

PHYSICS

2021-2022

Instructor: Briana Toelke	Period: 6
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Course Description: This is an introductory course in Physics. Topics to be covered will include, but are not limited to, motion, energy, relativity, thermodynamics, waves, sound, light, electricity and magnetism.

Course Pages and Resources:

1. Google Classroom: <https://classroom.google.com>
Course Code: 33a3tmx
2. Textbook: <https://openstax.org/details/books/physics>

Office Hours: Monday-Thursday from 3:30-4:30pm. (These times are subject to change due to school events/activities, etc...)

Grading Policy:

Homework and In-Class Activities	40%
Exams and Final Project	60%
Total	100%

1. Homework

Homework assignments will be posted on Google Classroom and will usually consist of reading the textbook and answering a few questions about the reading. Occasionally, you will be asked to watch a video and respond to it. You will always have at least two academic days to complete the homework. For example, if an assignment is posted on a Friday, it will not be due until the following Tuesday night.

2. In Class Activities

In-class activities will be individual or group activities. They are meant to be a fun and engaging alternative to long written homework assignments. These activities/labs will be graded using the following 4-point scale:

4	Perfect or mostly correct
3	You made several errors but you seem to have the right idea
2	You put effort into the activity but don't seem to understand the material
1	You put little to no effort into the activity but you wrote something down
0	You did not participate or left your paper blank

3. Exams

Exams will always be announced verbally and on Google Classroom at least one week ahead of the exam date. There will likely, but not always, be an exam at the end of each chapter. Exact exam dates will be determined according to how we are progressing through the material.

4. Projects

Rather than having a cumulative final exam at the end of second semester, you will have a final project. Details about the project will be discussed during the first week of class.

Class Policies:

- Regular attendance is essential and expected.
- Please refrain from using your cell phone in class.
- Respect those around you, both physically and audibly.

Academic Integrity: Please review the cheating policy on page 15 of the WWVA Student Handbook. I encourage collaboration with a classmate on homework and in-class activities *if that is helpful to you*. However, do not merely copy another student's answers. Make sure you understand the content. If you do not understand how to get the answer, please come talk to me during the office hour. Collaborating with, or copying from, another student on in-class, written, quizzes or exams will not be tolerated.

Tentative Course Outline:

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| 1. What is Physics? | 13. Waves and Their Properties |
| 2. Motion in one Dimension | 14. Sound |
| 3. Acceleration | 15. Light |
| 4. Forces and Newton's Law of Motion | 16. Mirrors and Lenses |
| 5. Motion in Two Dimensions | 17. Diffraction and Interference |
| 6. Circular and Rotational Motion | 18. Static Electricity |
| 7. Newton's Law of Gravitation | 19. Electrical Circuits |
| 8. Momentum | 20. Magnetism |
| 9. Work, Energy, and Simple Machines | 21. The Quantum Nature of Light |
| 10. Special Relativity | 22. The Atom |
| 11. Thermal Energy, Heat, and Work | 23. Particle Physics |
| 12. Thermodynamics | |