

Patterns Physics/Honors Patterns Physics

Syllabus 2021-2022

Teacher	Room	Prep period
Mrs. Martin	D05	per 5
Mr. Haspela	K03	per 4
Mr. Cramer	K01	per 4
Mr. Clarkson	K06	per 1

This is a lab-based and data analysis course designed for freshmen. Using the processes of scientific inquiry, engineering design, and critical thinking, students will discover and apply patterns in such major physics topics as motion, forces & momentum, energy, waves, and electromagnetism. An important aim of the course is to develop and build students' algebraic reasoning, performance in problem solving, scientific literacy, and technical communication skills that will be useful in later science courses. This course will address all required physics, inquiry, and engineering standards. All students may pursue and earn credit at the Honors level if they are motivated and capable.

Topics Trimester "A": Unit 1: Patterns & Inquiry; Unit 2: Energy & Engineering; Unit 3: Forces & Motion
Trimester "B": Unit 4: Engineering & Impulses; Unit 5: Waves & Technology; Unit 6: Electricity and Climate Change

This course will be aligned to the Next Generation Science Standards listed below adopted by Oregon State Board of Education in 2014.

[HS-PS1 Matter and its Interactions](#)

[HS-PS2 Motion and Stability: Forces and Interactions](#)

[HS-PS3 Energy](#)

[HS-PS4 Waves and their Applications in Technologies for Information Transfer](#)

[HS-ETS1 Engineering Design](#)

Materials

What to bring to class: Single Subject Notebook, pencil, colored pencils will be useful at times.

Textbook: We will use *Active Physics* as a text resource. Books will stay in the classroom unless a student is interested in checking out a copy. Replacement cost is \$70.

Expectations

You will be very successful if you meet the following expectations:

1. Attend class every day and show up on time with your materials.
2. Complete and turn in your own work, not the work of others.
3. Show respect for others in class at all times.
4. If you have a problem in class or about the class, speak with your teacher privately.
5. All personal electronic devices are not to be used in class except when expressly directed by your teacher. If yours is used inappropriately during class, we will deliver it to the office where you can retrieve it at the end of the school day. Repeated infractions will prompt further disciplinary action.

Discipline

You will receive two verbal warnings if you are either disrupting your teacher from teaching or other students from learning. If further disruptive behavior continues one of the following may occur:

- You will be asked to leave the room, assigned lunchtime detention, and your parents will be contacted.
- If disruptive behavior still continues, you will be asked to leave the classroom and earn a written referral to speak with an administrator.

Tardiness

Come to class on time. Classroom consequences will occur after the 3rd tardy per trimester. A referral will be written and a letter may be sent home to parents from the main office when a student receives a 4th tardy. A referral will be written and you will speak with an administrator after the 5th tardy.

Grading

The grading system is designed to provide a pathway to passing grades for all motivated students but A's and B's and C's will be more difficult to earn.

70% Unit Tests and Major Labs/Projects

30% In-class assignments (activities, notebook checks, lab reports, quizzes, practice tests)

Unit Tests: There will be 3 Unit Tests per trimester.

What if I do poorly on a test? You may earn the opportunity to retake a test by completing an alternate/re-take of the test with a maximum score of 85% or higher and finishing all assignments from the unit being tested.

Quizzes: Formative assessments (short quizzes) will occur. These will be tracked, but will be scored as an assignment, not a test.

Late Work: To receive full credit for your class work, it must be completed and turned in on time. We will accept late assignments, but only assignments from the current unit. No back assignments will be graded after a unit test.

Honors Credit

Any student in any Patterns Physics class who completes 4/5 *additional* assignments per trimester and passes them will be granted Honors credit on their transcript. Students will self-select for this Honors credit and do not need the permission of counselors, parents or teachers to pursue Honors credit. We encourage all students to show extra interest and effort in additional learning to earn the Honors title on this class. The assignments that are available will come later in September. The Honors credit is independent of the letter grade. For example, a student may earn a "D" grade in Honors Patterns Physics, or an "A" in non-Honors Patterns Physics, or anything in between those extremes.

Progress reports

Progress reports will be posted about once a month, and danger of failure notices will go out mid-trimester and near the end of the trimester. Students are strongly encouraged to keep track of their own grades online through our HAC system.

Communication for Parents

Your teacher is available at HRVHS on school days from 8am-4pm. Please feel free to come in, email and leave a message for them to return your call. Email is most effective for us.

Teacher	Email	
Mr. Clarkson	david.clarkson@hoodriver.k12.or.us	
Mr. Haspela	kevin.haspela@hoodriver.k12.or.us	
Mr. Cramer	ted.cramer@hoodriver.k12.or.us	
Mrs. Martin	emily.martin@hoodriver.k12.or.us	

I have read and understood the class expectations.

Student Signature: _____

Parent Signature: _____

Requirements for Honors Credit in Patterns Physics

The Honors Patterns Physics class is “embedded” within all normal Patterns Physics classes. Please read above on the transcript about the basic setup and ‘spirit’ of Honors in this class. Simply put, any student in any section of the course who completes a minimum of 4 of the Honors assignments will have the word Honors added to their transcript for this course.

CATEGORY ONE: LAB EXTENSIONS

- **GENERAL:** Each trimester will have 2-3 units. In each unit, there will be featured major labs that require more detail/work and that are graded for more points. For Honors, these labs will be completed at a higher level of rigor than is required of the students who do not choose to pursue Honors credit.
- **SPECIFICALLY:** In addition to all the standard NON-honors lab components, HONORS students must also do the following on these selected labs:
 1. Learn **background information** about the fundamental physics being investigated in the lab. This will require outside supplemental reading during HW time from textbooks, websites, conversations with the teacher, etc.
 2. Provide insight into the **relevance/application** of this science to the larger, “real” world around us. This must extend beyond the topics/connections mentioned by the teacher during class time.
 3. Provide a more elaborate lab report that includes background and relevance. In addition to the lab components required in class for all students, the HONORS student will also complete a final draft in MLA format that includes these additional components of the lab. This can be hand-written or typed.
 1. The final draft will be in MLA format and clearly organized. Specific instructions will be given with each assignment as to what is required from students.
 2. The goal of the research or the additional experiment is to deepen and extend the student’s grasp and appreciation for the physics we are studying. This could include deeper reading and thinking about the topic of study, such as from a textbook. Or the student’s research could be to investigate one specific case or example of the physics topic at hand in greater detail.