

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 office: Physics Building, Room B142 phone: 631-632 8065 emilio.mendez@stonybrook.edu	Prof. Vladimir Goldman Physics Building, Room B137 631-632 9001 Vladimir.Goldman@stonybrook.edu
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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)
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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
 $100 \geq A \geq 90$ $89 \geq A^- \geq 85$
 $84 \geq B^+ \geq 80$ $79 \geq B \geq 75$ $74 \geq B^- \geq 70$
 $69 \geq C^+ \geq 65$ $64 \geq C \geq 55$ $54 \geq C^- \geq 50$
 $49 \geq D \geq 45$ $44 \geq F \geq 0$

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.