

**PHY 231 004A TENTATIVE SYLLABUS AND SCHEDULE
SPRING 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
Office: **AA-0441** Phone: 571-225-8612 (text me, or leave a message, and I will get back to you)

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

Lecture: **Saturday 11 pm – 2 pm room AA-0441**

Laboratory: **Saturday 9 am – 11 am room AA-0385**

Textbook: [University Physics with modern physics by Young and Freedman, ed. Pearson. 13th 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. [MTH 173](#) and a satisfactory placement score for [ENG 111](#)

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 **January 26th**. 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, March 21st**. 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%;**
- 3 Exams – 42% (14% each);**
- Final - 18%**

Each assignment will be graded on the scale from 0-100%, and average percent grade will be calculated for each category. Your final % grade will then be calculated as a weighted average of the average % grades

Labs: Total weight 20%.

Lab handouts will be 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.

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.

Homework Non-graded HW will be assigned every week: students are strongly advised to do the HW every day, and not only on days before the exams.

HW problems will be discussed in class and students may be called to show their solutions.

Videos Students are expected to come to class prepared on the subject by watching the videos posted on Blackboard under the Videos Tab. Depending on your learning style it may be helpful to read the chapter on the book as well.

Exams: Total weight 60%.

- There will be **3** one hour and 30 minutes mid-term exams.
- **There will be a Final comprehensive exam. Final exam cannot be dropped!**
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**

PHY 231 SCHEDULE IS SUBJECT TO CHANGE AT INSTRUCTOR'S DISCRETION

Instructor: Branislav Djordjevic bdjordjevic@nvcc.edu

Week	Quiz Due the following week Sunday, by 23:59	Lab AA-0385 Saturday: 9-11 am Due following Saturday by 23:59	Lecture AA-441 Saturday 11 am-2 pm
Week 1 Jan 14		Syllabus and Labs rules- Vectors - Chapter 1 Lab 1: Vectors (online at home)	Kinematics 1D –Chapter 2
Week 2 Jan 21	Quiz 1 Vectors	Problem solving	Kinematics 2D- Chapter 3
Week 3 Jan 28	Quiz2: Kinematic s 1D & 2D	Problem solving	Dynamics and Newton- Chapters 4 -5 Review for Exam 1
Week 4 Feb 4	Quiz 3: FBDs	EXAM 1 (Chapters 1-3) Lab 2: Uniform Acceleration	Dynamics and Newton- Chapters 4 -5
Week 5 Feb 11	Quiz 4: Newton	Lab 3: Newton's 2nd Law	Work and Kinetic energy- Chapter 6 Energy conservation - Chapter 7
Week 6 Feb 18	Quiz 5: Work	Lab 4: Circular Motion	Momentum - Chapter 8 and Problem solving
Week 7 Feb 25	Quiz 6: Energy	Lab 5: Conservation of energy	Problem Solving - Review Rotation - Chapter 9
Week 8 Mar 4	Quiz 7: Linear Momentum	EXAM 2 (Chapters 4-5-6-7) No lab	Rotation - Chapter 9
Week 9 Mar 11	SPRING BREAK NO CLASSES		
Week 10 Mar 18	Quiz 8: Rotation 1	Lab 6: Conservation of linear momentum	Rotation - Chapter 10
Week 11 Mar 25	Quiz 9: Rotation 2	Lab 7: Torque (online)	Problem Solving - Review Gravitation – Chapter 13
Week 12 Apr 1	Quiz 10: Gravity	Lab 8: Buoyancy	Periodic Motion – Chapter 14 Equilibrium – Chapter 11

Week 13 Apr 8	Quiz 11: Equilibrium	EXAM 3 (Chapters 8-9-10) No Lab	Fluids – Chapter 12 Problem solving
Week 14 Apr 15	Quiz 12: SHM & Fluids	Lab 9: SHM (online)	Temperature and Heat - Chapter 17 Gas Laws - Chapter 18
Week 15 Apr 22		Lab 10: Density	Thermodynamics 1st Law- Chapter 19 Thermodynamics 2nd Law- Chapter 20
Week 16 Apr 29		Preparation for the Final Exam	Preparation for the Final Exam
Week 17 May 6	FINAL EXAM	Final exam (comprehensive) May 6, NOON-2 PM	

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](#).

Important dates:

Classes begin	January 9
Last day to drop with a tuition refund or change to audit (census date)**	January 26
Last day to withdraw without grade penalty***	March 21
Examinations end	May 7
Spring Break for teaching faculty and students. College offices open March 6-10.	March 6-12