

## Schedule for Physics with Calculus I – Fall 2018

### **Instructor: Dr. Richard A. Bone**

Below are the chapter-sections from "University Physics", 14th edition by Young & Freedman to be covered during this course. The eText version is a lot less expensive and comes with Modified Mastering Physics (~\$115). *(If you already have a different calculus-based book, you are not required to buy this edition of Young and Freedman. However you will need to order "Modified Mastering Physics." See below.)* Prior to each class, read briefly the sections that are to be covered. Do not worry about gaining a full understanding at this stage. The purpose is to make you more prepared to absorb the material provided in class. After the class you will need to read the sections again, this time in depth, so that you can upgrade and clarify your lecture notes accordingly. Gaining conceptual understanding of physics is of the utmost importance.

**Homework** We will be using the Web-based homework system, "Modified Mastering Physics," that is included with your purchase of a new copy of Young and Freedman. You will need to register through FIU's Canvas learning management system. **During registration, you must enter the course ID, which is bone42713.** If your textbook did not come with Modified Mastering Physics, you will need to purchase it separately. If you used regular Mastering with the same textbook in a previous semester, contact Pearson Support and they will give you a free Modified Mastering code

**Assistance** Individual assistance with any aspect of this course will be available during my office hours which, generally, will be Monday, Wednesday, Friday, 9:30 a.m. to 12:00 pm and Tuesday, Thursday and Friday 1:30 to 4:30 p.m. I will be in my office (CP 213) or my lab (CP 276). Solutions to problems will be posted on my website – [faculty.fiu.edu/~bone](http://faculty.fiu.edu/~bone) (user name and password will be provided in class). You may also want to sign up for a 1 credit problem-solving class, PHZ 2102, which accompanies PHY 2048 and meets on Wednesdays from 10:00 to 10:50 am

**This is a 4 credit course. You should therefore schedule at least 8 hours per week for homework and self-study outside the classroom.**

**Clickers:** We will be using i>clickers so that you will all be able to respond to questions posed during class. Clickers may be purchased if you do not already possess one. They are < \$30 (used at Amazon

The FINAL EXAM will contain 2 sections, one covering coursework since EXAM 2, the other on earlier material. The relative weighting of the 3 exams, clicker responses, and homework will be as follows:

HOMEWORK - 12%, CLICKER\* - 12%, EXAM 1 - 22%, EXAM 2 - 22%, FINAL - 32%  
(\*Clicker score will be 67% for participation + 33% for correct answer)

Your overall score will be converted to a letter grade according to the following approximate scheme: >85% = A, A-; 75-84% = B+, B, B-; 58-74% = C+, C.

**Make-up exams and/or incompletes will only be given in extreme cases involving serious medical problems or death in family. Written verification will be required. Inform me in advance.** They will not be given because your car breaks down, or you are not prepared for the exam, or you have a work/vacation conflict. Any make-up exams will be scheduled for after the final, assuming you get passing grades on the other exams. **Make-up exams may be more difficult due to increased time available for study.**

**Student Learning Outcome** Our technologically dependent world requires an understanding of the processes that led us here. Learning the basic concepts and ideas of scientific fields provides contact with not just those fields but with how science is done. In these courses students study the scientific method through examination of the foundational theories of modern scientific

thought. Students apply scientific principles and theories to problem solving, evaluate scientific statements, and incorporate new information within the context of what is already known.

Emphasizing the essential connection between theory and experiment, the accompanying hands-on laboratory experience provides the context for testing scientific theories.

The successful student will be one who has developed a strong, conceptual understanding of the classical mechanics described in the reading assignments below. A strong conceptual understanding is gained through regular class attendance, questioning your instructor in class and during office hours, and paying particular attention to homework. Confidence that you have a deep understanding of physics is achieved through homework exercises. Always work from first principles. There are so few of these principles that there's not much to memorize. If you find yourself simply hunting for an equation that contains the variables in the exercise, you will likely fail the exams. The successful student will be one who, confronted with an original problem, is able to apply the basic laws of physics in order to find a solution.

<u>Date</u>	<u>Week</u>	<u>Reading assignments</u>
Aug 21	1	1-1,2,3,4,5,6,7,8,9
Aug 23		
Aug 28	2	2-1,2,3,4,5
Aug 30		
Sept 4	3	3-1,2,3,4
Sept 6		
Sept 11	4	4-1,2,3,4,5,6
Sept 13		
Sept 18	5	5-1,2,3,4
Sept 20		<b>Exam 1</b>
Sept 25	6	6-1,2,3,4
Sept 27		
Oct 2	7	7-1,2,3
Oct 4		
Oct 9	8	8-1,2,3,4,5
Oct 11		
Oct 16	9	9-1,2,3,4,5,6
Oct 18		
Oct 23	10	10-1,2,3,4,5,6
Oct 25		<b>Exam 2</b> (Oct 29 is deadline for DR/WI)
Oct 30	11	12-1,2,3
Nov 1		
Nov 6	12	13-1,2,3
Nov 8		
Nov 13	13	14-1,2,3,4,5
Nov 15		
Nov 20	14	15-1,2,3
Nov 27	15	
Nov 29		
Dec 3-8	16	<b>FINAL EXAM</b> (~ 2/3 of exam covering new material, ~ 1/3 of exam on earlier material)