

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

New Course Request

SDSU	Jerome J. Lohr College of Engineering / Mechanical Engineering	
Institution	Division/Department	
Dennis D. Hedge		3/27/2019
Institutional Approval Signature		Date

Section 1. Course Title and Description

Prefix & No.	Course Title	Credits
ME 448	Mechanical Behavior of Biomaterials	3
ME 548	Mechanical Behavior of Biomaterials	3

Course Description
The course explores the field of biomaterials with a focus on response to static and dynamic forces, structure-property correlation, and experimental techniques for biomedical applications. Material topics include mammalian tissue (skin, artery, muscle, bone etc.), interaction with properties of implant materials (metal, polymer, ceramic etc.) and related regulatory issues in material selection and design for medical implants. Students will learn through literature review, case studies, homework, labs and projects.

ME 448 Pre-requisites or Co-requisites

Prefix & No.	Course Title	Pre-Req/Co-Req?
ME 241	Engine5.25 Td{.19 467.59 88.32 reW*nBT/TT0 12 cp2C	

Section 3. Other Course Information

3.1. Are there instructional staffing impacts?

No. Schedule Management, explain below: This is a technical elective course, previously offered as special topics. It will be offered in rotation with other technical electives with no net change in staffing required.

3.2. Existing program(s) in which course will be offered: Mechanical Engineering

3.3. Proposed instructional method by university: R - Lecture

3.4. Proposed delivery method by university: 001 – Face to Face Term Based Instruction

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: 10 undergraduates, 10 graduates 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: SME

4.2. Proposed CIP Code: 14.1901

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

NEW COURSE REQUEST

4. If this will be a dual listed course, indicate how the distinction between the two levels will be made.
Graduate students will be assigned separate exercises, more detailed presentations, and a compulsory final project requiring advanced analytical, research, and reporting skills. These exercises will be used to evaluate graduate students differently from undergraduate students.
5. Desired section size 10 graduates, 10 undergraduates
6. Provide qualifications of faculty who will teach this course. List name(s), rank(s), and degree(s).
Anamika Prasad, Assistant Professor, Ph.D.
Saikat Basu, Assistant Professor, Ph.D.
7. Note whether adequate facilities are available and list any special equipment needed for the course.