Course Description: AP Physics 1 is an inquiry-based course designed to expand on the principles of how and why the world around us works and find practical applications of physics through labs, data analysis, problem solving, and discussions. Students will investigate the topics of motion, force, energy, momentum, waves, rotational motion, electrostatics, and electricity. Students taking this course should be self-directed learners with strong math-computational skills.

GOALS FOR THIS COURSE:
1. Become a better critical thinker and problem solver.
   This requires you to take risks, make mistakes, and try again. You should be rewarded for this, not penalized.
2. Focus on learning not just getting 9/10 on an assignment.
3. Be responsible for your own learning. No one is going to hold your hand when you get to college. Start being responsible now.
4. Demonstrate what you understand. Your grade will be based on the standards for this course. You will have multiple opportunities to demonstrate your understanding.

CONTENT UNITS:
- Scientific Thinking and Tools (STT)
- Constant Velocity Particle Model (CVPM)
- Balanced Forces Particle Model (BFPM)
- Constant Acceleration Particle Model (CAPM)
- Unbalanced Forces Particle Model (UBFPM)
- Projectile Motion Particle Model (PMPM)
- Energy Transfer Model (ETM)
- Momentum Transfer Model (MTM)

GRADING:
Your coursework grade will be based upon the following:
- Lab Reports & Lab Practicals (20%)
- Standards assessed on the exams (80%)

Your semester grade will be determined by:
- Coursework (85%)
- Semester Final (15%)

HOW STANDARDS-BASED EXAMS WORK
A Standards vs. B Standards
Each unit typically contains 3-7 standards. Some of these are “A” standards and some are “B” standards. The B standards will be given a double weight on each exam because they are considered the more complex and comprehensive standards for that unit.

A grade is given for each standard on the Exam
You will receive a number grade (5, 4, 3, 2 or 1) for each standard on the exam. In this way, we will be able to access exactly what content you grasped or struggled with on the exam. The descriptions and percentages of the numerical grades are:

5 = 100% Clear & complete understanding is demonstrated (math calculation error allowed because you still demonstrate mastery of the concepts and set-up)
4 = 87% Significant understanding demonstrated but a minor aspect of the solution is incorrect or unclear
3 = 75% Partial understanding is demonstrated. Key aspect(s) of solution are missing or solution reveals a lack of depth of understanding.
2 = 63% Little understanding is demonstrated. The solution contains a major misconception(s) of a key concept.
1 = 50% No demonstration of understanding
REASSESSMENT POLICY

If eligible, you may take a “second try” question to improve your score on a specific standard only if you received a 3 or lower on that standard on the exam. The second try question may involve multiple standards at a time and you will have to complete the entire question even if only reassessing one standard. The highest score possible on a second try question is a 3.5 (equivalent to 80% per school policy). Also, count on the second try questions being very complex so it is to your advantage to prepare and score well on the original exam. In order to be eligible to take a reassessment, you must complete and turn in your homework the day prior to the test (often a Review Day).

You may also be required to complete additional practice BEFORE taking the reassessment as an ‘entrance ticket’ to the 2nd Try. (more on this-TBA!)

Second Trys will be held on an announced day, or days, before school and after school in room 143.

LABS AND LAB STANDARDS:
Lab work for this course will be separated into:
Lab activities—used to develop understanding of the concepts
Informal Lab reports - turning in data, analysis questions, conclusion, and reflection (see lab write-up handout for instructions)
Lab Practical- assessed on your results from the lab and interpretation of data

There will be no reassessment opportunities for the Informal Lab Reports or the Lab Practical.

TO BE SUCCESSFUL IN THIS CLASS:
Inside classroom:
1. BE ENGAGED—take notes. Participate in labs and group problem solving. Share what you are thinking.
2. ASK QUESTIONS- If there is something you don’t understand or need clarified- ASK right then. Questions are welcomed and help you understand!
3. STAY ORGANIZED- there are a LOT of handouts and labs in this class. Have a binder where you have sections for labs, worksheets, and notes. A LAB

Outside of classroom:
1. READ the assigned readings on Canvas. Take notes on them as you read!
2. DO THE HOMEWORK- You must practice outside of class to reinforce understanding- DAILY! This is the only way to stay on top of the material.
3. PREPARE FOR TESTS & QUIZZES- Create a study guide from the standards for the chapter. It will help you review the material and focus on what you will be assessed on.
4. COLLABORATE WITH OTHERS- Find some others in the class to study with in the morning, during lunch or after school. When you teach others, there is a deeper understanding of the material that happens.

HELP!
Do you need extra help for this course? What can you do?
1. Come find your teacher in the morning, or after school (talk with them to arrange a time beforehand).
2. Get a tutor in the Lit Center- You can drop in one time, or you can set up a weekly visit.
3. Supervised Open Study (SOS) is available after school on Mondays –Thursday up in the lit center. This is a place to do your homework and study and seek out help in all subject areas (a teacher from each subject is present).

COMMUNICATION POLICY:
I will try to e-mails and phone messages within 48 business hours.

INFINITE CAMPUS:
Grades will be posted throughout the semester on Infinite Campus. This grade is a work-in-progress and should not be considered final until the end of the semester. If you notice any errors or missing assignments, please talk to your instructor. Periodically check your progress, but don’t constantly monitor your grade. Looking at your AP Physics 1 “grade trend” (improving or declining) is better than looking at it as “points earned”, enabling you to proactively try new strategies to improve your understanding of physics. Work smarter rather than blindly working harder.

REQUIRED MATERIALS:

NOTEBOOK IS REQUIRED BY AP FOR THIS COURSE as a record of your work.
Graphing Calculator (from approved list), College-ruled lab/Homework notebook, 3-ring binder, text book cover.

Approved calculators: TI-83, TI-84. Non-graphing models or other models approved by teacher. (ASK).

Not allowed on tests: TI- Inspire models, TI-89.