



**COURSE TITLE/SECTION: Physics 1322 University Physic II Honors /Section #19481
Fall 2017**

**TIME: MWF 11 am – 12 pm
F 1 – 2 pm**

**LOCATION: SEC 206
SR1 117**

**FACULTY: Dr. Rebecca Forrest OFFICE HOURS: SR1 515C, M&F 2:00 – 3:00 pm,
T&TH 11:30-noon & by appointment**

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Phone:

(713) 743-3507

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Website: <http://www.phys.uh.edu/~rforrest/>

I. Course: Physics 1322 - University Physics II

A. Catalog Description: Primarily for science and engineering majors. Topics: Thermodynamics, electricity, magnetism, electromagnetic waves, optics, and modern physics.

B. Prerequisites: PHYS 1321. Credit for or concurrent enrollment in [MATH 2433](#). Credit may not be applied toward a degree for [PHYS 1322](#) and [PHYS 1302](#).

II. Course Objectives: The objective of this course is to learn the principles of electricity and magnetism, understand the concept of thermodynamics and be able to apply these concepts to solve problems.

Upon completion of this course, students will be able to:

1. master the physical concepts of electricity and magnetism;
2. be able to apply these to obtain solutions to technical problems;
3. use this scientific foundation to continue studies in more advanced courses in science and engineering.

Other learning outcomes include:

1. Students completing this course will be able to convey knowledge of the principles of physics and be able to use these principles to solve problems.
2. Students will be able to take a real life problem and use physical principles and mathematical tools to describe the problem.

III. Course Content: This course will cover chapters 17 - 36 which include the following topical areas:

1. Thermodynamics
2. Theory of Gases
3. Electric Charge and Electric Fields

4. Gauss' Law
5. Electric Potential
6. Circuits
7. Magnetic Fields
8. Induction
9. Electromagnetic waves
10. Interference and Diffraction

IV. Course Structure:

Dr. Forrest's web address is <http://www.phys.uh.edu/~rforrest/> .

This course uses Blackboard, <http://www.uh.edu/blackboard/>.

This course uses the Pearson Mastering online homework system, see below.

V. Textbooks:

University Physics with Modern Physics, 14th edition, by Young and Freedman/Sears and Zemansky. Binder version with access code to Mastering Physics is available at the UH bookstore. See the course website for more options for purchasing the textbook.

VI. Course Requirements

- A. Warm up Assignments:** You should read the material to be covered in class before coming to class. Warm-Up Assignments are assigned on Blackboard (<http://www.uh.edu/blackboard/>) and cover the material from the book, to be discussed in class. They are due one hour before class, most class days. It is your responsibility to check whether a Warm-Up is due. On each Warm-Up you can earn up to 1.5 points; one point for participation, and $\frac{1}{2}$ point for correctness. The $\frac{1}{2}$ point for correctness will count as extra credit towards your Warm-Up grade.
- B. Homework Assignments:** (See **Pearson Mastering Physics** for HW assignments) 10 or more **homework** problems will be assigned at the beginning of each chapter and will be due approximately one week from that date. Late homework is only accepted with a valid excuse. (www.pearsonmastering.com)
- C. Exams:** There will be three **one and a half hour exams** and a three hour **final exam** for a total of four exams for the class.

The **regular exams** will be given during the scheduled examination period for this course which is on Fridays Between 4 – 7:00 pm (see note on the course listing). The exams will cover 2-6 chapters and will consist of 10-20 multiple choice questions/problems. The **regular exams** are each worth 18% of your final grade for a total of 54% for the three exams. **A**

basic scientific calculator, for example a TI-30, will be allowed. No programmable/graphing calculators will be allowed.

The **final exam** will be comprehensive covering all chapters covered for the course. The format of the final exam will be similar to that of a regular exam. This exam will be given during the University scheduled time and will be worth 24% of your final grade.

There are no makeup exams for this course. The lowest exam score will be replaced by the final exam score if the final exam score is higher.

- D. Teamwork Component:** You will be completing worksheets during in-class demonstrations, in groups of 2-4 students. These will be collected and graded based on completeness, not correctness. Worksheets should be printed from Blackboard and brought to class. Print two, one to turn in and one to keep. These worksheets will count as the “teamwork” component of this course.
- E. Take-Home Experiment:** Students will do one Take-Home Experiment. The experiment must be conducted by groups of 3 students. Each group can choose between making an electric buzzer or a telescope. Each group is required to submit one report and a working device. Detailed information can be found on the course’s Blackboard page. Reports are due 12/7/17.

VII. Evaluation and Grading

4%	Warm Up’s
4%	Demonstration Worksheets
4%	Take-Home Experiment
10%	Homework
18%	Regular Exam I
18%	Regular Exam II
18%	Regular Exam III
24%	Final Exam (12/11/17, 11am – 2 pm, classroom)
100%	

Policy on grades of I (Incomplete): The grade of "I" (Incomplete) is a conditional and temporary grade given when a student, for reasons beyond his or her control, has not completed a relatively small portion of all requirements. Sufficiently serious, documented situations include illness, death in the family, etc.

VIII. Consultation

My office is located in room 515C of Science and Research #1. My mailbox is located in the Physics office, room 617 in Science and Research # 1. My office hours are listed above. For information about tutoring see <http://www.uh.edu/nsm/physics/undergraduate/tutoring/>.

IX. Bibliography

References: The Feynman Lectures on Physics, R. Feynman, R.B. Leighton, and M. Sands

Addendum: Whenever possible, and in accordance with 504/ADA guidelines, the University of Houston will attempt to provide reasonable academic accommodations to students who request and require them. Please call 713-743-5400 for more assistance.

Academic Honesty: It is each student's responsibility to read and understand the Academic Honesty Policy found <http://catalog.uh.edu/content.php?catoid=6&navoid=1025>.

Religious Holy Days: Students whose religious beliefs prohibit class attendance or the completion of specific assignments on designated dates may obtain an excused absence. To do so, please make a written request for an excused absence and submit it to your instructor as soon as possible, to allow the instructor to make arrangements. For more information, see the Student Handbook. <http://catalog.uh.edu/content.php?catoid=6&navoid=1079>.

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (www.uh.edu/caps) by calling 713-743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. Also, there is no appointment necessary for the "Let's Talk" program, which is a drop-in consultation service at convenient locations and hours around campus. http://www.uh.edu/caps/outreach/lets_talk.html.

Standard Disclaimer: This syllabus is subject to change at the discretion of the instructor.