

BME1472: FUNDAMENTALS OF NEUROMODULATION TECHNOLOGY AND CLINICAL APPLICATIONS

OBJECTIVES

1. Understand the basic principles of electrical nerve stimulation and recording.
2. Learn advanced techniques and designs for improving performance of neural interfaces.
3. Apply knowledge of neuromodulation technology to clinical applications.

LECTURER

	Telephone Number	e-mail Address
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SUGGESTED TEXTBOOKS (OPTIONAL)

Plonsey and Barr, Bioelectricity: A Quantitative Approach, Springer
Kandel, Schwartz and Jessel, Principles of Neural Science, McGraw-Hill

LECTURES

	Day	Time	Location
Lecture	Wed	10am-12pm	MY320

EVALUATION

A. Exams

You will be required to know all lecture material and general topics covered by project presentations. There will be 1 mid-term exam that will require you to understand and apply all subject matter.

B. Group Presentation

Each group (2 or 3 students) will give a presentation on select topics in electrical neuromodulation. Late submission of a deliverable will be subject to a loss of 1% per day. The deliverables include:

- 1) Email Abstract with student names, title, and brief description of topic. [5%]
- 2) Email a pdf copy of presentation slides [15%, grading rubric will be posted on Quercus]
- 3) Presentation [40%, grading rubric will be posted on Quercus]

GRADE DISTRIBUTION:

Components	Date	Value
Midterm Exams	Oct 23	40%
Submit Abstract	Oct 16 (11:59 pm)	5 %
Submit Presentation Slides	Nov 6 (11:59 pm)	15%
Presentation (topic review)	Nov 13 – Dec 4	40%