



MECA Physics Syllabus

2024-2025

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Room: 317

Office Hours: By Appointment

Welcome!

Welcome to Physics! Physics is the branch of science that scientists use to explain the nature of the universe and the properties of matter and energy. You are here to learn about how the world around you works! You will be challenged and you will certainly grow as a scientist! We can't wait to work with you!

(CUT HERE)

I have read and understand the Course Syllabus.

Student Name (Printed): _____

Student Signature: _____

Parent/Guardian Signature: _____

Labs

- Labs are the best part of physics! You're going to love them!
 - **If you are absent on a day that we do a lab in class, it is your responsibility to make up the lab activity.** We will offer the following options for lab make up:
 - If possible, we will attempt to offer lab make up sessions during typical class time.
 - If possible, we will find virtual lab options so that you can complete the lab activities while you are temporarily out of school.
 - Attend an after school make up session, which will be scheduled by your teachers.
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Materials

- Writing Utensil (Preferably Pencils w/ Erasers)
- Teachers will provide a note packet that students should bring everyday to class

Optional Materials

- Scientific Calculator - Calculators will be provided in class, however, you *may* wish to have one for at-home practice. There are also free online calculators.
 - Recommended Scientific Calculator: CASIO fx-300ES PLUS 2nd Edition
 - Recommended Free Virtual Calculator: NumWorks App or Website

Grading for Equity - Grading Policy

We will be using proficiency based grading this year. This means that you are only graded on how well you can demonstrate proficiency in the specific skills covered in physics. **Your final grade in the class will demonstrate your proficiency of specific physics skills.** You will receive feedback on classwork, homework, and formative assessments to help you understand your strengths and weaknesses.

Unweighted Assignment Categories

- Classwork & Practice (First Task, Notes, Daily Activity, Homework)
- Formative/Daily Assessments (Quizzes, Daily Labs, Discussions, Short Presentations)

Weighted Assignment Categories

- Summative/Formal Assessments (Projects, Exams, Formal Lab Reports, Authentic Tasks)

Revisiting Poor Work - Our goal is for you to learn and grow as scientists. Therefore, any course work that does not meet our/your expectations should be resubmitted after a conference with your teacher(s). You are capable of success in physics and we will work together to get you there.

Submitting Work Late - We want you to have every opportunity to earn credit for the skills and knowledge you develop. We will work with you to ensure you are able to demonstrate your skills for all essential assignments. Late work is accepted within the relevant unit of study.

We will be using an online grading system for this class. If you feel a grade has been entered in error or if you would like individual help, make an appointment with your teachers.

Absence & Make Up Work

If you are absent from class, please email your teachers to let us know. If you are able to secure a doctor's note, please share it with your teachers and the main office.

If you are sick, please stay home from school. You can not learn well when you don't feel well. When you are sick, our main concern is that you can rest and recover. We will help you make up necessary assignments when you recover.

Behavioral Expectations

You are here to learn and grow. In order to avoid unnecessarily distracting yourself, your teachers, and your peers, you are expected to follow all norms set by MECA.

You will not have access to personal electronic devices including cell phones, smart watches, portable gaming consoles, and wireless headphones. If we see you with one of these devices, we are required to report it immediately.

	Unit 1 <i>Electricity</i>	Unit 2 <i>Waves</i>
Topics	<ul style="list-style-type: none"> ❖ Charged Bodies ❖ Transfer of Charge ❖ Electric Fields ❖ Electrical Potential ❖ Current ❖ Resistance ❖ Ohm's Law ❖ Electrical Power ❖ Series & Parallel Circuits 	<ul style="list-style-type: none"> ❖ Oscillating Systems ❖ Pulses ❖ Wave Properties ❖ Standing Waves ❖ Sound & Doppler Effect ❖ Wave Phenomenon ❖ Electromagnetic Spectrum
Assessment Types	Formative Assessments: <ul style="list-style-type: none"> ❖ Lab Activities ❖ Quizzes Summative Assessments: <ul style="list-style-type: none"> ❖ End of Unit Project Write-Up ❖ Unit Test 	Formative Assessments: <ul style="list-style-type: none"> ❖ Lab Activities ❖ Quizzes ❖ Sound Mini-Project Summative Assessments: <ul style="list-style-type: none"> ❖ End of Unit Project Write-Up ❖ Unit Test

	Unit 3 <i>Kinematics and Dynamics</i>	Unit 4 <i>Momentum and Energy</i>
Topics	<ul style="list-style-type: none"> ❖ Distance & Displacement ❖ Velocity & Speed ❖ Acceleration ❖ Freefall ❖ Projectiles ❖ Newton's Laws ❖ Forces & FBDs ❖ Friction ❖ Circular Motion 	<ul style="list-style-type: none"> ❖ Momentum ❖ Conservation of Momentum ❖ Energy, Work & Power ❖ Energy & Work Principle ❖ Conservation of Energy ❖ Energy Loss ❖ Power
Assessment Types	Formative Assessments: <ul style="list-style-type: none"> ❖ Lab Activities ❖ Quizzes ❖ RAFT Writing Summative Assessments: <ul style="list-style-type: none"> ❖ End of Unit Write-Up ❖ Kinematics Party ❖ Unit Test 	Formative Assessments: <ul style="list-style-type: none"> ❖ Lab Activities ❖ Quizzes ❖ Amusement Park Mini-Project Summative Assessments: <ul style="list-style-type: none"> ❖ End of Unit Write-Up ❖ Unit Test