



**SOUTH DAKOTA BOARD OF REGENTS  
ACADEMIC AFFAIRS FORMS**

**New Course Request**

<b>USD/SDSM&amp;T</b>	<b>Biomedical Engineering/Nanoscience &amp; Nanoengineering</b>
<b>Institution</b>	<b>Division/Department</b>
USD 9/10/2018 <i>Elizabeth M. Freeburg</i>	SDSM&T Senate 10/11/18
<b>Institutional Approval Signature</b>	<b>Date</b>

**Section 1. Course Title and Description**

Prefix & No.	Course Title	Credits
BME 303	Introduction to Biomechanics	3

Course Description
Analysis of biomechanical systems at the macroscopic scale based on principles of statics, dynamics, and strength of materials. The biomedical applications of mechanics will be illustrated through analysis of the biomechanics of medical devices and implants, human body tissues, kinematics, musculoskeletal injuries, and the design application of prostheses and safety equipment. Emphasis will be placed on mechanical behavior (stress and strain), structural behavior, and injury tolerance of the human body.

**Pre-requisites or Co-requisites (add lines as needed)**

Prefix & No.	Course Title	Pre-Req/Co-Req?
MATH 125	Calculus II (no lab)	Pre-Req
EM 214	Statics	Pre-Req

**Registration Restrictions N/A**

**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:** R: Lecture
- 3.4. Proposed delivery method by university:** 025/020 DDN Host/Send Site
- 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: \_\_\_\_\_  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 a core course for the Biomedical Engineering Degree. This course enhances the understanding of the biomechanics of living things, the forces generated by and acting on the human body. From the inner workings of a single cell to the mechanical behavior of bones, tissues and organs, this knowledge provides the foundation to advance health care.
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        30
6. Provide qualifications of faculty who will teach this course. List name(s), rank(s), and degree(s).  
Zhongkui Hong, Assistant Professor, PhD  
Scott Wood, Assistant Professor, PhD  
Adam Piper, Associate 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.