



**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 305	Biomedical Engineering Transport Phenomena	3

Course Description
This course covers the theory and practice of mass transport phenomena in biomedical processes with an emphasis on molecular diffusion, membranes, and convective mass transfer. Application of transport to diverse problems and solutions on the molecular, cellular, organ and organism levels.

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

Prefix & No.	Course Title	Pre-Req/Co-Req?
BME 304	Biomedical Engineering Fluid Mechanics	Pre-req

**Registration Restrictions**

BME 304, or permission of instructor.
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**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?**

**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>

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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 student's understanding of Biological Transport and its application in solving biomedical problems.
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).  
Timothy Brenza, Assistant Professor, PhD  
Daniel Engebretson, Department Chair, 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.