



SOUTH DAKOTA BOARD OF REGENTS  
ACADEMIC AFFAIRS FORMS

New Course Request

USD/SDSM&T

Biomedical Engineering/Nanoscience & Nanoengineering

Institution

Division/Department

USD 9/10/2018 Elizabeth M. Freeburg

SDSM&T Senate 10/11/18

Institutional Approval Signature

Date

Section 1. Course Title and Description

Prefix & No.	Course Title	Credits
BME 464	Biomedical Engineering Senior Design I	3

Course Description

This course is the capstone course in Biomedical Engineering. Students will learn the engineering design process by applying knowledge and skills acquired in the undergraduate curriculum to devise a system, component, or process of biomedical engineering relevance to meet desired needs and specifications within constraints. Students will learn project management and technical communication skills. Students will prepare a design proposal, provide oral project updates, and prepare a final project report. Students will work in teams.

Pre-requisites or Co-requisites N/A

Registration Restrictions

Senior Level Standing.

Section 2. Review of Course

2.1. Was the course first offered as an experimental course?

- Yes (if yes, provide the course information below)  No

2.2. Will this be a unique or common course (place an "X" in the appropriate box)?

Common Course Indicate universities that are proposing this common course:

- BHSU  DSU  NSU  SDSMT  SDSU  USD

Section 3. Other Course Information

3.1. Are there instructional staffing impacts?

- No. Schedule Management, explain: Use available FTE.

3.2. Existing program(s) in which course will be offered: Biomedical Engineering, B.S.

3.3. Proposed instructional method by university: J-Design/Research

3.4. Proposed delivery method by university: 030 Blended/Hybrid

3.5. Term change will be effective: Fall 2019

3.6. Can students repeat the course for additional credit?

- Yes, total credit limit: \_\_\_\_\_  No

3.7. Will grade for this course be limited to S/U (pass/fail)?

- Yes  No

3.8. Will section enrollment be capped?

Yes, max per section: 25  No

3.9. Will this course equate (i.e., be considered the same course for degree completion) with any other unique or common courses in the common course system database in Colleague and the [Course Inventory Report](#)?

Yes  No

3.10. Is this prefix approved for your university?

Yes  No

**Section 4. Department and Course Codes (Completed by University Academic Affairs)**

4.1. University Department Code: UBME/MNANO

4.2. Proposed [CIP Code](#): 14.0501

*Is this a new CIP code for the university?*  Yes  No

## NEW COURSE REQUEST

### Supporting Justification for On-Campus Review

<b>Request Originator</b>	<b>Signature</b>	<a href="#">Click here to enter a date.</a> <b>Date</b>
<b>Department Chair</b>	<b>Signature</b>	<a href="#">Click here to enter a date.</a> <b>Date</b>
<b>School/College Dean</b>	<b>Signature</b>	<a href="#">Click here to enter a date.</a> <b>Date</b>

1. Provide specific reasons for the proposal of this course and explain how the changes enhance the curriculum.  
This course is the first course in the capstone design course sequence in the Biomedical Engineering Department. Students will work in teams to solve biomedical problems through research, design, and produce a prototype.
2. Note whether this course is:       Required                               Elective
3. In addition to the major/program in which this course is offered, what other majors/programs will be affected by this course? None.
4. If this will be a dual listed course, indicate how the distinction between the two levels will be made. Not Applicable.
5. Desired section size      25
6. Provide qualifications of faculty who will teach this course. List name(s), rank(s), and degree(s).  
Timothy Brenza, Assistant Professor, PhD  
Etienne Gnimpieba, Research Assistant Professor, PhD
7. Note whether adequate facilities are available and list any special equipment needed for the course. Adequate Facilities are available.
8. Note whether adequate library and media support are available for the course.  
Adequate library and media support are available.
9. Will the new course duplicate courses currently being offered on this campus?  
 Yes                               No
10. If this course may be offered for variable credit, explain how the amount of credit at each offering is to be determined. N/A
11. Add any additional comments that will aid in the evaluation of this request.  
This course brings together many concepts introduced in the undergraduate curriculum. The course will prioritize industry design projects and will focus on building relationships with regional and national industry partners. This effort will enrich the student design experience, improve our relationship with industry partners, and facilitate student placement by providing new internship and full-time job opportunities.