

Course Instructors:

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Course Administrator:

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Course Meeting Locations:

SAR 101

Course Meeting Time:

Fridays 12:20pm -2:05pm

Course Website:

<https://learn.bu.edu/>. The course is BE 465.

Course Description: The BME Senior Design Course consists of a two-part course sequence: BE 465 and BE 466. 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 remote and 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:

- Lecture series explaining course assignments, the design process, and career preparation.
- 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 465, students will complete:

1. *Class Participation Assignments:*
Project choice and group selection
Reading, video or quiz as assigned
2. *Project Summary (Individual):* Write Significance and Innovation Statements with proposed Aims.
3. *Project Proposal (Group):* Consolidate individual versions of your individual Project Summaries into one coherent document and include a detailed section describing their design approach.
4. *Proposal Presentation:* Oral presentation of Project Proposal to course instructors.

Course Schedule:

Date	Topic	Assignments (Due date)
3-Sep	Lecture 1: Introduction to Senior Project & Teamwork	
10-Sep	Lecture 2: Resume/CV Workshop (Mary Bertrand) + Project Q&A	
17-Sep	Lecture 3: Assignments in Proposal Writing & Career Advising	<i>Project Selected</i>
24-Sep	Lecture 4: Scientific Writing (David Shawn)	<i>Team Contract Due</i>
1-Oct	Lecture 5: Style in Presentation (Ray Han, Accenture)	
8-Oct	No lecture	<i>Project Summary Due</i>
15-Oct	Lecture 7: IP (Lando & Anastasi)	
22-Oct	Lecture 8: Use of EPIC, Project Proposal & Presentation	
29-Oct	Lecture 9: Writing Workshop	<i>Project Summary Returned (Oct 28th)</i>
5-Nov	Practice Presentations	
12-Nov	Practice Presentations	
19-Nov	Lecture 10: Informational Interviews (Sarah Cardozo Duncan, Career Strategist, ZOOM)	<i>Project Proposal Due</i>
26-Nov	Thanksgiving Recess—No Class	
3-Dec	BE 465 Presentations	<i>Proposal Presentations</i>
10-Dec	BE 465 Presentations	<i>Proposal Presentations</i>

Course Grade Distribution (out of 100%):*Class Participation: 5%**Project Summary: 25%**Project Proposal: 25%**Project Oral Presentation: 20%**Project Effort*: 25%*

*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 465 students are expected to demonstrate¹:

- 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,

¹ <http://www.abet.org/accreditation/accreditation-criteria/criteria-for-accrediting-engineering-programs-2018-2019/>

environmental, and societal contexts”

Course Policies:

Attendance: Class attendance is required. Sign up for in-person attendance will be first-come first-serve by Google Signup and students are strongly encouraged to attend at least one lecture in person. Classes will be recorded. Students will be responsible for the knowing the material covered in classes.

Expectations Regarding Safety: Students must wear masks covering nose and mouth at all times and maintain at least 6 ft of social distance in the classroom. All students are expected to follow all University guidelines with respect to daily symptom checks, testing, social distancing, and mask wearing when they leave their dorm or home. There is no eating/drinking in the classroom.

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”²

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, 19 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.”²

Late Assignments: It is essential to submit assignments by 9am 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 8:45am 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 9am and you submit it anytime between 9:01am on Friday and 9am on Saturday, the highest possible grade you will receive is a B.

² <https://www.bu.edu/academics/policies/academic-conduct-code/>