

## PHY141: Classical Physics A (3 credits)

**PHY125** - First part of a demanding two-semester sequence for students with the strongest background, interests, and abilities in science and mathematics. The topics covered in PHY 141 are similar to those in PHY 131 but are treated in more depth in a small-class setting. Three lecture hours and one recitation hour per week. Advanced Placement Physics or a very strong course in high school Physics is recommended. Students may transfer to PHY 131 at any time during the first half of the semester without penalty.

**Prerequisite:** Level 6 on Math Placement, or B or higher in MAT 131 or 141 or AMS 151, or B+ or higher in MAT 125, or instructor permission (priority given to students in Honors or WISE programs)

**Pre or Corequisite:** MAT 131 or 141 or 126 or AMS 151; PHY 133

- Objectives** At the end of PHY141, the students will
- have a deep understanding the main ideas and physics laws in Mechanics, Fluids and Thermodynamics as evidenced by their answers to conceptual questions often related to real-world situations;
  - solve complex Mechanics, Fluids and Thermodynamics problems by:
    - understanding the physical situations in the problems;
    - recognizing and applying the relevant physical laws;
    - using calculus-based mathematical and computational techniques; and
    - evaluating the limitations of their solutions.

**Instructor** Prof. Emilio Mendez  
Physics, Room B142  
phone: 631-632 8065  
[emilio.mendez@stonybrook.edu](mailto:emilio.mendez@stonybrook.edu)

**Textbook** Physics for Scientists & Engineers, 5<sup>th</sup> edition  
Douglas C. Giancoli, Pearson Prentice Hall  
PHY141 will cover chapters 1 to 14, 16 to 18  
The book can be purchased together with the Student Access Code for logging on to MasteringPhysics, where students will complete homework assignments.

**Lectures** Mon., Wed., Fri. 8:25 am – 9:20 am Mendez Physics P128  
First day of class: August 26  
Last day of class: December 9  
No classes on September 2 (Labor Day);  
October 14, 15 (Fall Break);  
November 27, 29 (Thanksgiving Break).

**Recitations** Friday: 10:00 am - 10:55 am Mendez Physics P128  
Start the week of August 26

**Office Hours** Monday, Tuesday, and Wednesday (9:30 am to 10:30 am) Physics B142

**Equipment** Internet-connected computer/laptop for homework  
**& Software** Pearson's Mastering Physics license for weekly homework

**Brightspace** Used for course announcements, distribution of lecture material, and weekly homework assignments

**Homework** Weekly problem assignments from Pearson's MasteringPhysics (via Brightspace)

**Evaluations** Weekly quizzes during recitation hours.  
Two mid-term exams during lecture time (on or around 9/30 and 11/04)  
Final exam on 12/18, from 8 am to 10:45 am

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

**Course Letter Grade**  
 $100 \geq A \geq 90$     $89 \geq A^- \geq 85$   
 $84 \geq B^+ \geq 80$     $79 \geq B \geq 75$     $74 \geq B^- \geq 70$   
 $69 \geq C^+ \geq 65$     $64 \geq C \geq 55$     $54 \geq C^- \geq 50$   
 $49 \geq D \geq 45$     $44 \geq F \geq 0$

**NOTE: Exams and assignments will NOT be graded on a curve. The final letter grade will be determined by individual performance only (as per the table above), not by a class curve.**

**Study Tips** (Adapted from Giancoli, *How to Study*)  
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. Participate in class discussions and exercises.  
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](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

[https://www.stonybrook.edu/commcms/registrar/calendars/religious\\_holidays#2024](https://www.stonybrook.edu/commcms/registrar/calendars/religious_holidays#2024)

Students will be expected to notify the lecture and/or recitation-instructor by email, in advance, of their intention to be absent for any religious observance during the Fall 2024 semester. They can discuss with their instructor before then how they will be able to secure the work covered.