

**Redwood High School
Tamalpais Union High School District**

Honors Physics 1-2

This document includes critical information including deadlines

**INFORMATION FOR STUDENTS AND PARENTS
2020-2021 School Year**

What is Honors Physics 1-2?

Honors Physics 1-2 is an accelerated comprehensive laboratory science course treating topics that include optics light, waves sound, electricity motion, forces, energy, momentum, and relativity. This university preparatory course will cover the same topics in Physics 1-2, but with more mathematical rigor, which will require higher-level advanced algebra and trigonometry skills. The homework assigned is more challenging than Physics 1-2. Also, the laboratory work, class discussions, and assessments (quizzes and exams) will at times be more demanding. This course fulfills one year of the District's graduation requirement in science as well as the UC laboratory science admissions requirement.

What are the short- and long-term goals of such a course?

To offer a comprehensive first year physics course that broadens students' education in physical sciences, and to provide an overview of topics often covered in a freshman-level college physics course so that students who chose to major in science, engineering, premed, etc. in college will have a broader curricular background.

What is the expected workload for students? What type of work should students expect to do?

Lectures, discussions, demonstrations, labs, and web-based tutorials occur each week in class. Labs are done in small groups and reinforce topics from the lectures and discussions. Demonstrations also reinforce these topics. Lectures usually are supported by online presentations and often include web-based tutorials. In the spring semester, students will complete a few hands-on projects as part of their overall assessment.

Out of class, homework from the textbook is assigned after each class meeting except for most Fridays. The homework is checked daily, and then collected the following week in a set of three assignments. Follow up questions from labs are also typically completed as homework, and are due the week after a lab has been performed. Project work is also done partly in class and partly as homework. Additional time out of class revolves around preparing for biweekly (every other week) quizzes, and two "midterm" exams each semester.

Will there be an informational meeting?

*There will be an optional informational meeting for students interested in Honors Physics. The meeting will take place at RHS in room 233 during lunch on **Monday, January 27th, 2020.***

Admission Criteria

Students must meet the following admission criteria in order to be enrolled in this course:

- *COMPLETION OF, OR CONCURRENT ENROLLMENT IN, AP CALCULUS (AB OR BC).*
- *OR*
- *PASSING SCORE ON "MATHEMATICAL READINESS EXAM"*

ENTRANCE EXAM IS ON MONDAY, FEBRUARY 3rd, 2020, 3:15-4:15PM IN RM 233

What to expect on the Entrance Test?

Critical to success in Honors Physics 1-2 is the ability to successfully solve mathematically challenging physics problems. This is the key difference between the Honors Physics 1-2 and Physics 1-2 courses. Therefore, the concurrent enrollment in AP Calculus - or passing the entrance test - shows the student's mathematical skills, including those learned in geometry, advanced algebra, and trigonometry. On the entrance test, use of a calculator is allowed, but not required while taking the test. It is not a test about use of technology, but rather mathematical computational skills. The instructor scores the entrance test.

If teacher recommendations are requested, what qualities are teachers asked to evaluate?

The teacher recommendation may be used to simply check-in with the most recent math teacher, especially for a student interested in admission to Honors Physics 1-2 but who will not be concurrently enrolled in calculus. The instructor will contact each math teacher, and nothing needs to be done by the student.

Selection Process

*Students are notified by the principal's office, via mail, as to whether they did or did not successfully pass the entrance test. Students who are selected will be asked to commit to the course by signing a required Honors/AP contract. The notification date is no later than **May 1, 2020** for all Honors/AP courses.*

What if a student doesn't do well on the entrance test?

Because of security reasons, the entrance test will only be given on the specified date, or on another pre-arranged date, but no "re-takes" will be administered. Since this course is designed to provide a college-type experience, students need to be prepared to perform well under challenging conditions. Many college courses are graded on the basis of one or two exams, and placement tests are usually given only once. Lack of success on the entrance test is a good indicator that a student should not be placed into an honors or AP course.

Is it possible for a student to have good grades in previous science courses and not pass the entrance test?

Yes. Many students work hard on their coursework and earn good grades through effort and persistence. However, Honors/AP courses are designed for students who have an unusually high interest level and/or talent for the subject, and are ready to handle the course content at a fast pace. There is often a big leap from regular high school coursework, and it may be too much for a student to handle, even though s/he is doing well in high school coursework.

What can a student do if s/he doesn't meet the course entrance criteria?

Honors/AP courses are just one option. Most other courses in the same department are college prep classes, and will provide a rigorous preparation for education at the next level. Other options include a) asking for enrichment within a regular class, b) taking a specialized summer workshop or institute, c) enrolling in a concurrent college course in a related subject. There are many ways to find the right challenge. Talk to your counselor or teacher.

What should a student or parent do if they need more information?

*Please contact the Honors Physics instructor David Nash
email: dnash@tamdistrict.org phone: 945-3600 x6233*