

TATIANA STANTCHEVA PHYSICS

PHY 231 OUTLINE

Course Outline

This is the first part of the two-semester [General University Physics Course](#) taught at [NOVA](#). The class is intended for students who plan to major in physics, engineering, chemistry, or computer science. If your major is different from those mentioned above, or you are not sure whether the class is for you, please, contact the physics department.

Prerequisites.

[MTH 173](#) and a satisfactory placement score for [ENG 111](#)

Additional Requirements.

Students are required to have access to a computer with fast internet connection.

Students are expected to have working knowledge of some form of Editing Software, such as Microsoft Office, Open Office, Google Documents, etc.

Students may be required to participate in virtual classes through [Blackboard Collaborate](#).

Course Objectives and Learning Outcomes.

[Course Content Summary and Objectives](#) as published on the NVCC web site.

By the end of the semester students are expected to know how to apply the following concepts to topics of Mechanics, Fluids, Oscillations, and Thermodynamics:

- Kinematics: Motion in one and more dimensions, including Rotational Motion

- Dynamics: Forces, Newton's Three Laws and their applications.
- Energy and the Laws of its Conservation.
- Linear and Angular Momentum and their conservation.

Textbooks

[University Physics](#) by Hugh Young and Roger Freedman

Physics 231-232 Laboratory Manual by Walter Wimbush

Honors Option.

Some course sections offer Honors Option. Contact your instructor to find out whether your section offers Honors Option. For more information on the qualifications and requirements to receive Honors Credit, visit the [Physics Honors Option Page](#).

Laboratory Safety Rules

- Only students officially enrolled in the class are allowed in the physics laboratory.
- Open-toe shoes such as sandals and flip-flops are prohibited in the laboratory. All shoes must provide adequate foot protection.
- All students must be acquainted and abide by the safety rules as published on [the Physics Laboratory Webpage](#).
- Students in violation of the safety rules will be asked to leave the laboratory.

General Course Organization and Policies

Assignments, Grading, and Make-up Policy

The course grade is comprised of labs and lab assignments, weekly homework, class tests and a final exam. For more details, contact directly the course instructor.

Grading Scale: A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: <60%

One lab will be dropped from the lab grade. The lowest test score will be dropped from the exam grade. No lab or test make-ups are allowed.

Attendance

Students are expected to attend all scheduled classes. If an online meeting is scheduled, due to an emergency or other reason, student participation in those meetings counts towards their attendance

Students are responsible to know all the material covered in class regardless of whether they have attended class or not.

Withdrawal/Incomplete/Audit

Last day to drop the class with Tuition Refund is [Census Date](#). No Audit will be permitted after the [Census Date](#). Students who have not attended class by the [Census Date](#) will be administratively withdrawn from the class.

No withdrawals will be permitted after [the Last Day to Withdraw Without Grade Penalty](#). Students are responsible for withdrawing themselves from the class.

Incomplete Grade may be given only to students who have earned already 70% of the class grade and have documented special circumstances that preclude them from finishing the class in time. In such cases, they must complete the class by the end of the following semester, or their grade will automatically revert to the earned grade.

Academic Dishonesty

Students are expected to abide by the [College's Rules on Academic Dishonesty](#). Be advised that:

- Cheating will not be tolerated in any form. Copying and using someone else's work to obtain credit, as well as letting someone else copy your work, is considered cheating. Any cheating incident will be reported to the Dean of Students and may then become part of your official student record.
- Cheating on any assignment will result in failing that assignment. A second instance of cheating will result in automatic failing of the class!
- All assignments are individual unless otherwise specified.

The use of unauthorized electronic devices during an exam is considered cheating.

Students who show a discrepancy greater than a full letter grade between their performance on two separate class assignments (in-class or outside class), may be required to take an additional exam. In that case, the instructor will decide how the additional exam grade will be factored into the overall course grade.

Disability Accommodations

No disability accommodations will be provided unless a Disability Data Sheet is provided to the instructor. Those seeking accommodations based on disabilities should obtain a Disability Data Sheet through [the Counselor for Special Needs](#).

Classroom Etiquette

Feel free to express yourself freely during class discussions; however, always be respectful and polite to your fellow classmates. Address your instructor by their last name.

During class, students may not use cell phones and other electronics devices except for direct and immediate classwork.

In their emails, posts and any other form of electronic communication, students are expected to address their recipient properly and courteously, include the course title and number in the subject line, and to sign their full name at the end of their message.

EDIT

TATIANA STANTCHEVA PHYSICS

PHY 231 GRADING 16WK

Grading Policies

Grading Scale: A: 90% or above; B: 80 – 89%; C: 70-79%; D: 60- 69%

Course Grade Total of 400 points. The course grade is comprised of Laboratory (20%), Online Quizzes (20%), Exams (60%).

Lab Grade Total 80 pts.

- All labs and assignments are 5 pts each.
- Late/missed policy:
 - Late for lab penalty: 2 pts.
 - Late assignments/reports penalty: 1 pts. **No late assignments are accepted if they are overdue by more than one week!**
 - One lab will be dropped.
- Students must adhere to the [lab policies](#) or else they will be required to leave the physics lab room.
- It is the responsibility of the students to check with [the schedule of classes](#) and to know which labs require protective goggles.

Online Quizzes Total 80 pts.

- There will be weekly on-line quizzes posted on [Blackboard](#). No more than 60 pts will count toward the Quiz grade.
- No late quizzes will be accepted. The most current quiz deadlines will always be posted on Blackboard.
- It is the student's responsibility to know when each quiz is due.

Exams Total 240 pts.

- There will be five exams each worth 40 points.
- The final exam (80 pts) consists of two parts, each 40 pts.
- The lowest exam grade is dropped. Note, students may elect to drop one of the final exam parts, but not both.
- The instructor will provide [phy231_formulae](#) Students may print it out at home in advance, and bring it to class. **No other formula sheets will be allowed.**
- During an exam, students may bring only a pen/pencil and an approved calculator.
- Absolutely no electronic devices except approved calculators with blank memory, are allowed during an exam. Check with your instructor for a list of approved calculators.
- No late or make-up exams will be given. For students who know in advance that they will not be able to take an exam at the scheduled time, an arrangement may be made for that exam to be taken at **EARLIER** time.

EDIT

	Aug. 21	FALL 2017	PHY 231 Class Schedule	
	Week	Assignments Due	Tuesday	Thursday
1	Aug. 21		Aug. 22	Aug. 24
			Introduction	Lab. Safety; Math Review
2	Aug. 28		Aug. 29	Aug. 31
		Quiz Vectors	2. Vectors; 3. Motion in 1D	LabA. Vectors; Lab. Velocity and Acceleration
3	Sep. 4		Sep. 5	Sep. 7
		Sep. 7: Last Day to Drop Quiz Motion 1D	2. Motion in 1D (contd); Problem Solving Session	Exam 1. Vectors, Motion in 1D Lab. Force Table
4	Sep. 11		Sep. 12	Sep. 14
		Quiz Motion in 2-3 D	3. Motion in 2-3 D	Ch. 4 Newton's Laws Lab. Newton's Second Law
5	Sep. 18		Sep. 19	Sep. 21
		Quiz Forces I	4. Newton's Laws (contd.)	Lab. Centripetal Motion
6	Sep. 25		Sep. 26	Sep. 28
		Quiz Forces II	5. Applications of Newton's Laws Problem Solving Session	Exam 2. Motion in 2-3 D, Newton's Laws Lab. Energy
7	Oct. 2		Oct. 3	Oct. 5
			6. Work and Energy	6. Work and Energy 8. Center of Mass
8	Oct. 9		Oct. 10	Oct. 12
		Quiz Energy Quiz Center of Mass	No Classes	9. Linear Momentum Lab. Collisions I
9	Oct. 16		Oct. 17	Oct. 19
		Quiz Momentum	9. Linear Momentum Problem Solving Session	Exam 3. Chapters 6 -9 10. Rotation
10	Oct. 23		Oct. 24	Oct. 26
			10. Rotation	11. Statics Lab. Torque

