



**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 <i>Elizabeth M. Freeburg</i> | SDSM&T Senate 10/11/18 |
| Institutional Approval Signature | Date |

Section 1. Course Title and Description

| Prefix & No. | Course Title | Credits |
|--------------|-----------------------------------|---------|
| BME 463 | Biomedical Engineering Laboratory | 1 |

| Course Description |
|--|
| This laboratory will introduce students to fundamental topics in bioinstrumentation and imaging, focused on the acquisition and monitoring of biomarkers and vital signs. Basic principles for the selection and appropriate use of instruments for solving bioengineering and medical problems such as cell culture, immunoassays, microscopy, electrocardiograms, and ultrasound, among others, are addressed. |

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

| | | |
|----------------------------|------------------|--|
| Request Originator | Signature | Click here to enter a date. Date |
| Department Chair | Signature | Click here to enter a date. Date |
| School/College Dean | Signature | Click here to enter a date. Date |

1. Provide specific reasons for the proposal of this course and explain how the changes enhance the curriculum.
This course introduces students to fundamental topics in bioinstrumentation and imaging, focused on the acquisition and monitoring of biomarkers and vital signs. This course shows the application of bioinstrumentation and imaging that BME 101 introduces.
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
Scott Wood, Assistant Professor, PhD
Grant Crawford, Associate Professor, PhD
Adam Piper, Associate Professor, PhD
Daniel Engebretson, Department Chair, PhD
Erin Harmon, GEAR Lab Manager, PhD
Ying Deng, Associate Professor, PhD
Etienne Gnimpieba, Research Assistant Professor, PhD
Zhongkui Hong, Assistant Professor, PhD
7. Note whether adequate facilities are available and list any special equipment needed for the course. Adequate Facilities are available. Special equipment needed will include [whatever instruments we decide to list in the course description that we don't have already].
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.