

SOUTH DAKOTA BOARD OF REGENTS

Committee on Budget and Finance

AGENDA ITEM: III – E

DATE: June 10-11, 2015

SUBJECT: Northern State University New Science and Math Building – Preliminary Facility Statement

Northern State University requests approval of its Preliminary Facility Statement to plan for the construction of a new Science and Math Building. This building would provide much needed lab space for faculty and student research purposes.

NSU’s current prep rooms are overcrowded and difficult to maintain due to the number of courses being offered. Storage and lab prep spaces are also inadequate. NSU’s mammal collection is currently being housed at SDSU because of space limitations on campus.

In addition, NSU has seen an increased success rate in its Math Lab program. This is causing limited space for growth in the program. Success of both the Math and Science Departments is contingent on sufficient space for teaching and research activities and equipment.

The proposed new facility would enhance recruitment, retention and the educational experience for students enrolled in chemistry, biology and environmental science programs. NSU’s long term growth focuses on Biology and Environmental Science that would allow enhanced research and education outreach. New courses and programs will be developed and existing courses will be modified or discontinued to address the needs of the faculty and students. NSU’s local and global visibility, increased enrollment, improved student retention and commitment to Teaching, Research, and Service will be enriched by the development of interdisciplinary programs.

The Higher Education Facilities Funds are committed until at least FY2020. The Board would then need to approve any projects to be funded beyond that point from HEFF. Approval of this project will allow NSU to develop schematics that can be used to raise private donations and develop a funding source proposal.

RECOMMENDED ACTION OF THE EXECUTIVE DIRECTOR

Approve NSU’s Preliminary Facility Statement to plan for construction of a new Science and Math Building. This will allow NSU to develop its Facility Program Plan and outline more specific plan details, cost estimates and funding sources. If approved, the Board President should appoint a Building Committee representative to oversee the planning of this project. Approval of the Preliminary Facility Statement does not commit future HEFF dollars.

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Additional details of this project are found in NSU's attached Preliminary Facility Statement. Local funds or donated funds will be used to develop the project's Facility Program Plan.

**PRELIMINARY FACILITY STATEMENT
FOR
CONSTRUCTION OF NEW SCIENCE AND MATH BUILDING
NORTHERN STATE UNIVERSITY
June 2015**

Northern State University requests approval of this Preliminary Facility Statement to construct a new science building.

1. GENERAL PROGRAMMATIC NEED TO BE ADDRESSED

The MeWaldt-Jensen building which houses the math and science classes today was built in 1964. The building has been well-cared for and the science labs were renovated in 2011. However, we have run out of lab space which thus limits the opportunities available to students. For the most part, upper-level classes are being taught in the same space that faculty and students use for research purposes, which limits the number of students engaged in research and related learning opportunities at any given time. Storage and lab prep space are also inadequate. For example, our collection of mammals is currently being housed at SDSU because we have no space to keep the specimens here. Our existing prep rooms are overcrowded and somewhat difficult to maintain due to the number of courses we offer. NSU's Math Lab program helps train our Math Educators, but also has increased our success rate of general math understanding in students from ~50% to ~70%. As such, the numbers of College Algebra sections has increased from two to seven; therefore math also struggles with space issues. Limited space prevents additional growth in the Math Lab program as well as the Math and Math Education degrees. The success of the Math and Science Department has resulted in overutilization of current teaching facilities and insufficient space for research activities and equipment.

A state of the art science and math education facility will enhance recruitment, retention and the educational experience of students enrolled in chemistry, biology and environmental science programs. As part of NSU's long-term growth strategy, a focus on Biology and Environmental Science will 1) enable faculty to enhance their own research interests; 2) be engaging and beneficial for current NSU undergraduate students as well as enticing for students considering NSU; and 3) serve the community via education and outreach by addressing problems of local, regional, and potentially global importance. New courses and programs will be developed and existing courses will be modified or discontinued to address the needs of faculty and students. A series of interdisciplinary programs will be created to enhance NSU's local and global visibility, increase enrollment, improve student retention, and honor Northern's commitment to Teaching, Research, and Service. Our goal is to provide students an education in a modern learning environment with adequate lab and classroom space that has been designed and built to meet the needs of today's faculty and students.

Recent numbers and course offering adjustments in Biology.		
Descriptor	Academic year 2008-2009	Academic year 2014-2015
Number of (just) Biology majors	78	162 (~60% increase)
Number of labs utilized	8 (out of 8)	11 (out of 11) per semester
Number of General Biology lecture sections	1 section (with 80 students)	2 sections per semester
Number of General Biology lab sections	3 sections	4-6 sections per semester
Number of IDL (Freshman Seminar) sections	1 section (with 24 students)	3 sections (each with 24 students)
Number of Senior Seminar sections	1 section (with 20 students)	2 sections (each with 20 students), potentially 3 sections per year
Number of sections for following upper level courses: Microbiology, Genetics, Vertebrate Zoology, Invertebrate Zoology, Ecology, Plant Structure and Function	1 section (with 24 students)	2 sections (each with 24 students)

New course offerings in the last five years.	
Academic year 2008-2009	Academic year 2014-2015
Online Course Offerings (1): Medical Terminology	Online Course Offerings (14): Medical Terminology, Women in Science, Ocean Systems, Bioethics, Chemistry 106 and 108, Microbiology, Anatomy, Physiology, Soils in Society, Evolution, Mammalogy, Ornithology, and Herpetology
Environmental Course Offerings (4): Environmental Science and Conservation, Plant Systematic, Plant Structure and Function, and Evolution	Environmental Course Offerings (14): Environmental Science and Conservation, Plant Systematic, Plant Structure and Function Introduction to GIS, GIS II, Biogeography, Ocean Systems, Aquatic Ecology, Entomology, Marine Biology, Soils in Society, Evolution, Mammalogy, Ornithology, and Herpetology
No Biotech Courses	4 Biotech Courses: Proteomics, Cell Culture, Intro to Biotech, and Bioinformatics
No Statistics Course	1 Science Stats Course: Biostatistics

2. ANALYSIS OF CONSTITUENTS TO BE SERVED

This project will serve the students and faculty in College of Arts and Science.

3. ADDITIONAL SERVICES OFFERED

A new facility will make it possible to expand class offerings and provide enhanced student and faculty research opportunities. Adequate lab space will allow faculty to provide instruction in a more hands-on environment that will result in students who are better prepared in their field of study. Sufficient prep, storage and office spaces are also important space considerations.

4. COMPLIANCE WITH THE MASTER PLAN

The NSU Campus Master Plan prepared in 2001 and updated in 2009 identified the need for additional lab space, classrooms and faculty offices.

5. ANALYSIS OF NEEDS ASSESSMENT BASED ON THE FACILITIES UTILIZATION REPORT

Although the utilization report would show that the space can be used, the space is not designed to be utilized in a manner that meets the programmatic needs of faculty and students. Spaces do not accommodate the modern equipment and hands on teaching environment used today.

6. LOCATION

The facility would be located south of the current MeWaldt-Jensen building.

7. REALLOCATION OF OLD SPACE, IF ANY

Existing labs would be used for research. Space would also be available for expansion of E-Learning.

8. PROPOSED FUNDING SOURCE

While the total project cost is not known at this time, it is anticipated that a portion of the funds would be provided through private donations. NSU would like to request that HEFF or general funds also be considered as a potential fund source.

9. BUDGET FOR DEVELOPMENT OF A FACILITY PROGRAM PLAN

Local funds or private donations will be used to fund the facility program plan.