enrollment of 48,203 students and a total degree credit full-time equivalent (FTE) enrollment of 38,703 students in the fall 2012 enrollment report. The following is a summary of University System degree credit headcount and FTE fall enrollments for 2003 through 2012:

Fall Headcount Enrollment[1]

Institution	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bismarck State College	3,430	3,546	3,370	3,477	3,591	3,788	4,020	4,177	4,392	4,109
Dickinson State University	2,461	2,479	2,516	2,572	2,670	2,730	2,767	2,485	2,346	1,837
Lake Region State College	1,473	1,464	1,471	1,508	1,520	1,657	1,702	1,913	2,056	1,974
Mayville State University	817	897	912	832	769	789	887	982	970	1,020
Minot State University	3,825	3,851	3,798	3,712	3,424	3,432	3,649	3,866	3,657	3,560
Dakota College at Bottineau	620	602	523	605	637	655	748	863	812	774
State College of Science	2,468	2,481	2,457	2,490	2,417	2,545	2,651	2,833	3,127	3,066
North Dakota State University	11,623	12,026	12,099	12,258	12,527	13,229	14,189	14,407	14,399	14,443
University of North Dakota	13,034	13,187	12,954	12,834	12,559	12,748	13,172	14,194	14,697	15,250
Valley City State University	998	1,033	1,035	1,037	982	1,019	1,083	1,285	1,384	1,362
Williston State College	871	937	947	912	731	850	949	932	993	808
Total	41,620	42,503	42,082	42,237	41,827	43,442	45,817	47,937	48,833	48,203

[1]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[1]

Institution	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bismarck State College	2,747	2,800	2,602	2,651	2,792	2,937	3,160	3,208	3,209	2,990
Dickinson State University	1,992	2,034	2,031	2,059	2,158	2,294	2,187	2,054	1,959	1,454
Lake Region State College	738	738	738	750	764	784	868	921	988	973
Mayville State University	700	761	722	652	586	563	662	704	704	759
Minot State University	3,021	3,022	3,063	2,928	2,730	2,720	2,832	3,002	2,795	2,731
Dakota College at Bottineau	473	447	386	399	402	440	490	540	524	474
State College of Science	2,323	2,271	2,223	2,171	2,097	2,041	2,076	2,217	2,366	2,354
North Dakota State University	10,294	10,692	10,752	10,890	11,221	11,794	12,577	12,708	12,606	12,707
University of North Dakota	11,704	11,815	11,531	11,381	10,967	11,137	11,306	12,018	12,319	12,729
Valley City State University	879	956	899	844	807	824	833	957	1,011	995
Williston State College	704	709	702	648	551	562	573	570	608	537
Total	35,575	36,245	35,649	35,373	35,075	36,096	37,564	38,899	39,089	38,703

[1]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. In order to provide a consistent basis for comparing 2006 enrollments to prior years, the prior year FTE enrollments have been recalculated based on the new definition. 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 students are counted as one FTE enrollment.

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 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)

The Legislative Assembly, through 2013 Senate Bill No. 2200, adopted a new higher education funding method for 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:

Institution(s)	Base Rate Per Credit Hour
North Dakota State University, University of North Dakota	$66.35
Dickinson State University, Mayville State University, Valley City State University	$95.57
Minot State University	$98.75
Bismarck State College, Dakota College at Bottineau, Lake Region State College, State College of Science	$101.73
Williston State College	$104.88

Through June 30, 2017, an institution may not receive less than 96 percent of the state aid to which the institution was entitled during the previous fiscal year. Under the adjusted student credit hour funding method funding for major capital projects is appropriated separately from the formula.

Attached as Appendix D is North Dakota Century Code Chapter 15-18.2 which contains the statutory sections enacted as part of 2013 Senate Bill No. 2200.

INTELLECTUAL PROPERTY

State Board of Higher Education policy 611.2 (Appendix E) establishes guidelines regarding intellectual property for institutions of higher education, including research universities. Each research university is required to establish its own procedures consistent with the board policies to determine ownership and income distribution for intellectual property.

Ownership

State Board of Higher Education policy provides a research university retains ownership of all intellectual property created or developed solely by the research university's faculty, staff, and students using university resources. A private sector partner retains ownership of all intellectual property created or developed solely by its employees. When intellectual property is developed or created jointly by a research university and a private sector partner, both the research university and the private sector partner have an equal, undivided ownership interest in the intellectual property. If the intellectual property was created or developed using federal funding, either the research university retains ownership or the ownership transfers to the federal government. This applies even if the intellectual property was developed jointly between a research university and a private sector partner. The federal Bayh-Dole Act governs intellectual property created or developed using federal funding and requires the research university to try to commercialize the intellectual property. A research university may assign or transfer its ownership interest to an independent foundation.

Royalties

As required by State Board of Higher Education policy, an institution is required to make annual payments of at least 30 percent of the net royalties and fees associated with intellectual property to the inventor. The net royalties are the gross royalties and fees reduced by taxes, expenses for procuring and protecting the patent, and any other relevant costs. The 30 percent minimum for the disbursement of royalties applies both to intellectual property developed solely by a research university's faculty, staff, and students and to intellectual property developed jointly between a research university and a private sector partner.

Royalty-Bearing Licenses

The owner of the intellectual property has the right to negotiate exclusive or nonexclusive commercially reasonable royalty-bearing licenses for the commercialization of the intellectual property. If the intellectual property was created jointly between a private sector partner and a research university, both parties have the right to negotiate royalty-bearing licenses. A private sector partner may request an exclusive royalty-bearing license with the research university to gain complete control over the intellectual property. A nonexclusive royalty-bearing license usually costs less, but allows other private sector partners to gain access to and to utilize the intellectual property. In cases where the intellectual property was created or developed jointly between a private sector partner and a research university using federal funding, the private sector partner has the first option to negotiate a royalty-bearing license with the research university assuming the research university retained ownership of the intellectual property. The terms of royalty-bearing licenses are unique to each agreement.

OPEN TEXTBOOKS

An open textbook is a digital textbook made available to students, teachers, and others at little or no cost. An open textbook is generally available online but may be made available through other formats. Open textbooks are generally licensed under an open copyright license which allows individuals to use, modify, and distribute the materials.

Textbook Costs

The University System currently lists anticipated student book and supply costs to be $1,100 per year. A June 2013 United States Government Accountability Office report found the cost of new college textbooks increased by 82 percent between 2002 and 2012. As a comparison, overall consumer prices increased by 28 percent during the same time period. Options for students to save on textbook costs include renting textbooks, buying used textbooks, buying an e-textbook version, or buying textbooks online.

Actions by Other States Relating to Open Textbooks

Several states have created initiatives to use open textbooks for elementary, secondary, and postsecondary education courses. In 2009 the Florida Legislature passed a bill to establish the Florida Distance Learning Consortium and assigned the consortium the duty to "develop and operate a central instructional content repository that allows public school and postsecondary educational institution users to search, locate, use, and contribute digital and electronic instructional resources and content, including open access textbooks. In the development of the repository, the consortium shall identify and seek partnerships for the purpose of sharing instructional content."

As part of the effort an Open Access Textbook Task Force was established to study the use of open textbooks and prioritize high enrollment general education courses for the use of open access textbooks. The task force developed several recommendations which were used in developing an open textbooks initiative. As part of the initiative, open textbooks are stored on the Florida statewide digital repository named "The Orange Grove." The Orange Grove is an online statewide initiative to store and manage instructional, organizational, and professional development resources for faculty, staff, and students. In addition to open textbooks, the repository includes books, maps, graphs, lesson plans, and other resources.

In 2012 the University of Minnesota created an open academics textbook catalog to help faculty find affordable textbook options for courses, including open textbooks. Instructors can customize the open textbooks to fit course needs by remixing, editing, and adding additional content. Students can generally receive a free digital version of the open textbook or can purchase low-cost printed copies.

ATTACH:5