# PHY131.01, Spring 2026
# Course Syllabus

Physics 131.01 has one main lecture section which meets MWF 8:25 am – 9:20 am in Earth and Space 001 auditorium. In addition, each student must enroll in 1 (of the 7) recitation sections. A recitation section meets once per week starting in the 2nd week of the semester. We cover material in Ch. 1 - 20 of the D. Giancoli “Physics for Scientists and Engineers” text book (See below). The course also will use clickers or phone used during the lecture (referred below as “clickers”), online homework assignments, 2 midterm exams, and a final exam.

You get the maximum benefit from the lectures and homework problems if you take a look at the material and problems **before the classes for that week**, including studying the (electronic) textbook. This way you are already introduced to the material and you can focus on the pieces you may not have understood and maybe even have questions ready. This is not required, but experience shows this is very beneficial to mastering the material.

Although it is not a formal requirement that the two courses be taken simultaneously, most PHY131 students also take the corresponding lab, PHY133, in the same semester they take PHY131. If you also need or want PHY133, you must register for that separately from your PHY131 registration. This syllabus covers only PHY131 lecture course.

## Learning outcomes:

At the successful completion of this course students should be able to:

1. Explain the basic concepts of one and two dimensional motion and solve very basics related problems on these concepts,
2. Describe the concepts involved in gravity and work very basic related problems,
3. Show their comprehension of the fundamental principles momentum, energy and relativity, by explaining the basic concepts involving these principles in their own words and working basic problems using appropriate equations from these principles.
4. Describe the structures and the states of matter in their own words

5. Explain temperature, expansion, heat contents and the first and second law of thermodynamics, in their own words.

## Learning Objectives:

The above Student Learning Outcomes will be achieved using the following course objectives:

1.1 Introduction World View of Physics

1.2 Description and explanation of Motion

1.3 Description of Motion in space

1.4 Explanation of how the force of gravity affects motion

2.1 Explanation and description of the concepts of linear momentum, impulse, and collisions, including elastic, inelastic and glancing collisions

2.2 Explanation of the various types of energy including kinetic and potential

2.3 Explanation of Rotational Motion, torques and angular momentum

3.1 Description of the structure of Matter

3.2 Explanation of the States of Matter

3.3 Explanation of Thermal Energy

3.4 Explanation of Available energy

## Instructor(s):

The PHY131 professors are:
Sec.01, Prof. Dmitri Tsybychev, Physics D135, 632-8106, Dmitri.Tsybychev_at_stonybrook.edu

• **Recitations:**

o Prof. John Hobbs, Physics D139, 632-8107, John.Hobbs_at_stonybrook.edu

R4 Tu 9:30 am - 10:25 am

o Prof. Vladimir Goldman, Physics B137, 632-9001, Vladimir.Goldman_at_stonybrook.edu

R1 Mo 11:00am -11:55am
R2 We 9:30 am -10:25 am
R3 Fr 11:00 am - 11:55 am

o Prof. Jacobus Verbaarschot Physics C142B, 632-8123, Jacobus.Verbaarschot_at_stonybrook.edu

R5  Th 9:30 am - 10:25 am
R6  Fr 9:30 am - 10:25 am
R7  Tu 12:30 pm - 1:25 pm

• **Office hours:**

o Prof. D. Tsybychev: TBA

o Prof. J. Hobbs: TBA

o Prof. V. Goldman: TuTh  1:00-2:00 pm

o Prof. J. Verbaarschot:  Th 2:00-4:00 pm

For the actual email addresses substitute @ for (at). The best way to reach your instructors is by email; you have to **put PHY131 somewhere in the subject line** of your message to get their attention. Instructors get hundreds of emails every day. For email regarding recitation, send the email to your recitation instructor and CC Prof. Tsybychev.

## Course Administration

The course will be administered through Brightspace Course Management System. Please make sure that you have access to your Stony Brook Brightspace account, that this course is listed there (in 1st week of classes for sure), and that the SBU email address is listed in your Brightspace account and is the one that you monitor. You have to register in VEVOX via Brightspace; see below

## Calendar

The calendar shows the chapter(s) that will be covered in each lecture. There may be small adjustments during the semester, so do keep an eye on this. You can find the course calendar link in the Brightspace “Calendar” section.

Firsts for this Semester: Details for each of these items are below, but the “first days” are gathered here for reference,

• ***First Clickers for credit (clicker must be registered in Brightspace): 2/2 (Dry run: 1/28, 1/30 )***

- ***First Homework for class due (submitted online; This will be a slightly longer HW): 2/8, 11:59 PM***

## Clickers

The University switched to a new response system, VEVOX (TurningPoints Solution used previously). This is a web-based system (start it) and does not need any clicker hardware or special app. You connect to it via any web browser. Follow the instructions (in the Brightspace Content area) to log on. We will have practice runs (no credit, see schedule above) to check the registration process and get used to the system.

We will have a clicker dry run (no credit, see schedule above) to check the registration process. All clicker problems must be sorted out by **Feb. 2**. We will not go back and retroactively transfer scores because of clicker registration problems. This is in part why we drop a number of clicker days (see below).

During the lecture, when you are working on one of the clicker questions, you may discuss the problem quietly with your immediate neighbors. This is intended to help you understand the problem and solve it. “The answer is C” is not the kind of discussion intended here - you deprive yourself of the opportunity to learn and prepare yourself for the exams.

One person operating more than 1 clicker/app (i.e. doing your friend’s clicker/app for them) is clear academic dishonesty, and will result in zero credit for the clicker score and be reported to the Academic Judiciary for the owners of both clickers.

**You will need a calculator**. It should be able to do trig functions, square root, log, exponential notation. You do not need a fancy graphing calculator. You will also need your **calculator for the exams**. Your calculator is an important tool for the course, and you should be familiar with it. Calculators may not be shared in the exams. You may not use the calculator function of a cell phone in the exams.

## Homework and Textbook

Homework problems will be assigned using Mastering Physics. You get there from Brightspace. You will need to purchase a license for homework through Pearson or use existing one (if you have one) or it comes together with a book, printed or e-text. You do

not need a course ID as you should register to the linked course in Mastering Physics through Brightspace. The textbook is “Physics for Scientists and Engineers with Modern Physics” by Giancoli, 5th edition. If you already have a license you must connect via Brightspace to link your license with our course. Instructions to do this are at

https://help.pearsoncmg.com/integration/cg/student/content/get_started.htm

There will be online problems assigned once per week, and they will be due at 11:59 PM on the following Sunday. (i.e. the problems for the week of Feb. 2 will be due Feb. 8.)

Mastering Physics and Textbook: You must have a valid Mastering Physics license for the course (a license is good for two semesters), and there are several options for the accompanying textbook. Here are the choices:

1) Modified Mastering Physics with Pearson eText Access Code (18 Weeks) for Physics for Scientists & Engineers with Modern Physics 5th edition, 18 Weeks $89.99
ISBN 9780137488353; Giancoli

2) Modified Mastering Physics with Pearson eText Access Code (24 Months) for Physics for Scientists & Engineers with Modern Physics 5th edition, 24 Months, $154.99
ISBN 9780134402628; Giancoli

3) Modified Mastering Physics with Pearson eText + Print Combo Access Code (18 Weeks) for Physics for Scientists & Engineers 5th edition, 18 Weeks, $129.99, ISBN 9780137504299; Giancoli

4) Multi Term Modified Mastering Physics with Pearson eText + Print Combo Access Code for Physics for Scientists & Engineers, 5th edition, 24 Months, $184.99, ISBN 9780136960331; Giancoli

The text book is required. You do not have to purchase the book by Giancoli, but you must have access to any college level calculus based textbook of Physics for Scientists and Engineers. ***Mastering Physics license for homework is mandatory***. The text books in items 3 and 4 are the full versions of Giancoli with all chapters. This semester we will cover material in Ch. 1 – 20, so if you prefer you may buy one of the reduced content texts (not listed here).

## Getting help/Echo360

Echo360 Recording. An echo recording of the class periods will be available. To see the echo recordings either go to Brightspace or log on to echo360 directly. When logging in to echo directly, use your SBU email address.

We point out the following two items from the echo system information for instructors:

• “With all technology, there is the possibility of a hardware/software failure. Students should not rely on these recordings as their sole source of instruction. “

• “...failure for a recording to occur does not count as a legitimate excuse for lack of student performance.” We expect that students attend class in person.

The point of this is that you shouldn’t rely on the technology in the echo, especially in real time.

Office Hours: To help you with questions related to the course, recitation instructors hold 2 hours of office hours per week. In addition, the Phy133 Lab TAs also have office hours. The office hour schedule (and location) will be made available later in the semester.

## Exams:

Two Midterm exams are scheduled **8:15-9:35 PM on Monday, February 23 and Monday, April 6.** The final exam is **Thursday, May 14 at 2:15 PM - 5:00 PM**. ***All exams are in person.*** You have to make sure there are no conflicts in your schedule – we will not grant a makeup exam for schedule conflicts. The registrar's policy that students have responsibility for avoiding exam conflicts is crystal clear, and ***exceptions will not be granted in this course.*** If you cannot take a midterm due to exceptional circumstances, such as **documented** illness or death in the immediate family, discuss with the instructor as soon as possible. We will increase the weights of the other parts of the course accordingly, but not have make up exams. If you miss the final with a valid excuse, you will receive an Incomplete in the course and a makeup final will be scheduled as promptly as possible after the end of the semester.

## Grades:

Your course grade will be based on the following.

• **15% Homework**

- **10% Clicker score (100% is participation)**
- **20% Recitation score (Your recitation instructor will explain the scoring)**
- **15% Each of two midterms (30% total for both)**
- **25% Final Exam**

The lowest 5 daily clicker scores and lowest 2 homework scores will be dropped when grading. The clicker drops are to allow for technology problems, bad clickers, poor network, etc. It is your responsibility to make sure your clicker or app is working.

***There are no extra credit or other special supplementary assignments.***

## Academic Honesty

Academic dishonesty will not be tolerated. In this course, the standards are as follows. In lecture, when a "clicker" question is posed, you may discuss it with your neighbors. However, one person operating more than 1 clicker is cheating, and will result in zero clicker credit and report to the Academic Judiciary for the owners of both clickers. You may work with your colleagues on the clicker questions and the homework problems. However, please note that you only hurt yourself if you submit answers that you get from somebody else and you do not understand. In an exam, copying answers from another person or use of materials or communication other than what is allowed by the instructors will result in an F in the course.

Standard University Policy

ELECTRONIC COMMUNICATION POLICY FOR ALL STONY BROOK STUDENTS: Email to your University email account is an important way of communicating with you for this course. For most students the email address is 'firstname.lastname@stonybrook.edu', and the account can be accessed here: http://www.stonybrook.edu/mycloud. It is your responsibility to read your email received at this account.

For instructions about how to verify your University email address see this: http://it.stonybrook.edu/ help/kb/checking-or-changing-your-mail-forwarding-address-in-the-epo . You can set up email forwarding using instructions here: http://it.stonybrook.edu/help/kb/setting-up-mail-forwarding-in- google-mail . If you choose to forward your

University email to another account, we are not responsible for any undeliverable messages.

ACADEMIC INTEGRITY. Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instance of academic dishonesty to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/ commcms/ academic_integrity/index.html

STUDENT ACCESSIBILITY SUPPORT SERVICES (SASC). If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact SASC, located in the Educational Communications Center (ECC) Building, room 128, (631) 632-6748 or http:// www..stonybrook.edu/commcms/studentaffairs/sasc/. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

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 Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, and/or inhibits students' ability to learn.