



Course Syllabus - Advanced Placement Physics 1, 2023-24 School Year

Ms. Cristina Arsovan (arsovan@fultonschools.org)

Rm. 139

Mrs. Anu Bhardwaj (bhardwaj@fultonschools.org)

Rm. 140

Text: *College Physics: A Strategic Approach*, 4 edition, Knight ISBN: 9780134391786; **Replacement Cost:** \$155.47

Instructors: Cristina Arsovan – arsovan@fultonschools.org Anu Bhardwaj – bhardwaj@fultonschools.org

Course Description:

Advanced Placement Physics 1 is designed to introduce students to a range of topics in physics as well as prepare the student for the advanced placement examination. **The AP Physics 1 exam will be Friday morning, May 17, 2024.** The advanced placement examination provides students with the opportunity to earn college credit for a course taken in high school. The AP Physics 1 course covers a variety of topics but primarily focuses on Newtonian mechanics including kinematics, forces, work/energy/power, momentum, rotational motion, oscillations, and fluids. In addition, I plan to include additional units that will provide exposure specifically to electricity and magnetism, as well as other interesting topics if time allows.

Student Expectations: Due to the in-depth nature and pace of this course, along with the necessity to review and prepare for the AP exam, students should understand the need to spend time outside of regular school hours preparing for the AP exam. In addition, since students can receive college credit for this course, students will be expected to perform significant work outside of class, as would be expected of college students. Students are required to have a scientific (NOT GRAPHING) calculator to use on our assessments.

STUDENTS ARE REQUIRED TO USE A SCIENTIFIC (NON-GRAPHING) CALCULATOR ON ALL ASSESSMENTS

Fall Semester Objectives (test dates are tentative and subject to change due to pacing adjustments as well as school related activities, such as assemblies and field trips that impact instructional time): **Students should expect unit tests to be cumulative.**

Unit	Topic/Chapters Covered	Tentative Test Date
1	Introduction to Physics and One-Dimensional Motion; Algebra/Trigonometry review (summer assignment), measurement, graphing, vectors and one-dimensional motion <u>(Chapters 1-2; 3 weeks)</u>	August 25 th
2	Forces, including 1D and 2D -Newton's Laws of Motion, Free-Body Diagrams, Types of Forces <u>(Chapters 4-5 and 3 (2D Vectors); 3 weeks)</u>	September 20 th
3	Two-dimensional Motion and Circular Motion including Gravitation, and Circular Orbits <u>(Chapters 3 and 6; 3.5 weeks)</u>	October 17 th
4	Work-Energy Work, Energy, Power, Conservation of Energy <u>(Chapters 10; 3 weeks)</u>	November 3 rd
5	Linear Momentum - Momentum, Conservation of Momentum, Collisions <u>(Chapter 9; 2 weeks)</u>	November 17 th
6	Simple Harmonic Motion <u>(Chapter 14; 2 weeks)</u>	December 8 th
	Digital Portfolio/Recovery - December 11-15 (Portfolio due Friday, December 15 th – minor grade)	December 15 th

Spring Semester Objectives:

Unit	Topic/Chapters Covered	Tentative Test Date
7	Rotational Motion including Kinematics, Rotational Kinetic Energy, Moment of Inertia and Rolling Motion <u>(Chapter 7, 10.3; 3 weeks)</u>	January 24 th
8	Torque and Angular Momentum; Kepler's Laws <u>(Chapter 7 and Chapter 8; 4 weeks)</u>	February 23 rd
9	Fluids including Density, Pressure, Buoyancy, Continuity Equation and Bernoulli's Principle <u>(Chapter 13; 2.5 weeks)</u>	March 15 th
	A project (minor grade) will be assigned upon completion of Unit 9 and be due before spring break, March 29 th . (2 weeks)	March 29 th
	Review for the AP Physics 1 exam will start upon returning from the spring break. The AP Physics 1 exam will be Friday morning at 8:00 am, May 17, 2024. Students will be required to take an AP style assessment that will count as an additional major grade for the course. This will be administered prior to the actual AP Exam between April 22 nd and May 3 rd (exact date tbd).	TBD

Northview High School

Students will be required to take an AP style assessment that will count as an **additional major grade** for the course. This will be administered prior to the actual AP Exam (date tbd). The learning objectives for this course, as determined by College Board, and additional resources can be found at: [AP Physics 1 - AP Central | College Board](#). Be sure to look at those objectives denoted for AP Physics 1 only.

Grading

- **Major Assignments** – include unit tests **55% of the overall course grade.**
- **Minor Assignments** – include lab assignments, projects, quizzes **35% of the overall course grade.**
- **Practice Assignments** – Mastering Physics, other graded homework **10% of the overall course grade.**

Students are required to install LoggerPro/Graphical Analysis on a home computer and school issued device. LoggerPro/Graphical Analysis is a data collection and analysis program that we will use in many of our laboratory exercises. A home copy will allow students to perform analysis of the data at home as well as produce graphs and other artifacts to include in their lab reports. The LoggerPro/Graphical Analysis installation file can be found on each teacher's class website.



We will also use an online homework service (Mastering Physics) that accompanies our textbook. This service is provided as part of the resources provided by the textbook publisher. Mastering Physics homework problems are to be done in a composition notebook and all students should be able to show their work for Mastering Physics if asked. Students should be able to, with notice, bring in their homework notebook as evidence of the quality of work they have done. During the last 3 days before each unit test students will take a short homework quiz.



GRADING SCALE-All grades will be recorded on transcripts and report cards as *numeric* grades. The grading scale is as follows:

A = 90 and above
B = 80 – 89
C = 70 – 79
F = 69 and below

Students who successfully complete AP and/or Honors courses will receive an additional seven points. These honor points will be added to the final average for each qualifying course.

 **STUDENT EXPECTATIONS**  You are a young adult and responsible for yourself and your behavior. You are expected to act with respect toward anyone or anything with which you are involved. This includes but is not limited to your fellow students, teachers, other school personnel, classroom furniture, laboratory equipment and school property. Acting in such a manner will insure an enjoyable and productive classroom environment that can benefit all at Northview High School.

No food or drinks are to be consumed in the classroom except for water, which should be in a container with a sealable top.

The use of cell phones in the classroom is prohibited unless you are instructed to do so by the teacher or have clearly asked for permission from the teacher. Cell phones that are visible during class time without teacher permission will result in a disciplinary action that may include detention or office referral (in the case of multiple infractions). Cell phones may also be confiscated and turned into the student's assistant principal.

1. Students may not leave class for any reason without a pass issued by the teacher. **Teachers are not authorized to issue passes during the first ten minutes or last ten minutes of class except in cases of a true emergency.**
2. Students who are suspended from school are restricted from attending school events until the suspension is concluded. Students suspended Friday and Monday may not participate or be present at weekend events.
3. Students are responsible for damage to, or loss of, their books or any school property.
4. Northview High School operates on the closed campus concept. Students may not leave campus once they arrive unless they have properly checked out through the attendance office.
5. During an emergency or drill, students are to stay with their class and follow all teacher directions.
6. Students may not use cell phones or other electronic devices during class time, unless given permission by staff for instructional purposes. Please see cell phone policy section.



Communication: Our email addresses are at the top of the syllabus, as well as the school phone number, to facilitate parental communication. Please utilize email to make your initial contact as we do not have phones in the classroom. **Infinite Campus is an internet tool that can be used to access student grades.** Please remember that grades will be entered upon completion of grading, which can take several days depending upon the nature of the assignment. Infinite Campus can be accessed via the link provided on the Fulton County Schools website. Canvas will also be used to support instruction.



Office Hours: Please speak with your teacher directly regarding meeting availability.

Northview High School



Cell Phone Policy - Tiered System

Students may **not** use cell phones during class unless explicitly approved on a specific day for instructional purposes by the teacher.

- **Upon entering the classroom, all students must place their cell phone in their assigned pocket # of the classroom's hanging cell phone holder**
- Once placed in the cell phone holder, students may not access during class time without the explicit permission of the teacher on a specific day for instructional purposes.
- If leaving the classroom to use the restroom, vending machine, etc., cell phones must remain in the classroom holder; students are **not** allowed to bring phones with them.
- If a student refuses to follow school and district cell phone rules, the teacher should (1) remind the student of the rule, (2) notify the parent/guardian via email that the student is not following the rule, (3) assign a detention, and (4) submit a behavior referral to the appropriate administrator. At the administrator's discretion, the student's cell phone may be confiscated and returned only to a parent/guardian. Further disciplinary consequences may be assigned depending on the circumstances.

1st Offense

- Teacher Warning
- Teacher keeps phone for remainder of period
- Parent contact (email)
- If student refuses, submit an office referral

2nd Offense

- Collect phone from student and take to the front office - attach student name to phone
- Student gets phone from the front office at 3:30 pm
- If student refuses, submit an office referral

3rd Offense and Beyond: Office Referral (Tier 2 Offense)

- Collect phone from student and give to their administrator - attach student name to phone
- Parents gets phone from the administrator
- If student refuses, submit an office referral
- Administrator advises parents phone should not be in the building



MULTIPLE TESTS ON THE SAME DAY-Students are not required to take more than three *major* tests on the same day.

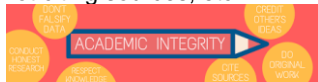
Students scheduled for four or more tests on the same day should see their administrator no later than the day before the tests. Teachers will be notified in writing by an administrator if permission to reschedule a test has been granted.



HONOR CODE VIOLATIONS-As members of Northview High School, we honor academic and personal integrity. We uphold the values of honesty, integrity, respect, responsibility, and our mission are to instill excellence in academics.

Cheating has been defined as giving or receiving, in any form, information relating to a gradable experience including the use of sources of information other than those specifically approved by the teacher, either during or outside of class.

Examples of cheating include, but are not limited to, visual exchanges (cheat sheets, copying, open books or notes, writing on hands, shoes, or desks, calculators, submission of another student's work, etc.), and verbal, electronic or coded exchanges. Other examples include, but are not limited to, plagiarism, discussing tests with students who have not taken the test, copying homework assignments, not citing sources, etc.



CONSEQUENCES OF ACADEMIC DISHONESTY -Instances involving academic dishonesty, students are referred to their administrator and issued a consequence. The assignment will receive a grade of "0". The teacher must contact the student, parent/guardian via phone on the day of the incident and enter the violation into Infinite Campus. An Honor Code Violation is placed in the student's permanent discipline file.

First offense:

The teacher must contact the parent/guardian via phone on the day of the incident and enter the violation into Infinite Campus.

Consequences

- Assignments receives a zero –assignment not eligible for recovery (teacher)
- Titan Opportunity School – 4 Hours (administration)
- Honor Code Violation is placed on the student's permanent discipline file (administration)

Second offense:

The teacher must contact the parent/guardian via phone on the day of the incident and enter the violation into Infinite Campus.

Consequences:

- Assignments receives a zero - assignment not eligible for recovery (teacher)
- In School Suspension (administration)
- Awards and organization consideration (National Honor Society, Beta, etc.), clubs, class officers, and teacher/counselor recommendations will be revoked (administration)
- Honor Code Violation is placed on the student's permanent discipline file (administration)

Northview High School

Third or more offense:

The teacher must contact the parent/guardian via phone on the day of the incident and enter the violation into Infinite Campus.

Consequences:

- Assignments receives a zero - assignment not eligible for recovery (teacher)
- Range of multiple days of ISS up to OSS (administration)
- Awards and organization consideration (National Honor Society, Beta, etc.), clubs, class officers, and teacher/counselor recommendations will be revoked (administration)
- Honor Code Violation is placed on the student's permanent discipline file (administration)

In any instance involving academic dishonesty, the school principal, or principal designee, may impose sanctions more serious than the reprimands/consequences above depending on the severity of the academic dishonesty. Discipline offenses are cumulative throughout a student's high school career.



Help Sessions: Help sessions are available before and after school. Please set a confirmed appointment time and I will be there for you.



Infinite Campus: Parents have access to their child's grades through Infinite Campus.



TARDY- Students are expected to be in class and ready to begin work before the tardy bell sounds. Tardies accumulate throughout each 9-week grading period. At the start of each new 9-week grading period, the tardy count restarts. During the school day, repeated tardiness to the same class will result in assignment of the following consequences:

- 1st tardy: verbal warning
- 2nd tardy: one-day private detention with teacher and parent contact
- 3rd tardy: referral to administration and one day of administrative lunch detention
- 4th & subsequent tardy: referral to administrator and after school detention (2 hours or more)



MAKE-UP WORK/PROGRESS REPORTS/RECOVERY- Students are given the same number of days to complete make-up work as the number of days absent (not including the day of return). For instance, a student is absent two days, he/she has two days (not including the day of return) to complete the assignments. The teacher will establish a reasonable schedule for completing tests, labs, etc. that cannot be done independently by the student. This applies to all student absences, unexcused, excused, pre-approved, field trip, athletic and fine arts event, clubs/organizations, i.e.)

Published scheduled assessments will be given **the day of return** from an absence. **Refusal to take an assessment will result in a zero, with no recovery opportunity.** If a student misses 1 or more days of **new** (added) instruction prior to the assessment or the due date of an assignment, the student will have an equal number of days as they were absent to take the assessment or turn in the assignment to receive full credit.

Failure to complete make-up work within the designated time frame will result in a grade reduction and/or loss of credit for the assignment.

Late work will receive a grade of zero if not completed by the due date. All work submitted after the due date will receive **15% off the overall grade scored** on the task (practice/major/minor). Students have until the end of the unit to clear the zero of the missing assignment. Work submitted after the end of unit deadline will be subject to a **maximum of 25% deduction off the overall grade.**

Northview High School Recovery Policy: All major assessments are eligible for recovery if they score below a 75%. 1 recovery attempt per major assessment. Recovery should occur before the next major assessment. Teachers may require that all missing work be submitted and/or students attend remediation session(s) prior to completing recovery.



HALL PASSES- Students who are out of class for any reason must be in possession of a Northview Hall pass.