

Syllabus, Fall 2019-2020

Honors Physics, Amy Jacob

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Office Hours: TBD during SMART Lunch

Physics is the study of the motion and behavior of matter. This semester we will be exploring both how and why things behave the way they do. Honors Physics is a fast-paced course that uses hands-on activities in which we will employ an in-depth and mathematical approach. One of the primary goals that I have for my students is to learn from these hands-on practical experiences as opposed to mindless memorization. Therefore, we will be doing a lot of practicing. Just like sports, success relies on muscle memory, the same applies to physics which depends on muscle memory of the brain. Mathematical analysis is one form of repetition we will be using to build a strong physics foundation.

Curriculum:

Honors Physics will follow the Common Core and Essential Standards:

<http://www.dpi.state.nc.us/docs/curriculum/science/scos/support-tools/unpacking/science/physics.pdf>

Course Outline:

Unit 1: One-Dimensional Motion

Unit 2: Force

Unit 3: Two-Dimensional Motion

Unit 4: Energy and Momentum

Unit 5: Waves and Sound

Unit 6: Waves and Light

Unit 7: Electricity

Unit 8: Magnetism

Labs:

We will be using lab information to formulate the basic understanding of the concepts in physics and will build upon these with each topic. It is imperative that each student attend all labs. Please see me to sign up for a time to make up any missed labs.

Demonstrations:

These are important also not to miss, as they show the students another perspective to the theories and mathematical language of physics.

Canvas:

A variety of resources such as Power Points, notes, homework, answer keys, announcements, handouts, and worksheets can be found on Canvas.

Absent/ Late Work:

- When you are absent it is **YOUR** responsibility to collect your absent work from the absent folder and collect any missed lab data/notes from your peers or from Canvas. All absent work must be **turned in within 2 days of being absent for full credit**. It is your responsibility to label this work as absent along with the date on the top and place in the absent box, NO DATE = NO CREDIT. Late work will be accepted for a 10% reduction for each day late. Late work will not be accepted after 3 days.
- Test makeups will follow the MRHS policy.

Materials:

- Calculators, must have Scientific Notation, Trigonometric Functions
- Notebook paper
- Pencils
- Binder for organization, please: no spiral notebooks
- NC Physics Reference Table, given the first day of class
- Ear buds

Classroom rules:

- Cell phones: Must be in the shoe pocket before the bell rings and will only be used when given prior permission.
- Be in your assigned seat and completing the warm-up, **without talking**, when the bell rings.
- Any homework or classwork that is due should be on your desk by the time the bell rings.
- Raise your hand when wanting to make a comment or ask/answer a question.
- Computers are to remain closed during lecture time.
- Be respectful and kind to all of your peers and their learning environment.
- Follow all school/district rules, regulations, and policies.
- Use of the restroom will be permitted upon approval **only** during independent and break out activities. Students will not be able to use the restroom during the first 10 minutes and last 10 minutes of each class.

Grading Policy:

- Each assignment will be weighted as follows:
 - Tests: 50%
 - Quizzes: 20%
 - Homework: 10%
 - Labs and projects: 20%
- Students are responsible for completing each component of an assignment, regardless of whether or not that component is ultimately graded.

Lab Rules:

- No food, drinks, or gum.
- Hair and loose clothing must be tied back and secured.
- All personal belongings must be left at your desk with the exception of a writing utensil and your lab papers.
- Goggles must be worn during all labs that utilize materials other than air and water.
- Always read the directions and labels before the use of anything in the lab and be sure to ask questions if you are ever unsure.
- All equipment must be put away and your work area cleaned as instructed.

NC Physics Reference Table: <http://www.ncpublicschools.org/docs/accountability/common-exams/physics-reference.pdf>

<http://www.bozemanscience.com>

<http://www.physicsfundamentals.org/>

<http://www.physicsclassroom.com/>

<http://www.aplusphysics.com/>

<http://www.khanacademy.org/science/physics>

As your son/daughter's teacher, I will treat all students equally and with respect. I strongly believe that effective parent/teacher communication will promote the academic success of students at Marvin Ridge High School.

Sincerely,

Amy Jacob

