PHY127: Classical Physics C  Spring 2024

PHY127  Second or third of a three-part sequence for physical-sciences or engineering majors. It focuses on electromagnetism using the concepts of vector fields and scalar potentials, and on DC and AC electric circuits. Calculus is used concurrently with its development in MAT 126. Three lecture hours and one recitation hour per week. Associated Labs (PHY 133 or PHY 134) are offered separately. Not for credit in addition to PHY 122, PHY 132, or PHY 142. This course has been designated as a High Demand/Controlled Access (HD/CA) course. Students registering for HD/CA courses for the first time will have priority to do so.

Prerequisite:  C or higher: PHY 125 or 131 or 141

Corequisite:  MAT 126, 132, 142, 171 or AMS 161 or level 7 or higher on math placement exam

Objectives  At the end of PHY127, the students will

- understand the main ideas and physics laws in Electricity and Magnetism as evidenced by their answers to conceptual questions often related to real-world situations;

- solve complex and diverse Electricity and Magnetism problems by:
  - recognizing the physical laws relevant to the problem,
  - applying the relevant laws to the problem,
  - using mathematical and computational techniques including Calculus, and
  - evaluating the possible limitations of their solutions.

Instructors  Prof. Emilio Mendez  Prof. Vladimir Goldman
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Textbook  Physics for Scientists & Engineers, 5th edition
Douglas C. Giancoli, Pearson Prentice Hall
PHY127 will cover chapters 21 to 31, both included.
Students will need to have access to the Pearson’s Mastering platform, which will be used for weekly homework assignments. The Study Access Code students bought for PHY125 will normally be valid for PHY127, depending on the date and conditions of purchase. In some cases, it may be necessary for students to buy a new code.

Lectures  Tuesday  8:30 am – 9:50 am  Prof. Mendez  Melville Lib. W4540
Thursday  8:30 am – 9:50 am  Prof. Mendez  Melville Lib. W4540
First day of class: January 23
Last day of class: May 3
No classes the week of March 11 (Spring Recess)
Recitations  
Rec. 01: Mon. 9:00 am – 9:53 am  Prof. Mendez  Physics P117 
Rec. 02: Wed. 9:00 am – 9:53 am  Prof. Mendez  Physics P117 
Rec. 03: Mon. 10:00 am – 10:53 am  Prof. Goldman  Frey Hall 224 
Rec. 04: Mon. 11:00 am – 11:53 am  Prof. Goldman  Physics P117 

Start the week of January 29.

Office Hours  
Tuesday 10:00 am – 11:30 am  Prof. Mendez  Physics B142 
Wednesday 10:00 am – 11:30 am  Prof. Mendez  Physics B142

Homework  
Weekly assignments from Pearson’s website MasteringPhysics.com 
Due on Wednesdays at 11:59 pm

Evaluations  
Weekly quizzes during Recitations
Two mid-term exams (February 22 and April 4)
Final exam (May 14).

Brightspace  
Used for course announcements, distribution of lecture material, and weekly 
homework assignments (via Brightspace-linked Pearson’s Mastering) 
If recording equipment is available in the classroom, the lectures will be 
videorecorded (via Echo) and available on Brightspace after the lectures.

Grades  
**Numerical grade**
10% Homework; 15% Quizzes 
40% Midterm Exams (20% each); 35% Final Exam 
5% Dynamic Study Modules (extra credit)

There is **No Curve Grading** in this course

**Letter grade**
100 ≥ A ≥ 90  89 ≥ A- ≥ 85 
84 ≥ B+ ≥ 80  79 ≥ B ≥ 75  74 ≥ B- ≥ 70 
69 ≥ C+ ≥ 65  64 ≥ C ≥ 55  54 ≥ C- ≥ 50 
49 ≥ D ≥ 45  44 ≥ F ≥ 0

Study Tips  
(Adapted from Giancoli, p. xviii) 
Before class, read textbook sections to be covered in class; get familiar with vocabulary and notation. Do extra-credit Dynamic Study Module.
Attend all classes, both lectures and recitations. Watch recorded sessions if you couldn’t come to class or would like to review some of the material.
After class, read textbook material covered in class, paying attention to main concepts, details and worked-out examples. Do homework problems corresponding to material covered that day in class.
Academic Integrity
Each student is accountable for all submitted work. Representing another person's work as your own is wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic integrity website at http://www.stonybrook.edu/commcms/academic_integrity/index.html.

Americans with Disabilities Act
If you have a physical, psychiatric/emotional, medical or learning disability that may impact on your ability to carry out assigned course work, you should contact the staff in the Disability Support Services office [DSS], ECC (Educational Communications Center) Building, Room 128, (631)632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential. https://web.stonybrook.edu/newfaculty/StudentResources/Pages/DisabilitySupportServices.aspx
Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the website http://www.sunysb.edu/ehs/fire/disabilities.shtml.

Critical Incident Management
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn.

Religious Observances
The academic calendar has no religious holidays. See the List of Religious and Other Holidays and other relevant links at http://www.stonybrook.edu/commcms/provost/faculty/handbook/employment/list_of_religious_and_university_holidays#view-s2018
Students will be expected to notify the lecture- and/or recitation-instructor(s) by email, in advance, of their intention to be absent for any religious observance during the Spring 2024 semester. They can discuss with their instructor(s) before then how they will be able to secure the work covered.