

PHY 232 002A      TENTATIVE SYLLABUS AND SCHEDULE  
FALL 2017

Lectures are in the room: AA-0441

Labs are in the room: AA-0385

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, email the instructor for clarification.

**Instructor:** Branislav Djordjevic [bdjordjevic@nvcc.edu](mailto:bdjordjevic@nvcc.edu)  
Office: AA-0441

**Office hours:** After the class on **Saturday** – by appointment

**Lecture:**            Saturday 10:00 am – 1:00 pm [ room AA-0441 ]

**Laboratory:**      Saturday 1:00 pm – 3:00 pm [ room AA-0385 ]

**Textbook:** [University Physics with modern physics by Young and Freedman, ed. Pearson. 13<sup>th</sup> edition is fine.](#)  
MasteringPhysics access code card package is **NOT** required

**Attendance and expectations:** **Students are expected to come to class prepared and already familiar with the topic.** This involves watching videos, reading the textbook, and occasionally doing some assigned activities **before** coming to class. The majority of the class time will be dedicated to discussions and to solve problems collaboratively. **It is crucial to arrive in class prepared.** Students should plan to stay for the entire scheduled hours. The actual length of the “lecture” will be decided by the instructor on daily basis.

Students are expected to attend *all* lecture and laboratory sessions.

Students are responsible for all material covered in the lecture, laboratory and assignments.

Students are expected to come to class on time.

If an online meeting is scheduled, due to an emergency or other reason, student’s participation in those meetings counts towards attendance.

**Students are expected to study physics and solve the assigned HW every day!**

**Prerequisites.** Successful completion of [PHY 231](#) and [MTH 174](#)

**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:

- o Kinematics: Motion in one and more dimensions, including Rotational Motion
- o Dynamics: Forces, Newton's Three Laws and their applications.
- o Energy and the Laws of its Conservation.
- o Linear and Angular Momentum and their conservation.

**W/Audit Grades:** Last day for Schedule Adjustments with Tuition Refund **(Census Date) is September 7th.** Students who have not attended any class by the **Census Date** will be administratively withdrawn from the class. No Audit will be permitted after the **Census Date**.

No withdrawals will be permitted after the **Last Day to Withdraw Without Grade Penalty, October 31st.** Students are responsible for withdrawing themselves from the class.

The instructor reserves the right to withdraw a student for poor attendance.

**Grading scale:**

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

**Graded assignment categories with weights:**

- Labs – 20%;**
- Quizzes – 20%;**
- 2 Midterm Exams – 36% (18% each);**
- Final – Comprehensive - 24%**

**Labs: Total weight 20%.**

There will be 10 ~ 11 labs.

Lab handouts are posted on Blackboard under the Labs tab.

Lab reports are due one week after the lab. No late report will be graded. Most reports will be a group reports, other reports may be individual reports. **All the reports should be uploaded on Blackboard by the due date, which is Sunday, 11:59 pm, the following week.**

If a student is late by more than 15 min for the lab, he/she can still do the lab but will lose 30% of credit for that lab. **Students without shatter-resistant eye goggles or with open-toe shoes will not be permitted to stay in the laboratory room!**

It is the students' responsibility to know which lab experiments require protective eye goggles. No students will be permitted to perform those experiments without protective eye goggles. Only students officially enrolled in the lab section are allowed in the physics laboratory.

**Students must have a passing lab grade in order to pass the class!**

**Quizzes: Total weight 20%.**

There will be weekly on-line quizzes, posted on Blackboard, **due Sunday by 11:59 pm. It is the student's responsibility to know when each quiz is due.** Check with Blackboard under Quizzes for the most up-to-date quiz deadlines or for any changes in the schedule.

No late quiz will be accepted. No quiz on paper or emailed will be accepted. No make-up quiz are allowed.

**Be PREPARED:**

Students are expected to come to class prepared on the subject.

**Exams: Total weight 60%.**

- There will be **2** mid-term exams, each 1.5 hours long (**30% total**).
- **There will be a Final comprehensive exam. (30%)**  
Only formula sheets provided by the instructor can be used during exams.  
Students may bring only a pen/pencil and a calculator; programmable calculators must have blank memory before the exam. No TI Nspire allowed.
- 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.

**Make-up policy: Regardless of the circumstances,**

- **there are no make-up exams**
- **there is no make-up final exam**
- **there will be absolutely no make-up quizzes**
- **there is no make-up for labs**

<b>PHY 231 SCHEDULE IS SUBJECT TO CHANGE AT INSTRUCTOR'S DISCRETION</b>			
<b>Instructor: Branislav Djordjevic <a href="mailto:bdjordjevic@nvcc.edu">bdjordjevic@nvcc.edu</a></b>			
<b>Week</b>	<b>Quiz Due SUNDAY following week by 11:59pm</b>	<b>Lab: AA-0385 Saturday: 1-3 pm Due Sunday, 11:59pm The following week</b>	<b>Lecture AA-441 Saturday 10 am - 1 pm</b>
Week 1 Aug 26	Quiz 1 Waves	Syllabus and Labs rules- <b>Lab 1: Standing Waves</b>	<b>Waves</b>
Week 2 Sep 2	Quiz 2: Sound	<b>Lab 02: Air Column Resonance</b>	<b>Sound</b>
Week 3 Sep 9	Quiz 3: Sound	<b>Lab 03: Equipotential Lines</b>	<b>Electric Charge and Force; Electric Field.</b>
<b>Census Day: September 7th</b>			
Week 4 Sep 16	Quiz 3: Electrostatic Field	<b>No LAB! Problem-solving time!</b>	<b>Gauss Law</b>
Week 5 Sep 23	Quiz 4: Gauss Law	<b>EXAM 1: Waves, Sound, El. Force, El. Field, Gauss Law. No LAB!</b>	<b>Electric Potential</b>
Week 6 Sep 30	Quiz 5: El. Potential	<b>Lab 4: Ohm's Law</b>	<b>Electric Current &amp; DC Circuits</b>
Week 7 Oct 7	Quiz 6: Capacitors	<b>Lab 5: RC Circuits</b>	<b>Magnetism</b>
Week 8 Oct 14	Quiz 7: El. Current	<b>Lab 6: E/M Ratio</b>	<b>Sources of Magnetic Field</b>
Week 9 Oct 21	Quiz 8: DC Circuits	<b>No LAB! Problem-solving time!</b>	<b>EM Induction</b>
Week 10 Oct 28	Quiz 9: Magnetic field	<b>EXAM 2 (El. Potential, Current, DC Circuits, Magnetic Field, B-Sources No LAB!</b>	<b>Inductance</b>
<b>Last day to Withdraw without Grade penalty: October 31st</b>			
Week 11 Nov 4	Quiz 10: Sources of Magnetic field	<b>No LAB! Problem-solving time!</b>	<b>AC Circuits</b>
Week 12 Nov 11	Quiz 11: Induction	<b>Lab 7: Ray Optics – Index of Refraction</b>	<b>EM Waves, Ray Optics</b>
Week 13 Nov 18	Quiz 12: Inductors and Transformers	<b>Lab 8: Ray Optics - Lenses</b>	<b>Ray Optics,</b>

Week 14 Nov 25	Quiz 13: AC Circuits	<b>Lab 9: Interference and Diffraction</b>	<b>Interference and Diffraction</b>
Week 15 Dec 2	Quiz 14: EM Oscillations	<b>Lab 10: Analysis of Light</b>	<b>Dual Nature of Light</b>
Week 16 Dec 9	Quiz 15: EM Waves	<b>No LAB! REVIEWS &amp; Problem Solving</b>	<b>REVIEWS &amp; Problem Solving</b>
<b>FINAL EXAM</b>	Quiz 16: Ray Optics		<b>Final exam (comprehensive) December 16, at NOON</b>

### Academic

**Integrity:** Students are expected to abide by the [College's Rules on Academic Integrity](#).

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. Cheating on an exam will result in failing that exam. A second offence will result in automatic failing of the class!

During an exam, if a student leave the room for any reason, he/she will not be permitted to continue working afterwards. All assignments are individual unless otherwise specified.

**Electronics:** Please, turn off your pagers and cell phones when you come to class.

**Disability accommodations:** No disability accommodations will be provided unless an Accommodations Request Form is provided to the instructor. Those seeking accommodations based on disabilities should obtain an Accommodations Request Form through the Counselor for [Disability Services](#).