Physics 413
Introduction to Biophysics
TuTh 11:00 am

Instructor: Dr. Joel Mobley
Room 1034 NCPA
Phone: 915-6937
jmobley@olemiss.edu (best way to contact me)

Office Hours: Tuesday 12:45-2:00, Lewis Hall Room 203 (Optics Lab)
Wednesday 11:00 – 2:00, NCPA Room 1034
I will not be available after 2 pm MW
I will not be available the hour before class TuTh
By appointment at **1034 NCPA**
Email me if you plan to come to NCPA

NCPA is the **National Center for Physical Acoustics** and is located near the intersection of Chucky Mullins Dr. and Hill Dr. (see map)

EXAM SCHEUDLE

Final Exam: Tuesday, May 9th, 12:00 pm

Midterm Exams: Thursday, March 2nd
Thursday, April 20th

Prerequisite Exam: Thursday, February 2nd

Active Learning Environment

The class will be taught using the active learning method which relies on active student-professor interaction during lectures. This will require students pairing up in the classroom and participating in class dialogs. Because of this, students will be expected to attend all lectures and should notify me if they are unable to attend.

Learning Objectives:

After completing this class the student should understand the following:

- how the principles of physics underlie life processes at the cellular level,
- how to apply physics knowledge to solve problems in biology and biomedicine,
- the physical principles of biomedical diagnostic techniques such as ultrasound, x-rays, computed tomography (CT) and magnetic resonance imaging (MRI).

Detailed lists of learning objectives will be provided throughout the semester

Content: For half of the class, we will examine the role of physics in life processes and physiology, and for the other half of the course we will study the physics of biomedical diagnostic imaging

Student Presentation: *Each student is required to give a 15 minute presentation in order to successfully complete the course.* The subject of the presentation must be approved by the instructor. The only requirements are that potential topics be related to biophysics, biology or biomedicine. The student will submit a list of questions based on their presentations for possible inclusion on final and/or the 2nd exam. The schedule and related deadlines will be discussed in class.

Article Discussion: Throughout the semester, we will have class discussion days where a scientific article is reviewed. Students must read the article in advance and come prepared to participate in the discussion. The articles will be available in electronic format prior to the class.

Lecture Notes and Supplementary Materials:

Supplementary materials used during the course will be posted on Blackboard. Some of the lecture notes will be provided. Availability of these lecture notes will be based on attendance for the relevant class.

Grading

25 % each	2 Midterm Exams (March 2nd; April 20th)
25 %	Final Exam (May 9th, noon)
15 % total	Homework (Prereq exam counts as 2 HW assignments)
10 %	Student Presentation (REQUIRED TO PASS THE COURSE)

Grading Scale

A: 100.0 – 92.0	**B+**: 87.4 – 82.5	**C+**: 74.9 – 70.0	**D**: 62.4 – 50.0
A-: 91.9 – 87.5	**B**: 82.4 – 78.5	**C**: 69.9 – 66.0	
	B-: 78.4 – 75.0	**C-**: 65.9 – 62.5	**F:**<50.0

Location of NCPA