

SOUTH DAKOTA BOARD OF REGENTS

Full Board

AGENDA ITEM: 24


DATE: June 10-11, 2015

SUBJECT: Program Productivity Review & Guidelines

During the [November 2014](#) and [February 2015](#) AAC meeting, the council discussed the Program Productivity Review process and evaluated the most recent set of programs that were flagged for further review due to graduate numbers that fell below the averages approved by the Board. In addition to reviewing the most recent set of productivity reports, AAC representatives noted concerns in November about the lack of a clear set of guidelines that can be used to manage the yearly program productivity review process. It was agreed that a more robust set of procedural guidelines would be beneficial, and an initial draft (see Attachment I) was discussed during the February meeting. AAC representatives were tasked with reviewing the guidelines further on campus and discussed modifications/changes to the set which are intended to serve as procedural guidelines going forward.

RECOMMENDED ACTION OF THE EXECUTIVE DIRECTOR

Information only.

		<h2>ACADEMIC AFFAIRS GUIDELINES</h2>	
Section 2:		Programs – Curriculum Procedures	
Title:		Program Productivity Review Guidelines	
Number (Current Format)	Number (Prior Format)	Date Last Revised	
2.16		1/15	
Reference			
Related Form(s)			

I. Background

During the 2009 Board of Regents Planning session the Board of Regents discussed establishing a formal program productivity review process in relation to concerns about quality. The Board of Regents affirmed that all students should have the opportunity to learn and to work with a group of faculty and colleagues, and that graduates from programs that are not productive clearly have fewer opportunities for these beneficial interactions. During the October 2009 Board of Regents meeting, the Board approved a set of guidelines to target underproductive programs, and following review during the March 2010 meeting the Board formalized an ongoing Program Productivity Review process. As set in policy, majors not producing the agreed upon number of graduates will be terminated unless the Board approves a continuation plan which must include measurable stipulations.

II. Graduate Limits

A. Graduate Production Thresholds

1. *Associate's Degree*: 5 graduates a year or 25 during the five-year reporting period.
2. *Bachelor's Degree*: 5 graduates a year or 25 during the five-year reporting period.
3. *Master's Degree*: 3 graduates a year or 15 during the five-year reporting period.
4. *Professional & Doctoral Degree*: 1 graduate a year or 5 during the five-year reporting period.

B. Designated Reporting Period

1. The program productivity report will be reviewed by the Academic Affairs Council (AAC) each year during its November meeting.
2. A five-year reporting window will be employed each year depicting the graduate production for all degree programs in the Regental system for the five most recent academic years.
3. Only those degree programs that fail to meet the production thresholds will be flagged for each campus. All degree programs failing to meet production thresholds will be reported and those meeting approved program exclusions will be identified.

C. Program Exclusions

1. Major Program Modifications

- a. Degree programs that have undergone recent program modifications that adversely impact graduate production for an institutions.
- b. Modifications traditionally include programs that have undergone recent name changes during the reporting window that result in two equivalent degree programs.

2. Program/Major Specializations

- a. Degree programs that have one or more specializations which reduce the total number of graduates.

- b. The exclusion may apply only for those specializations where the combination results in graduate production that meets the established threshold for the degree.
- 3. Terminated Programs (See Appendix A & B)**
 - a. Degree programs that have been inactivated during the reporting period, but still depict graduates that fall below the established thresholds.
 - b. Terminated programs will remain on the Program Productivity Report until inactive programs have completely cycled through the established reporting period.
- 4. Program Coding**
 - a. Degree programs that are coded/labeled differently on the campus but represent equivalent degrees approved by the Board of Regents.
 - b. Institutions may receive an exclusion for these programs for three years, at which time program coding must be addressed to align all graduates with the degree program approved by the Board of Regents.
- 5. New Programs**
 - a. Degree programs that have been activated within the past seven years resulting in limited graduate production due to program implementation.
 - b. The activation year shall be identified on the program productivity report, and program exclusion will terminate on the eighth year of active status.
 - c. Institutional review may be requested prior to the eighth year if graduate production is not scaling to the required thresholds for the degree level.
- 6. Program Waivers (See Appendix C)**
 - a. Degree programs that have been reviewed at the institutional and system level and received a “Retain Due to Critical Need” or “Retain with Further Review” designation.
 - b. Retention designations may be approved for three years at which time institutional representatives must re-establish the rationale.

III. Program Designations

A. Designation Process

- 1. Graduate production thresholds serve as a feature of the formal program review process that occurs every seven years at the institutional level.
- 2. If a program is flagged through the program productivity review process, it should facilitate a formal review at the institutional level.
- 3. Following a formal review on campus, institutional representatives must assign one of five program designations to those degree programs that fail to meet established production thresholds.

B. Designation Types

1. Retain Due to Critical Need

- a. An institution may recommend that a degree program be retained due to its ability to fulfill a critical workforce need or shortage area for the state.
- b. Justification for retaining due to critical need must include:
 - i. Explanation of why the program is important to the University/State/region
 - ii. Description of specific steps (already taken and/or planned) to increase enrollment and graduate production;
 - iii. Preliminary outcomes of steps taken.

2. Retain with Further Review Required

- a. An institution may request that a program be retained for further review for those degree programs that serve a specific function central to the mission of the institution.
- b. Justification for retain due to further review must include:
 - i. Explanation for how the program is central to the university’s mission and the benefit to the system;
 - ii. Description of specific steps (already taken and/or planned) to increase enrollment and graduate production;

- iii. Preliminary outcomes of steps taken.
- 3. Consolidate with Another Program on Campus (See Appendix D)**
 - a. An institution may request that a program be consolidated with a similar program on campus that achieves similar degree requirements.
 - b. Justification to consolidate with another program on campus must include:
 - i. Explanation for how the degree requirements for the two programs warrant consolidation;
 - ii. Evidence that the consolidation will meet graduate production thresholds, or specific steps to increase enrollment to meet production thresholds;
 - iii. Preliminary outcomes of steps taken.
- 4. Consolidate with Another Program(s) within the System**
 - a. Two or more institutions may request that similar degree programs be consolidated to maintain equivalent degree programs.
 - b. Justification for retaining due to multi-institutional consolidation must include:
 - i. Explanation for how the consolidated programs will collaborate (e.g., sharing of required courses, shared faculty, etc.) to maintain graduate production thresholds;
 - ii. Evidence that multi-institution collaboration will meet graduate production thresholds, or specific steps to increase enrollment if merging programs fails to meet production thresholds;
 - iii. Preliminary outcomes of collaboration between institutions.
- 5. Terminate**
 - a. An institution may request that a program be terminated due to limited graduate production, lack of student interest, shifts in a given field of study, or continued declines in major enrollments.
 - b. If the exigency for termination results from the program productivity review process then a brief justification to terminate a program should be included. Such a justification must include:
 - i. Explanation for the decline in graduate production in the degree program;
 - ii. Intended timeframe for submitting a program termination request to the Board of Regents for their consideration;
 - iii. Expected timeline to meet teach-out requirements established through the regional accrediting body.

Appendix A
Programs Terminated Through Program Productivity Review Process

Black Hills State University

- 2010 - BA in American Indian Studies
- 2010 - BS in Spanish
- 2010 - BA in Composite Music (non-teaching)
- 2010 - BA in Composite Vocal Music
- 2010 - BA in Speech/Speech Communication
- 2012 - BA in Mass Communications
- 2012 - BA in Composite Communication/English
- 2012 - BA in Composite Communication/Speech
- 2012 - BS in Composite Communication/Speech
- 2012 - BA in Composite Social Science
- 2012 - BS in Composite Social Science
- 2012 - BA in Social Science
- 2012 - AS in Paraprofessional Education
- 2012 - BA in Sociology
- 2012 - BA in Communication Arts

Dakota State University

- 2011 - AS in Office Management
- 2013 - BS in Scientific Forensics Technology

Northern State University

- 2010 - BA in Community Development
- 2012 - AS in Social Services
- 2012 – AS in Desktop Publishing
- 2012 – AS in Paraprofessional Education
- 2012 – AA in Commercial Art
- 2015 - BSEd. in Art – Comprehensive
- 2015 - BSEd in Speech
- 2015 - BSEd in E-Business Education
- 2015 - MS Ed in Teaching and Learning – Special Education

South Dakota School of Mines & Technology

South Dakota State University

- BS in Arts and Sciences in Microbiology
- BS in Safety Management
- BATS - Industrial Supervision
- BATS - Applied Agriculture
- BATS - General Supervision
- BATS - Allied Health
- BATS - General Technology
- BATS - Industrial Sales
- BS in Global Studies
- BS in Arts and Sciences in Mathematics

University of South Dakota

- BSEd in Political Science
- BSEd in Chemistry Education
- BFA in Theatre Education
- BA in Biology
- BA in Mathematics
- BA in Chemistry

Appendix B
Program Specializations Terminated (Retain Core Program) through Program Productivity Review Process

Black Hills State University

Dakota State University

Northern State University

- BS in Environmental Science (Bioremediation, Wildlife Management, Rural Planning & Environmental Policy)
- BA in French Studies (Business, General Studies)
- BA in English (Teaching English as a Second Language, Literature, Teaching, Creative Writing, Professional Writing and Rhetoric, Desktop)
- BS in Human Performance and Fitness (Personal Training/Strength and Conditioning, Fitness Administration, Health and Fitness for Older Adults)
- BA in Sociology (Professional Sociology)

South Dakota School of Mines & Technology

- BS in Geology (Applied Geology, Earth System Science, Paleontology)

South Dakota State University

- BS in Ag System Technology (Business, Environmental Science & Engineering, Environmental systems, Processing, Production)
- BS in Ag and Biosystems Engineering (Environmental Science and Engineering, Food and Bio Materials Engineering)
- BS in Ag with major in Range Science (Range Livestock Production, Rangeland Ecology & Habitat Management, Rangeland Resources Conservation)
- BA in Art (Visual Art, Education)
- BS in Art (Visual Art, Education)
- BA in Arts and Sciences, with major in Sociology (Human Resources, Human Services, Pre-Social Work, Teaching)
- BS in Arts and Sciences, with major in Sociology (Pre-Social Work, Teaching)
- BS in Biol Sc., major in Environmental Management (Environmental Science & Engineering)
- BS in Arts and Sciences with major in Biology (Organismal Biology, Pre-Professional Ecology, Secondary Education)
- BS in Biol. Sciences in Biology (Ecology, Secondary Education, Organismal Biology)
- BS in Biol Sciences, major in Microbiology (Infectious Diseases, Microbiology, Environmental and Applied Microbiology)
- BS in Civil Engineering (Environmental Science & Engineering)
- BS in Clinical & Laboratory Science (Clinical Laboratory, Industrial Laboratory)
- BA in Arts and Sciences with major in Communication Studies and Theatre (Speech, Education, Theatre)
- BS in Arts and Science with major in Communication Studies and Theatre (Speech Education)
- BA in Arts and Sciences with major in English (English Education)
- BS in Industrial Management (Industrial Sales)
- BS in Agriculture with major in Horticulture (Business, Production)
- BA and BS in History (Teaching)
- BA in Arts and Sciences in Journalism (Broadcast Journalism, News Editorial)

- BS in Arts and Sciences in Journalism (Broadcast Journalism, New Editorial)
- BA in Arts and Sciences with major in German (Modern Language Business Economics, Teaching)
- BA in Arts and Sciences with major in French Studies (Modern Language Business Economics, Teaching)
- BA in Arts and Sciences with major in Spanish (Modern Language Business Economics, Teaching)
- BS in NFS (Nutritional Sciences, Food Science)
- BS in Hospitality Management (Foodservice Management, Hotel & Hosp. Management)
- BS in Physics (Teaching)
- BS in Agriculture, with major in Agronomy (Business, Production, Pest Management, Science)
- BS in Arts and Sciences with major in Psychology (Graduate School Preparation, Psychological Services, Teaching)
- MS in Animal Science (Genetics & Reproduction, Meats, Muscle Biology & Growth, Production & Processing, Range Science, Veterinary Science)
- MS in Biological Sciences (Food and Biomaterial Processing, Horticultural Science, Human Nutrition and Food Science, Pharmaceutical Sciences, Veterinary Microbiology, Veterinary Pathology)
- MEd in Educational Administration (Adult & Higher Education, Career & Technical Education)
- MS in Plant Science (Agroecology, Agronomy, Crop Science, Entomology, Horticultural Crop Management, Machinery Systems & Water Management, Plant Pathology, Soil Science, Weed Science)
- MS in Rural Sociology (Demography, Criminal Justice, Family Studies, Applied Research)

University of South Dakota

Appendix C

Programs Retained With Further Review through Program Productivity Review Process

Black Hills State University

- *2012 – Associate of Industrial Technology*
 The program includes courses that are required in other Industrial Technology programs and “dovetails” with the four-year industrial tech program; thus, there is not an added cost to BHSU. In August 2012, a consultant was commissioned to conduct a comprehensive review of BHSU’s Industrial Technology programs including recommendations for how to strengthen and enhance the area. The recommendations were very helpful and are in the process of being implemented by the faculty. In addition, the Industrial Technology program at BHSU is the only IT program in the state. It is a unique niche area for BHSU.
- *2012 – Associate of Advanced Manufacturing Technology*
 The program includes courses that are required in other Industrial Technology programs; thus, there is not an added cost to BHSU. In addition, the IT program at BHSU is the only IT program in the state and the associates in advanced manufacturing is unique to BHSU. In addition, this program is available to students in Rapid City as well as Yankton; thus, it has statewide impact. This program was included in the consultant’s review.
- *2012 - Associate of Tourism & Hospitality Management*
 The associates in tourism include courses that are a part of the business administration-tourism and hospitality management specialization. Thus, there is not an additional cost to BHSU. This program is unique to South Dakota and is delivered via DDN to the Sioux Falls market. The School of Business will examine the viability of marketing the bachelors in tourism in Sioux Falls to expand the tourism program options.
- *2012 – Bachelor of Applied Technical Sciences*
 The program includes courses that are required in other Industrial Technology programs; thus, there is not an added cost to BHSU. In addition, the IT program at BHSU is the only IT program in the state. It is a unique niche area for BHSU. This program is the result of an articulation agreement with Western Dakota Tech Institute and with continued cooperation, there is an opportunity for growth in this program. This program was included in the discussions with the consultant.
- *2012 – Bachelor of Composite Chemistry*
 The program is fairly new to BHSU and efforts have been made to hire the appropriate faculty (and number) to sustain and grow the program. Twenty five majors were enrolled during the fall 2011 semester. With the hiring of four chemistry faculty and the addition of a new life sciences building, the opportunity to grow the program with new majors is now being undertaken.
- *2012 – Bachelor of Social Sciences & Composite Social Science*
 In 2009, Black Hills State University offered five majors which had a general Social Science overview and had the phrase Social Science in the title. After the last Program Productivity Review, three of those majors were eliminated, while the University retained the two programs currently under review. Since it has been only two years since three Social Science majors were eliminated, it makes sense to retain both of these programs in order to provide time for the result of this consolidation to take effect. At this point, it is believed that not enough time has elapsed to gain an accurate reading of the enrollment trends.
- *2012 - Bachelor of Mathematics*
 Although the number of graduates in these last years did not meet targets, the general trend of these numbers has been up over the last several years. This year we anticipate as many as ten graduates. Mathematics generally, and the training of mathematics secondary school teachers

specifically, are national and statewide priorities. In order to maintain a viable secondary teacher training program, it is essential that a mathematics program be offered.

- *2012 - Bachelor of American Indian Studies*

The state of South Dakota has made a moral and legal commitment to support American Indian Studies programs at Black Hills State University. Black Hills State University supports a Major in American Indian Studies, leading to the Bachelor of Science; a general Minor in American Indian Studies; the Minor in American Indian Studies: Teaching; and an American Indian Studies Minor: Emphasis in Communications. The Major in American Indian Studies was formally initiated in the Fall of 1997. We are currently the only American Indian Studies major that has consistently enrolled students since its inception. According to the South Dakota Board of Regents Program Review (2009), BHSU has graduated nineteen (19) students from Academic Year 2005-2006 to Academic Year 2008-2009 with a B.S. in American Indian Studies. In the spring of 2009 there were eighteen (18) students with a minor in American Indian Studies. Currently, there are sixteen (16) students majoring and twelve (12) students minoring in American Indian Studies. We expect these numbers to remain consistent or increase.

Dakota State University

- *2012 – Bachelor of Computer Education*

The degree program has had 13 graduates over the last 5 years and currently has 5 students enrolled in it. DSU is the only public institution in South Dakota offering the degree program. Program graduates are qualified to teach computer education. They are also qualified to manage the computer network for a K-12 school district. The program will be part of the NCATE / DOE review, which is scheduled for 2016. The curriculum for the degree program has extensive overlap with the curriculum for the B.S. in information systems. There are only 3 courses (9 credits) that are not required in the B.S. in information systems: CIS 275, 325 and 383. However, those 3 courses are required courses for other degree programs within the college, so there are not any unique courses in the degree program, other than the teaching methods course. There are currently 65 students enrolled in the B.S. in information systems, with 83 graduates over the last 5 years. Because of the overlap in curriculum, DSU is requesting that the program not be included in the program productivity review process in the future, as long as the combined enrollments in B.S.Ed in computer education and B.S. in information systems remain strong.

- *2012 – Bachelor of Respiratory Care*

The degree program has had 16 graduates over the last 5 years and currently has 26 students enrolled in it. This degree program has been identified as a high-need degree program and DSU is the only public institution in South Dakota offering it. DSU also offers an A.S. in respiratory care. That program is quite large, with 87 graduates over the last 5 years and 72 students currently enrolled in the A.S. degree program. Currently, graduates of 2-year degree programs are eligible for certification. However, the accrediting agency for respiratory care degree programs is discussing the possibility of moving the certification process to 4-year degree programs only. As a consequence, it would not be advantageous to eliminate the 4-year program now, only to rebuild it in a few years when the change in the certification process is made. The curriculum for the 4-year degree program has extensive overlap with the curriculum for the 2-year program. There are only 3 respiratory care academic courses (8 credits) in the 4-year degree program that are not required in the 2-year program. The 4-year degree program also includes an additional 6 credits in clinical courses that are not included in the 2-year program. Both the A.S. and the B.S. degree programs will be reviewed in 2017-2018 by CoARC. Because of the overlap in curriculum between the A.S. and B.S. programs, DSU is requesting that the program not be included in the program productivity review process in the future, as long as the combined enrollments in the A.S. and B.S. programs remain strong.

- *2012 – Bachelor Business Technology BBA (Formerly Management for Information Systems)*

New program entitled Business Technology DSU is requesting time to grow enrollments with the new curriculum. Our recommendation is a review again in 3 years, after the ACBSP review. The degree program has had 15 graduates over the last 5 years and currently has 15 students enrolled in it. The curriculum for the degree program has been reviewed and modified, effective Fall 2012,

with a stronger emphasis on business technology, rather than MIS. The curriculum for the newly revised degree program has extensive overlap with the curriculum for the other BBA degree programs and with the B.S. in information systems. There are only 3 courses (9 credits) that are unique to this degree program: BADM 331, BADM 435 and BADM 475). These 3 courses are not required in any other degree program but could be used as electives in any of the other BBA degree programs. There are currently 65 students enrolled in the B.S. in information systems, with 83 graduates over the last 5 years. A faculty champion has been appointed. The faculty champion is expected to help draw attention to the newly revised degree program, as one means of boosting program enrollments. Enrollment projections for the future: the goal is to increase program enrollments with 10 new students admitted to the program every year. The revised program will be part of the ACBSP accreditation review in 2014-2015. DSU is requesting time to grow enrollments with the new curriculum. Our recommendation is a review again in 3 years, after the ACBSP review.

- *2012 – Bachelor of Professional Accountancy*

The degree program has had 13 graduates over the last 5 years and currently has 18 students enrolled in it. The BBA in accounting has had 29 graduates over the last 5 years and currently has 28 students enrolled in it. The curriculum requirements for the B.S. in professional accountancy are set by the board that governs the CPA examination process. Students who complete the BBA in accounting and who want to sit for the CPA exam must complete an additional 30 credits of coursework before sitting for the exam (150 credits total). Although 150 credits are required to sit for the CPA exam, the board does not specify which additional credits the student must complete, beyond the BBA in accounting. Although academic advisors recommend that professional accountancy students complete additional BBA courses, to gain a more well-rounded business background, students can complete any combination of credits. This degree program will be reviewed as part of the ACBSP accreditation review. Because of the overlap in curriculum between the B.S. in professional accountancy and the BBA in accounting, DSU is requesting that the program not be included in the program productivity review process in the future, as long as the combined enrollments in the B.S. and BBA programs remain strong.

Northern State University

- *2012 – Associate of Gerontology*

NSU plans to make this program available for online delivery by Spring 2013. This should improve our enrollment numbers. In addition, the department plans to further develop relationships with institutions, agencies, and private industry, which will include the development of an Advisory Board. Similarly, the department plans to collaborate with other SD Board of Regent institutions through the newly established Gerontology Consortium.

- *2012 – Associate of Banking & Financial Services*

Our recommendation is that this program be retained. Currently, four (4) students are enrolled in the Banking and Financial Services Associate program. However, this program was recently made available in an online format, which we anticipate will improve our enrollment numbers. Furthermore, all of the courses in the program are common to the courses in the Banking major, i.e., there are no unique courses in the Associate degree program. An advertising campaign is currently underway to promote the new M.S. in Banking and Financial Services, as well as the B.S. and A.S. degrees.

- *2012 – Bachelor of Communication Studies*

Twenty (20) students graduated from this program in the five-year period 2006-2011. An additional five (5) students graduated in AY12. The College of Arts and Sciences is currently working on recruiting majors into this program through its Speech and Debate Team activities.

- *2012 – Bachelor of Chemistry*

The College of Arts and Sciences has implemented several strategies in an attempt to increase enrollments. The curriculum was recently revised to enhance student success in the program. Chemistry 106 has been developed in an online format, which should also help recruit students

into the program. In addition, a faculty member will be submitting a grant to NSF later this year entitled “Increasing STEM Graduates by increasing Undergraduate Research and Enhancing their Laboratory Experience.” It is anticipated that these efforts will result in increased enrollments in this program.

- *2012 – Bachelor of Music Theater*

The BA in Musical Theater was approved in Spring 2008, with classes for the degree being formally offered in the fall of 2008. This fall marks the fourth official year of the degree. Up to this point, several students had been taking courses that met the degree requirements, even though NSU was not granted permission to confer the degrees until spring 2009. In addition to the number of graduates provided by the Board of Regents, indicating that three (3) students have graduated from this program in the past 5 years, two (2) additional students graduated in AY12, bringing the total to five (5) students. Two (2) more will graduate this spring, which will represent the first full class of students enrolled in the program for four years. The enrollments in this major continue to increase. Currently, there are 15 majors in musical theater, which is consistent with our budget predictions when the degree was approved. Five of these students are freshmen. Based upon the excellence and reputation of this program, it is anticipated that this growth trend will continue and we estimate that within the next five years we should meet the 25-graduate threshold. Aggressive marketing and recruiting efforts continue with brochures, a recruiting booth taken to high school theater activities around the state, and NSU's hosting of the SD State One-Act Festival, bringing nearly 1,000 high school theatre students to campus.

- *2012 – Bachelor of Medical Lab Science*

The table below shows the enrollment growth that this program has experienced over the past several years. Prior to 2009, the program was titled Medical Technology. (A few students are still enrolled under the Medical Technology program, rather than the Medical Lab Science program.) It is anticipated that the revision of the curriculum that accompanied the title change to Medical Lab Science will continue to have a positive impact on enrollment numbers. In addition, the College of Arts and Sciences has developed an advertising campaign and has developed new promotional materials. Most importantly, NSU has developed an affiliation with the Western Alliance at the University of North Dakota. This alliance has provided NSU students with more than 70 clinical sites from which to choose for their internships. (Previously, there were only three clinical sites from which to choose.)

- *2012 – Bachelor of International Business*

The Bachelor of Arts degree in International Business has been offered by Northern State University since 1997. Graduates of the program totaled eighteen (18) over the five-year period 2006-2011. An additional six (6) students graduated in AY12. Currently 28 students are majoring in the program. A number of measures have been taken to increase enrollment. On May 17, 2010 NSU's International Business program was accredited by the Network of International Business Schools. On December 3, 2009 NSU's International Business program formally established an Advisory Board, which meets twice annually. NSU's School of Business has made curricular changes to the International Business major to enhance its attractiveness to students based on Board input. Last spring, the Board of Regents approved NSU to offer the International Business major online. It is estimated that the online offerings will significantly increase the number of majors and graduates in International Business. As well, in the spring of 2011, the Board of Regents approved NSU to offer the International Business degree as a minor. Finally, the School of Business is examining the possibility of placing an International Business course into its required business core. Such a placement would expose all business majors to the possibility of becoming an International Business major with a resultant increase in the number of majors.

South Dakota School of Mines & Technology

- *Master of Paleontology*

This is the only M.S. program in paleontology in the nation. Paleontology has been an important part of SDSMT for nearly its entire existence. The collections of the Museum of Geology are

among the finest in the world. Since opening in the summer of 2010, the Paleontology Research Laboratory has provided a world-class research repository for faculty and students.

- *Doctorate of Geological Engineering*

The earth sciences have been a central pillar for the School of Mines and will continue to grow in importance as the deep underground laboratory is built. In addition a number of the students enrolled in this program are engaged in paleontological research.

South Dakota State University

- *2012 – Bachelor of Agricultural & Resource Economics*

Recommendation for status of the program: Retain due to critical need. A program in Agricultural and Resource Economics contributes greatly toward the university's land-grant mission. In addition, this program serves the needs of many of the department's accelerated master's students. Finally, it should be added that this program is nearly costless to maintain, as all of its courses also contribute to the heavily-enrolled Agricultural Business and Economics majors.

Fall 2011 census day enrollment in the major: 13 and Fall 2012 census day enrollment in the major: 10. When interpreting current enrollment numbers, one should note that many first- and second-year students who are planning on an AGREC major are designated as P-ECN. The AGREC enrollment numbers therefore understate student interest in this program. The College of Agriculture and Biological Sciences had 175 P-ECN students on census day for Fall 2011, so there is a robust demand for Economics Department majors, including the Agricultural and Resource Economics major.

Number of graduates in December 2011 / May 2012: 5. *Specific steps taken to increase enrollment and number of graduates:* The Department of Economics has recently revived Introduction to Resource and Environmental Economics (AGEC 372) and Resource and Environmental Economics (ECON 472/572) to appeal to students who are interested in these topics, with the latter being required for the AGREC major. Moreover, the department has made a concerted effort to recruit high-quality undergraduate students into the accelerated master's program in Economics. The Agricultural and Resource Economics major, in concert with the Economics major, serves as the primary program for students who wish to pursue graduate training in this field. Increased enrollment in the accelerated master's program will lead to a larger number of undergraduates choosing the Agricultural and Resource Economics major. *Preliminary outcome of steps taken to increase enrollment and number of graduates:* The department graduated five students in this major during the 2011-2012 academic year, which equals the pace necessary to achieve the required 25 graduates over five years.

- *2012 – Master of Sociology & Rural Studies*

The June Program Productivity report was submitted by Dr. Mary Emery, Department Head. *Census day Fall 2012 enrollment is 18 students and the Census day Fall 2011 enrollment in the major.* A total of 17 students enrolled in the MS in Sociology program. Seven are in the on-campus cohort and 11 are enrolled in the Great Plains Interactional Distance Education Alliance (GPIDEA) Community Development specialization online cohort.

Number of graduates December 2011/May 2012: Five students graduated with an MS in the regular Sociology Program. Two students graduated with an MS in the GPIDEA program from SDSU. The program is so new, beginning at SDSU in 2007 and admitting primarily part-time students, that we are just now starting to see students graduate. Among all the participating institutions (ISU, UNL, KSU, NDSU and SDSU) for GPIDEA Community Development, there were 10 graduates this year 2011-2012, a 50% increase over last year (2010-2011).

Description of specific steps taken to increase enrollment and number of graduates: Information on the Master's programs has been disseminated at various conferences and meetings including the Great Plains Sociological Association conference in Spearfish, the Rural Sociological Society conference in Boise, ID and the Community Development Society conference also in Boise, ID. In addition materials have been taken to the Community Development Institute in Boise and sent to

other CDI programs, to the Community Capitals Institute, and to various other community development events. We are working to connect with other schools in order to recruit additional students into the graduate programs including North Dakota State University and Black Hills State University. We plan to increase our outreach to regional Colleges in Minnesota in the future.

Preliminary outcomes of steps taken to increase enrollment and number of graduates: Overall applications are up from 15 last year (10 PhD, 5 GPIDEA) to 33 this year (11 PhD, 8 MS, and 14 GPIDEA)

- *2012 – Master of Chemistry*

Retain; critical need for functioning of the chemistry graduate program even though it will also produce a relatively low number of graduates that varies widely. The majority of students pursuing a graduate degree in chemistry go directly from the baccalaureate to the doctorate; the tradition within the discipline is that a M.S. degree is not required for admission to the PhD program. Thus the Department's graduate program emphasizes the recruitment of students intent on pursuing a PhD in chemistry.

Within this framework, 1.) The M.S. degree in chemistry (Option A) serves two purposes in the department's graduate program. First, it provides a terminal degree for graduate students in the doctoral program who cannot complete the PhD. Second, it provides an opportunity for students seeking a doctorate in chemistry but lacking the requisite content knowledge an opportunity to strengthen their preparation prior to applying to the doctoral program. There are no additional costs incurred to offer the Chemistry M.S. (Option A) because all the necessary coursework is also required by the Chemistry PhD and 2.) The M.S. degree in chemistry (Option B) is exclusively targeted at high school chemistry teachers needing to improve their content knowledge to meet the requirements of the "No Child Left Behind" Act. As practicing teachers, these students matriculate slowly through the program.

The Chemistry graduate program was reviewed by the American Association for the Advancement of Science (AAAS) during the Department's 2010 Institutional Program Review (IPR). The AAAS panel concluded that the program was consistent with national norms.

Census day Fall 2011 enrollment in the major: 11 and the Census day Fall 2012 enrollment in the major: 10. Number of graduates December 2011/May 2012: 5 Description of specific steps taken to increase enrollment and number of graduates: In the 2011/2012 academic year, the on-line, chemical education track within the degree (Option B) that is targeted specifically to high school chemistry teachers was proposed and accepted as a WICHE Western Regional Graduate Program (WRGP). *Preliminary outcomes of steps taken to increase enrollment and number of graduates:* Since the WICHE WRGP status does not take effect until the 2012/2013 academic year it is too early to tell what the outcome of receiving this designation will be.

- *2012 - Doctorate of Agronomy*

Plant Science requests that the Agronomy PhD program be retained based on two justifications: 1.) Based on the current enrollment, the program should easily meet the minimum graduation rates going forward. We currently have 18 students, and this number will increase as new faculty are hired to fill current vacancies. Given that a PhD in Agronomy takes 4-5 years for completion, our current enrollment of 18 students should result in an average of 4-5 graduates/year. However, this is still a small program so the graduate rate will be stochastic. This is illustrated by results of 2010-11 and 2011-12 where we had 0 and 2 graduates, respectively

There is a nationwide shortage of PhD trained scientists in agronomy. The Plant Science Department has experienced this first hand during our efforts to fill vacancies. The pools of qualified candidates were small and we have had difficulty competing with attractive salary packages being offered by other universities. Industry is also experiencing this shortage, leading them to create fellowship programs to increase enrollment in Agronomy and related areas. This is exemplified by the Monsanto Plant Breeding Fellowships in our department. The world population

is expected to hit 9 billion by 2050, which will result in a doubling of demand for agricultural production. Doubling of production will in turn increase the demand for PhD trained agronomists to develop the new technologies needed. Therefore, we should retain the PhD in Agronomy to meet this critical need.

Census Day Fall 2012 enrollment: 18 PhD students in the Agronomy major. Number of graduates December 2011/May 2012: 2 graduates in spring 2012. Description of specific steps taken to increase enrollment and number of graduates: All faculties with research appointments in the department of Plant Science are encouraged to have PhD graduate students. This coupled with the increased research expectations at SDSU, grant awards received, and hiring of new faculty, will continue to drive up Agronomy PhD enrollment. Our goal is to increase the number of PhD students in Plant Science Areas to average 2 per research FTE or a total of 40 PhD students by 2016. *Preliminary outcomes of steps taken to increase enrollment and number of graduates:* Over the past few years, we have hired a number of new, research-active faculty and increased the expectations for current faculty. This has resulted in a steady growth of the Plant Science Department's PhD programs to their current level of 18 students in Agronomy, 9 in Biological Science and 2 in Computational Science (An increase of 3 over last year). We fully expect this trend to continue.

University of South Dakota

- *2012 – Bachelor of Native Studies*

This major is only two students away from the minimum of 25. Although the appeal of the program is likely to remain limited, it provides a unique opportunity for students interested in the culture, language, and history of the indigenous peoples of the upper Great Plains. Students intending to work in human services or the public section in South Dakota or the region gain particular advantage from study in this field, but the availability of the Native Studies program also contributes more generally to curricular diversity at USD.

- *2012 – Bachelor of Earth Sciences*

This program is only one student away from the minimum of 25. Program is expected to remain stable at approximately this level, continuing to provide valuable education and training for students interested in geology and other earth sciences. The program also complements the new Sustainability major, which includes ESCI offerings as both core and elective courses. The introductory Earth Sciences courses are a popular choice for general education.

- *2012 - Bachelor of Liberal Studies*

This individualized, interdisciplinary program is available by petition only to students who are able to show that their specific professional and educational aims cannot be met in an existing major. While most students are best served by a traditional major, motivated students with unusual combinations of interests or talents benefit from the rigorous academic path of the BLS degree. Students take mainly upper-division courses in multiple departments within the university; the program has no assigned faculty and therefore has no dedicated instructional cost.

- *2012 - Bachelor of Philosophy*

Philosophy is a foundational discipline within the liberal arts, and essential to USD's undergraduate curriculum. Enrollment in lower-division courses has grown in the last two years as the department has diversified its offerings and adjusted its scheduling; these developments bode well for modest growth in the number of majors. Ethics courses are also required for nursing students in the BSN and for majors in Medical Biology and Sustainability. Courses taught by Philosophy faculty are integral to the University Honors Program as well.

- *2012 - Master of Natural Sciences*

The current design of the program limits accessibility for the secondary school educators who are its primary audience. A program modification that allows for more innovative delivery to a larger number of students will be presented to the Board of Regents at its December 2012 meeting.

- 2012 – *Master of Biomedical Sciences*

This degree has traditionally only been awarded to Biomedical Sciences students who decide not to continue with the PhD. Starting with the 2012-13 academic year, it will be awarded to all Biomedical Sciences students who have completed the requirements for an MS degree. The number of degrees awarded to PhD candidates suggests that the program already enrolls enough graduates to meet the required minimum.

Appendix D
Program Consolidated through Program Productivity Review Process

Black Hills State University

- 2010 - - BSED in Composite Instrumental Music
- 2010 – BS in Composite Physical Science

Dakota State University

Northern State University

South Dakota School of Mines & Technology

South Dakota State University

University of South Dakota