

BME 1008 – Introduction to Biomedical Engineering
Room NPB (Physics) 1002
Wednesdays Period 9: 4:05 – 4:55

First Day Handout

Instructor	Teaching Assistant
Assistant Professor Peter S. McFetridge	TBA
	Email Contact:

Located in the J. Crayton Pruitt Family Department of Biomedical Engineering

Further Information: <http://www.bme.ufl.edu> – look for people and/or courses. Includes some details about grading, prerequisites, honesty, counseling, disabilities, co-requisites. Arrangements for posting on Sakai, the e-Learning system, are in progress.

Course Objective:

That undergraduate students, especially first and second year, gain an overview understanding of the range of activity in the field of biomedical engineering. Included will be guidance on the multiple paths appropriate for preparing for careers in or related to this field.

Format:

Guest lecture each week on a topic in biomedical engineering

Grading:

- (45%) Multiple choice quizzes will be given at the end of every fourth lecture.
- (25%) A cumulative semester quiz will be given in the last class of the semester.
- (15%) A two page term paper on a BME topic of the student's choice will be due during the next to the last class
- (15%) Attendance

The purpose of the quizzes and exams is to ensure that students have grasped the material of the lectures.

Policies:

- Attendance is mandatory. Do not register for your friends.
- Missed quizzes may be compensated by extra writing assignments.
- Turn off cell phones. Do not use lap top computers during the class.
- Sit as far front as possible.
- Ask questions.

Textbook:

None. Where lecturers permit, PowerPoint slides will be made available for student review.

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Lecture Schedule – TBA

Formal Description:

1. Catalog Description (1 Credit Hour)

Introduction to and overview of Biomedical Engineering. Lectures will be given by faculty expert in an area of biomedical engineering. The goal is to give beginning students an appreciation for the breadth of the field and to guide them in making curriculum, major, and career choices.

2. Pre-requisites and Co-requisites - None

This course is open to all students with preferences to first year engineering students interested in biomedical engineering.

3. Course Objectives

- 1) To introduce students to the field of biomedical engineering, communicating especially the breadth and excitement of this rapidly growing field.
- 2) To communicate to students the academic preparation needed for successful study and professional careers in the different subdisciplines of biomedical engineering.
- 3) To guide and advise students who will apply to the BME major, as well as to encourage enrollment in other engineering or life science programs from which one can pursue a career in a subdiscipline of biomedical engineering.

4. Contribution of course to meeting the professional component (ABET only)

- 1) Students gain an appreciation for life-long learning, for the social context of their study. Ethics issues are also discussed.
- 2) This is not a science or engineering skill course.

5. Relationship of course to program outcomes (ABET only)

6. Instructor

Dr. Peter McFetridge

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Web site: <http://www.bme.ufl.edu>

Office hours: TBA

7. Teaching Assistant - TBA

- a. Office location

- b. Telephone
- c. E-mail address
- d. Office hours

8. Meeting Times

Wednesdays, Period 9

9. Class/laboratory schedule

Class meets one 50 minute period per week

10. Meeting Location - TBA

11. Material and Supply Fees - TBA

12. Textbooks and Software: NONE Required

13. Recommended Reading (see 12 above)

14. Course Outline

The course is comprised of guest lecturers from the BME Department and Affiliates to introduce major areas of biomedical engineering and to inform first year students as to their choices for pursuing biomedical engineering and related careers. Below is an ideal lecture series. Order and exact topic are dependent on speaker availability.

Week 1 – Introduction to Biomedical Engineering

Week 2 – Careers in Biomedical Engineering

Week 3 – Neural Engineering

Week 4 – Biomechanical Engineering

Week 5 – Biomedical Imaging: Optical

Week 6 – Biomaterials Engineering

Week 7 – Tissue Engineering

Week 8 – Biological Engineering

Week 9 – Bioinstrumentation

Week 10 – Rational Drug Design

Week 11 – Patient Simulators

Week 12 – Rehabilitation Engineering

Week 13 – Biomedical Imaging: MRI

Week 14 – Choices in Biomedical Engineering

Week 15 – Final Exam

15. Attendance and Expectations

Class participation is required.

16. Grading

There will be short in class quizzes every third lecture based on the content of previous lectures. (45%) There will be a final exam (25%) and a short (e.g., 2 page)

essay on a BME topic of the student's choice (15%). Attendance is mandatory (15%)

17. Grading Scale

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
> 90	87-89	84-86	80-83	77-79	74-76	70-73	67-69	64-66	60-63	57-59	< 56

A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit:

<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

18. Make-up Exam Policy

Quizzes and Final Exam can be made up in extreme circumstances. Documentation is required.

19. Honesty Policy

All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

20. Accommodation for Students with Disabilities

Students Requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

21. UF Counseling Services

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
- SHCC mental Health, Student Health Care Center, 392-1171, Personal and Counseling.
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.
- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

22. Software Use

All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be

taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.