Course Instructors:
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Course Administrator:
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Course Meeting Locations: COM-640 Commonwealth Avenue, B11  
Course Meeting Time: Fridays 12:20pm -2:05pm  
Course Website: https://learn.bu.edu/. The course is BE466

Course Description: The BME Senior Design Course consists of a two-part course sequence: BE 465 and BE466. Students will work together in a team of 2-5 people with a Principal Investigator in Industry, Academia or a Hospital Setting to develop a solution to a biomedical engineering challenge. Students will research their problem using scientific literature, clearly write about their projects appropriately citing scientific literature, perform hands-on design work, collect and formally present work in oral and written formats. In addition to the scientific and engineering content in the course, there will be an emphasis on clear writing and professionalism.

Class Format:

- Limited in-class lecture series explaining course assignments.
- In-class workshops to work on and refine course assignments.
- Time outside of class researching project and working with principal investigators.
- Online videos, readings and assignments.

In BE 466, students will complete:

Class Participation Assignments:  
Team Evaluation  
Reading, video or quiz as assigned  
Final Conference day attendance

Progress Report 1 (Group): Present a Gantt timeline, and correlated progress to proposed aims. Include draft of Methods section.

Project Report 2 (Group): Present a Gantt timeline, and correlated progress to proposed aims. Include revised draft of Methods section, and Results section.

Final Report (Group): Written project summary including: Abstract, Introduction, Methods, Results, Discussion, Conclusions, References.
Final Presentation: Oral presentation (Talk or e-Poster) of Project to technical audience.

Course Schedule

<table>
<thead>
<tr>
<th>Class</th>
<th>Class Date</th>
<th>Topic</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24-Jan</td>
<td>Lecture 1: Progress Report Guidance; Methods Writeup; Results Writeup</td>
<td>Senior Design Project Competition Application</td>
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<tr>
<td>2</td>
<td>31-Jan</td>
<td>Lecture 2 and Workshop: Data Analysis</td>
<td>Senior Design Project Travel Fund Request Form</td>
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<tr>
<td>3</td>
<td>7-Feb</td>
<td>Scheduled Project Advising (No Formal Class)</td>
<td>Progress Report 1 Due (Group)</td>
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<tr>
<td>4</td>
<td>14-Feb</td>
<td>Scheduled Project Advising (No Formal Class)</td>
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<tr>
<td>5</td>
<td>21-Feb</td>
<td>No Class</td>
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<tr>
<td>6</td>
<td>28-Feb</td>
<td>No Class</td>
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<tr>
<td>7</td>
<td>6-Mar</td>
<td>No Class</td>
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<tr>
<td>8</td>
<td>13-Mar</td>
<td>Spring Break-No Classes</td>
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<tr>
<td>9</td>
<td>20-Mar</td>
<td>Lecture 3: Presentation &amp; Abstract</td>
<td>Progress Report 2 Due (Group)</td>
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<tr>
<td>10</td>
<td>27-Mar</td>
<td>No Class</td>
<td>Abstract &amp; Resume Due (follow template)</td>
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<td>11</td>
<td>3-Apr</td>
<td>No Class</td>
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<tr>
<td>12</td>
<td>10-Apr</td>
<td>No Class</td>
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<tr>
<td>13</td>
<td>17-Apr</td>
<td>Lecture 4: Conference Preparation Class</td>
<td>Final Report Due</td>
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<tr>
<td>14</td>
<td>24-Apr</td>
<td>Optional Practice Presentations (April 20-24 and 27-30) **</td>
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<tr>
<td>15</td>
<td>1-May</td>
<td>Final Conference Day</td>
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** Email Dr. Duncanson or Dr. Smith to attend practice presentations

Course Grade Distribution (out of 100%):

Progress Report 1: 20%
Progress Report 2: 20%
Project Effort*: 15%
Class Participation: 5%
Final Paper: 30%
Final Presentation: 10%
*The student’s technical advisor will provide input on Project Effort grade; however, the course instructors will determine the final effort grade.

**Course Objectives:**

At the end of BE 466 students are expected to demonstrate:\(^1\):

- “an ability to communicate effectively with a range of audiences
- an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
- an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
- an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts”

**Course Policies:**

*Attendance:* Class attendance is required. Students will be responsible for the knowing the material covered in classes.

*Academic Integrity:* Any incident of Academic Misconduct as described by the BU Code of Conduct will result in a zero for the assignment.

“Academic misconduct is conduct by which a student misrepresents his or her academic accomplishments, or impedes other students’ opportunities of being judged fairly for their academic work. Knowingly allowing others to represent your work as their own is as serious an offense as submitting another’s work as your own.”

*Accommodations:* “Boston University provides reasonable accommodations to eligible individuals with disabilities in conformance with Section 504 of the Rehabilitation Act of 1973 and with the Americans with Disabilities Act of 1990. Requests for disability accommodations must be made in a timely fashion to Disability Services, 1 Deerfield Street, Boston, MA 02215; 617-353-3658 (Voice/TTY). Students seeking accommodations must submit appropriate medical documentation and comply with the policies and procedures of Disability Services.”

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\(^2\) [https://www.bu.edu/academics/policies/academic-conduct-code/](https://www.bu.edu/academics/policies/academic-conduct-code/)

\(^3\) [http://www.bu.edu/about/diversity/](http://www.bu.edu/about/diversity/)
BU Diversity Statement: Boston University’s founders opened its doors to all students without regard to religion, race, or gender. Building and sustaining a vibrant community of scholars, students, and staff remains essential to our mission of contributing to, and preparing students to thrive in, an increasingly interconnected world. We strive to create environments for learning, working, and living that are enriched by racial, ethnic, and cultural diversity. We seek to cultivate an atmosphere of respect for individual differences in life experience, sexual orientation, and religious belief, and we aspire to be free of intellectual parochialism, barriers to access, and ethnocentrism. Success in a competitive, global milieu depends upon our ongoing commitment to welcome and engage the wisdom, creativity, and aspirations of all peoples. The excellence we seek emerges from the contributions and talents of every member of the Boston University community.³

*Late Assignments*: It is essential to submit assignments by 12:20pm on the specified due date. Most of the submissions will be through Blackboard. To prevent incidents of late submissions, make a habit of beginning your submission no later than 12:00pm on the specified due date. Late submissions will be penalized by a full letter grade per day late. For example, if an assignment is due on Friday at 12:20pm and you submit it anytime between 12:20pm on Friday and 12:20pm on Saturday, the highest possible grade you will receive is a B.