

# syllabus AP Physics 1



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**Campus:** Jim Ned High School  
**Year:** 2024-2025

**Prerequisites** In order to enroll in AP Physics 1, the student must successfully complete prerequisite courses that include the following topics: algebra, geometry, trigonometry.

**Course Weighting** Advanced courses are weighted by adding ten percent to the semester grade when determining class rank. Weighting is used for class rank determination only. Weighted grades do not appear on report cards or transcripts.

**Course Eligibility** In order to enroll in an advanced course, the student must achieve a final course average of 80+ in the previous advanced prerequisite (if applicable), not including the ten percent weighting. In order to remain in an advanced course, students must maintain a 75+ average, not including the ten percent weighting.

**Course Description:** The AP Physics 1 course is equivalent to a first-semester introductory college course in algebra-based physics. The course is focused on four big ideas:

Big Idea 1 Systems: a physical system is a portion of the physical universe chosen for analysis.

Big Idea 2 Interactions: objects and system interactions can be described using concepts such as force and energy.

Big Idea 3 Change: changes in the properties of a system can be used to predict future states of the system.

Big Idea 4 Conservation: changes that occur because of interactions are constrained by conservation laws.

## Course Outline

- ☐ Unit 1: Kinematics
- ☐ Unit 2: Dynamics
- ☐ Unit 3: Circular Motion
- ☐ Unit 4: Energy
- ☐ Unit 5: Momentum
- ☐ Unit 6: Simple Harmonic Motion
- ☐ Unit 7: Torque and Rotational Motion
- ☐ Unit 8: Fluids

## Stay Informed About Grades, Attendance, and Timeline

- ☐ Students and parents are expected to subscribe to grade and attendance notifications in Parent Portal.
- ☐ Students are expected to regularly monitor Google Classroom communications from the teacher.
- ☐ **Important:** It is extremely important that both students and parents communicate with the teacher about grades early and often. Addressing performance concerns near the end of a six-week grading period seldom provides the student an opportunity to recover.

## Grades

- **Tests (50%)** Tests consist of multiple choice and short answer questions that resemble the framework of the actual AP test. Tests will assess the student's ability to understand and integrate key facts and concepts from the unit objectives. Tests may not be retaken.
- **Quizzes (20%)** Quizzes will be concise assessments of the most recent material in the form of MCQ and/or FRQ. Quizzes will be announced several days prior to administration. Quizzes may not be retaken.
- **Labs (30%)** Labs consist of physical and virtual explorations, are typically student-designed, and often result in a formal lab report.

## Tutorials

- Tutorials are available Monday – Friday, 7:30 – 8:00am.

## Excused Absences and Make-up Work

- **Excused, Expected Absences** If a student is going to be absent from class for an expected, excused absence (school-sponsored activity, medical appointment, etc.), the student is responsible for collecting assignments prior to the absence.
- **Excused, Unexpected Absences** If a student is absent due to an unexpected event (illness, family emergency, etc.), the student is responsible for collecting assignments immediately upon return. Labs may be replaced with an alternate assignment. Due dates will be adjusted accordingly.
- **Unexcused Absences** Assignments missed due to an unexcused absence are not accepted and are assigned a grade of zero. At the teacher's discretion, these assignments may be accepted, given extenuating circumstances.

## Expectations

- The teacher and students will arrive to class on time and prepared every day ... there is a tremendous amount of material to cover.
- The teacher will engage students during class and students will participate during class.
- Students will complete all reading assignments and homework outside of class.

## Policies

- **Academic Integrity:** Cheating of any kind will result in a grade of zero. Most lab work is performed in groups. You may consult with your group during lab time, but must submit original work for the lab.
- **Phones:** Phones may not be visible or audible while in the classroom. Students are expected to have phones turned off during class time. Phones that are seen or heard for any reason whatsoever will be confiscated by the teacher and submitted to the campus office.
- **Chromebooks:** Students are expected to bring the school-issued Chromebook, with sufficient charge, each day. Chromebooks will be used at teacher discretion.
- **Failure to Comply:** Classroom discussion will be an important component of this course. However, a directive is not an invitation to engage in conversation or debate. When given an instruction, if a student fails to comply fully, classroom and/or campus disciplinary measures will be leveraged.