Welcome to Honors Physics

Scope of the course: Topics that will be covered during the course of the year include:

Motion
Motion in one and two dimensions, including Uniform motion, Accelerated motion, Vectors, Projectile motion

Forces
Newton’s Laws, Vector free-body diagrams, types of forces, inclines

Circular Motion
Period, frequency, free-body diagrams, tangential velocity, centripetal forces and acceleration, causes of circular motion, vertical and horizontal circles

Gravitation
Newton’s Universal Law of Gravitation, Gravitational fields, gravitation as a cause of circular motion, Motion of the planets and satellites

Momentum
Impulse, Momentum, Conservation of Momentum, Elastic and Inelastic collisions

Work, Energy & Power
Forces and work, Power, Kinetic and Potential Energy, Work-Energy Theorem, the Law of Conservation of Mechanical Energy

Electricity
Electrostatic forces, Coulomb’s Law, Electric fields, Electric Potential, Electric Current, Circuits

Additional details may be obtained from the MTHS website by viewing the curriculum for Honors Lab Physics.

Materials you will need EVERY CLASS to be successful:
1. A notebook to keep organized notes.
2. A folder or binder to keep all handouts and other papers organized.
3. A PENCIL to complete your work. You will erase A LOT in this class.
4. A scientific calculator to solve problems.

Rules of the class:
1. Always be respectful to your classmates, the teacher, and all lab equipment.
2. Always follow directions the first time you are told.
3. Come to class on time and prepared to learn.
4. Please do not use Cell phones or any other electronic devices in class. You will be written up and appropriate disciplinary action will follow.

Please follow all Monroe Township High School Rules and Regulations.

Just remember: You are responsible for your own success. This is true in this class and for the rest of your life.
**Grading Procedure:**
I use a point system; every assignment will be given a certain number of points. The weighting of different types of assignments in each marking period is as follows:

- **Tests:** 50%
- **Labs:** 20%
- **Quizzes:** 20%
- **Homework:** 10%

Each of the four marking periods is 21% of the total grade. The Final Exam is worth 16% of the total grade.

- Lab write-ups are approximately 100 points while FORMAL labs are 150 points.
- One **typed** Formal Lab report will be turned in per marking period.
- Quizzes are assessments that will have differing point values depending on length and difficulty and can range from conceptual questions learned during discussions, to what was done during lab, to problems.
- Tests will be administered at the end of every unit or major topic and their point value will reflect how much time was spent on the unit.
- Homework assignments will primarily be done on WebAssign. You will also be submitting the accompanying work to eBackpack, using Doc Scan HD to scan and create a **SINGLE** pdf file for submission. I will give you a review for each unit before your test, which will either be a WebAssign assignment or a paper assignment to be scanned and handed in to eBackpack.
- Tests and quizzes may be reviewed in class and after school, but students will not be permitted to take these home for review. If parents wish to review tests, please contact me by e-mail, and I will do my best to arrange for the parents to view the tests in school. This is departmental policy.

**Extra help** is available after school from 2:10 to 3:10 pm on Tuesdays and Thursdays. You can find me in room F 221; all you have to do is ask.

**E-mail:** rbasu@monroe.k12.nj.us

**Makeup Work:**
**It is your responsibility** to seek me out the day you come back to get make up work. If you do not make up the work within the guidelines outlined in your student handbook, the zero will remain.

- Labs – After School Physics Days, within 1 week from day of absence
- Tests and Quizzes – Any tests and quizzes missed must be made up after school in the After School Science lab within **TWO CALENDAR DAYS** of your return to school. If you miss a test or quiz, you will be administered a COMPLETELY DIFFERENT TEST.
**Academic Integrity:**

Students caught cheating will receive a zero for the assignment and other penalties as appropriate, which may include a disciplinary referral to school administration and a phone call home. Cheating includes, but is not limited to:

- Copying homework or lab answers from another student, or turning in egregiously similar homework on eBackpack; all parties involved will receive a grade of zero.
- Turning in the same formal lab report as a lab partner even if you worked together.
- Using unauthorized notes during tests.
- Copying text from the Internet and submitting it as your own writing.
- Using someone else’s ideas without acknowledging them in your work.
- Sharing or discussing questions or answers during or after a testing situation.

If there are circumstances that prevent you from doing well, please see me to talk it over rather than resort to quick shortcuts such as cheating on your work.

Additional examples of violations of academic integrity are described in the Academic Integrity Pledge posted on my school webpage.

*ALL STUDENTS AND PARENTS MUST SIGN THE ACADEMIC INTEGRITY PLEDGE ON MY WEBPAGE AND TURN IT IN TO THE DESIGNATED FOLDER ON EBACKPACK. PLEASE USE GOODNOTES OR GOODREADER ON THE IPAD TO SIGN THE PLEDGE BEFORE YOU TURN IT IN.*

**Midyear Test:**

Students will take a midyear test at the end of 2\textsuperscript{nd} MP or beginning of 3\textsuperscript{rd} MP. It will count as a double test grade. Students will receive a review guide several days before the test is given. They must complete the review guide and hand in solutions on the day of the test (NO EXCEPTIONS: LATE SUBMISSIONS WILL RESULT IN A ZERO FOR THIS PART OF THE TEST GRADE).

**Final Exam:**

Students will take a Final Exam at the end of the school year. The final exam is worth 16\% of the student’s total grade for the course. Students will receive a review guide several days before the Exam. They must complete the review guide and hand in solutions on the day of the final exam (NO EXCEPTIONS, LATE SUBMISSIONS WILL RESULT IN A ZERO FOR THIS PART OF THE EXAM GRADE).

**School Closings:**

In the event that a test, quiz, or assignment is due on a day there is an emergency school closing, the test or quiz will be given the following school day or the assignment will be due the following school day.
Physics is an experimental science; therefore, we will do lots of hands-on work in this class. Your active participation is essential. Merely watching others do science does not confer learning or skill.

Proper use of equipment is also essential. Treat all lab equipment as if it is your own personal stuff. You should always handle materials with the utmost care.

In the lab, safety is our top priority. Here are our lab safety rules:

- Students will follow the teacher’s directions at all times regarding any laboratory safety issue.
- Students will read the procedures of each experiment, which will include any special safety precautions. The teacher will reemphasize safety precautions before the lab work begins.
- Students will wear closed toe shoes when directed to do so.
- Students will clean their work areas after experiments.
- Students are not to eat, drink, or chew gum in the classroom or lab.
- Students must know where the fire extinguisher is and how to use it.
- Students must know where the fire blanket is and how to use it.
- We share our lab with other classes. Students are not to handle chemicals, hotplates, or other potentially dangerous materials that may have been left behind by others.
- Equipment is never to be taken from the lab.
- Any accident of any kind is to be reported to the teacher immediately. This includes spills, falls, cuts, broken glass, or any other accident.
- Students are never to work in the lab without direct teacher supervision.
- Horseplay is strictly prohibited. This includes, throwing objects, running around, play wrestling, or any other kind of horseplay.
- Some of the equipment we may use, whether in laboratory exercises or classroom demonstrations, is potentially dangerous.
  - Lasers are not to be shined in a person’s eye.
  - Matches and candles are to be handled with due caution. Students with long hair are to tie their hair back.
  - Projectiles (e.g., springs, balls) are not to be launched or thrown at anyone. Eyewear is to be worn when directed.
  - Objects with wheels are not to be left around on the floor.

Failure to comply with these rules may result in disciplinary action after the first offense and may result in a student’s loss of lab privileges along with a zero for the lab.
Contact Lenses Safety:

The following is a message to all students, parents/guardians regarding soft contact lenses.

It has come to our attention that many of our students may be wearing soft contact lenses in the laboratory; therefore, we would like you to be aware of the possible danger of their use. There have been instances in other schools and in industry, in which people have had contact lenses damaged from chemical vapors. We strongly suggest that your child not wear soft contact lenses in the science lab.

Thank you for your cooperation in this matter.
• Homework: Go over “Welcome to Physics” with your parent or guardian. Both you and your guardian must sign this sheet and return this page to me by turning it in to the designated folder in eBackpack.

Honors Lab Physics 2018-2019 Dr. Basu

I ______________________ have read the above classroom rules, laboratory safety rules, contact lenses safety precaution, and procedures, and I agree to abide by them:

______________________________  ____________________________
Student Signature/ Date  Parent/ Guardian Signature/ Date

Parent/Guardian Name: ____________________________

Parent/Guardian E-mail Address: ______________________

Parent/Guardian Home Phone: _______________________

Parent/Guardian Day/Work Phone: _____________________

A Few Questions:
1. What extra-curricular activities are you involved in? __________________________

________________________________________________________________________

2. What math class(es) will you be taking this year? __________________________

3. Do you need to sit in the front of the classroom for any reason? __________________

4. Is there anything else you think I should know about you? ____________________

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