Course Number  
BME 1920

Course Title  
Biomedical Engineering Design Laboratory II

Credits  
1

Prerequisite  
BME 1910

Corequisite  
BE 1300

Course Material Fee  
$100

Course Description  
Application of engineering principals to biomedical engineering problems through laboratory and design exercises. Semester 2 of a 6-semester sequence – focus on CAD and biomaterials.

Objective  
At the end of the course, students will be able to demonstrate an ability to:

<table>
<thead>
<tr>
<th>Course Learning Objective</th>
<th>Related Program Outcome</th>
<th>Level of Competence</th>
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</thead>
<tbody>
<tr>
<td>to build simple models using NX</td>
<td>k</td>
<td>Introductory</td>
</tr>
<tr>
<td>to conduct basic tests to characterize biomaterials</td>
<td>b2, b3</td>
<td>Introductory</td>
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<tr>
<td>to write laboratory reports describing experimental and simulation results</td>
<td>g</td>
<td>Introductory</td>
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<tr>
<td>to work effectively in teams</td>
<td>d</td>
<td>Progressing</td>
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<tr>
<td>to apply basic design processes</td>
<td>c</td>
<td>Progressing</td>
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<tr>
<td>to discuss engineering and biomedical issues surrounding current BME challenges</td>
<td>f</td>
<td>Progressing</td>
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<tr>
<td>to write a basic design history file</td>
<td>g,k</td>
<td>Progressing</td>
</tr>
<tr>
<td>to develop a basic powerpoint presentation</td>
<td>g</td>
<td>Progressing</td>
</tr>
<tr>
<td>to give an effective oral presentation (5 min)</td>
<td>g</td>
<td>Progressing</td>
</tr>
<tr>
<td>to discuss current societal context of biomedical engineering challenges</td>
<td>h,j</td>
<td>Progressing</td>
</tr>
<tr>
<td>to use MedLine and patent search engines</td>
<td>l</td>
<td>Progressing</td>
</tr>
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</table>

* For BSBME Program Outcomes, please refer to www.bme.wayne.edu or the BSBME Handbook.
Instructor
Michele J. Grimm, Ph.D.
Associate Professor and Undergraduate Program Chair
2215 Bioengineering Center
(313) 577-8092
mgrimm@wayne.edu
Office Hours: T/W 10:00 am – 11:00 am
Fri 9:00 am – 10:00 am (0331 Engg)
Or by appointment

Teaching Assistant
Melissa Wrobel
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Office Hours: Th 3:00 - 5:00
Fri noon – 2:00 in 0331 ENGG
Or by appointment

Grading
Team Projects: 45%
Individual Assignments: 35%
Class Participation: 10%
Peer Grading: 10%

Class participation will be graded in the following manner for each class section:

Attendance at class: 1 point
Active participation: 2 points

Students are expected to actively participate in every class. Allowances for lack of attendance will only be made with documentation in the form of a doctor’s note, accident report, or other appropriate documentation from an official source.

Letter grades will be assigned based on the following grading scale:

A    ≥ 93%
A-   90 - 92.9%
B+   87 - 89.9%
B    83 - 86.9%
B-   80 - 82.9%
C+   77 - 79.9%
C    73 - 76.9%
C-   70 - 72.9%
D+   67 - 69.9%
D    63 - 66.9%
D-   60 - 62.9%
F    < 60%

Percentages will be rounded to the nearest tenth for grade assignment. Note that the College does not accept any grade lower than a C- for credit towards graduation.
Deferred Grades

A grade of "I" will only be assigned if a student IS NOT currently failing the course and if there is NOT a substantial amount of work to be completed. An "I" grade MUST be made up within one year of assignment of the grade. Assignment of an “I” grade will be at the sole discretion of the instructor. Incomplete grades automatically are converted to F grades after 12 months if the work is not completed.

Expectations

You will be expected to attend class and participate in discussions related to lectures, labs, projects, and your classmates’ presentations. You will be expected to participate fully in your team and complete work by the assigned due date. If there are any issues that prevent your full participation in class, you will be expected to bring these to the instructor’s attention immediately so that a plan may be developed that supports your learning as well as the learning of your team.

Blackboard

Blackboard will be used throughout the course for communication among students and with the instructor. Feel free to post both private and common questions. (If you post a question to the discussion board that requires a timely answer from the instructor, please send the instructor an email with a heads-up!) Written assignments will be turned in and distributed to other students via Blackboard. Please activate your Wayne email address, forwarding it to your standard email if you wish. This will be the address with which the class communicates with you. Some written assignments may be submitted through SafeAssign within Blackboard, a plagiarism checking software. Instructions on this process will be provided.

Withdrawal Policy

Please be aware of the following dates and policies. The last day to drop any class with a tuition refund is the end of the second week of classes. The last day to withdraw from the class, without a notation of W on the transcript, is the end of the fourth week of classes. All drop/add activity during the first 4 weeks should be done through Pipeline. Withdrawals after the end of the 4th week are also submitted through Pipeline and only require the permission of the instructor, which is done automatically. Marks of WP, WF, or WN will be assigned between the end of the 4th week and the end of the 10th week. After the last withdrawal date, only a standard letter grade (A to F) can be assigned unless an Incomplete has been previously arranged.

For the Winter 2014 semester, the following are the important dates pertaining to registration:

- January 12 -- Last day to add classes
- January 18 -- Last day to drop classes with full tuition refund
- February 2-- Last day to drop classes with no W noted
• February 3 -- All withdrawals require instructor permission and will be noted with a WP, WF, or WN on the student’s transcript, counting as an attempt at the course.

• March 23 -- Last day to drop a course (no exceptions)

Policy on Cheating

It is the policy of the Biomedical Engineering Program that any instance of cheating will result in a grade of F for the course. Cheating is defined by the University as “intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information, or assistance in any academic exercise.” This includes any group efforts on assignments or exams unless specifically approved by the professor for that assignment/exam. Evidence of fabrication or plagiarism, as defined by the University in its brochure Academic Integrity, will also result in downgrading for the course. Please refer to the “Expectations for Citation in Biomedical Engineering” handout (attached and available on the web) and to the Departmental recommended book on scientific writing, for guidance. STUDENTS WHO CHEAT ON ANY ASSIGNMENT OR DURING ANY EXAMINATION WILL BE ASSIGNED A FAILING GRADE FOR THE COURSE.

Therefore avoid all appearance of improper behavior! Students who witness cheating should report the incident to the instructor as soon as possible. Students are also welcome to discuss any concerns related to cheating with Dr. John Cavanaugh, Associate Chair of Biomedical Engineering.

“Academic dishonesty ... tends to compromise the academic integrity of the institution or subvert the education process. All forms of academic dishonesty are prohibited at Wayne State University, as outlined in the Student Due Process Policy.” -- from Academic Integrity: Important Information for Faculty and Students

Education Accessibility Services

If you have a documented disability that requires accommodations, you will need to register with Educational Accessibility Services (EAS) for coordination of your academic accommodations. The EAS is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-577-3365 (TTY: telecommunication device for the deaf; phone for hearing impaired students only). Once you have your accommodations in place, I will be glad to meet with you privately during my office hours to discuss your special needs. Education Accessibility Services’ mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.