PHYS 115: Physical Sciences

Instructor	Joe Storm, jhditommaso@alaska.edu
Meeting Times	Lecture: *Tues Thurs 5:20-6:50 PM Online Only via Google Meet* Lab: *Tues or Thurs 7-10PM Part In-person, Part Online*
Office Hours	*Tues/Thurs 4:20PM-5:20PM Online Only via Google Meet* I am available by appointment in the evenings or weekends.
Credits	4 credits (3 hours of lecture + 3 hours of lab per week)
Text	*Physics of Everyday Phenomena, 8e by Griffith*
Prerequisites	Placement in WRTG F111X; placement in MATH F105. Must be enrolled in PHYS F115L

Course Requirements and Policies

Course Goals	The course will cover the fundamentals of classical physics in the real world: mechanics, thermodynamics, electricity, magnetism, and optics. It will also focus on how these topics are interrelated and interdependent.
Class Attendance	For the best understanding of the course material attendance and participation during class is essential.
Reading Assignments	Class time will be a balance of lecture, demonstrations, and practice problems. As such, reading the chapter ahead of time will be essential for understanding what we do in class. Reading assignments are accounted for in the homework credit amount.
Homework	Due each week (besides the first week) at the beginning of class on Thursday. Late work will receive a 50% deduction and will not be accepted beyond the Monday after it was due. Homework will be posted on Blackboard at least a week before it is due. Each assignment will be graded out of 100 points.
Quiz	A short quiz will occur at the start of Thursday's class, based on the past week's readings, concepts covered, and homework. It will be open notes but not open book.

Exams I will provide an equation sheet for the exam and a study guide beforehand. The midterm will be on **Tuesday March 3rd** and will cover Chapters 1-7. The Final will be on **Friday May 1st from 3:15- 5:15** and will cover Chapters 8-14. Please notify me beforehand if you will be absent on the day of an exam.

Labs There is a lab component associated with this course. ALL labs and reports must be completed to get a passing grade for the lab. Labs may only be made up if excused and with permission of the course instructor. *A passing grade in the lab is required to pass the course*.

Grading: Quiz 15% Lab 20 % Homework 25 % Midterm 20 % Final Exam 20 %

Grading Ranges >90% = A >80% = B >70% = C >60% = D

Allowed grades will be limited to A, B, C, D, IN, NB, F, and no plus-minus grades will be given for this course.

Class Schedule

Date	Topic	HW Due	Readings Due
Tues 1/12	Syllabus, Scope of physics		Ch1: 1-5
Thurs 1/14	Speed, Velocity, and Acceleration		Ch 2: 1-3
Tues 1/19	Uniform Acceleration		Ch 2: 4-5
Thurs 1/21	Quiz 1, Falling Objects	HW 1	Ch 3: 1-3
Tues 1/26	Projectile Motion		Ch 3: 4-5
Thurs 1/28	Quiz 2, Newton's Laws	HW 2	Ch 4: 1-3
Tues 2/2	Applications of Newton		Ch 4: 4-5
Thurs 2/4	Quiz 3, Centripetal Motion	HW 3	Ch 5: 1-2
Tues 2/9	Planetary Motion		Ch 5: 3-5
Thurs 2/11	Quiz 4, Work, Power, & Energy	HW 4	Ch 6: 1-3
Tues 2/16	Conservation of Energy		Ch 6: 4-5
Thurs 2/18	Quiz 5, Momentum/Impulse	HW 5	Ch 7: 1-2

Tues 2/23	Collisions		Ch 7: 3-5
Thurs 2/25	Quiz 6, Rotational Motion	HW 6	Ch 8: 1-3
Tues 3/2	**Midterm Exam**		
Thurs 3/4	Angular Momentum		Ch8: 4-5
Tues 3/9	**Spring Break**		
Thurs 3/11			
Tues 3/17	Fluids		Ch 9: 1-3
Thurs 3/19	Quiz 7, Temperature & Heat	HW 7	Ch 9: 4-5
Tues 3/24	Heat Engine and 2nd Law		Ch 10: 1-5
Thurs 3/26	Quiz 8, Heat Pump & Entropy	HW 8	Ch 11: 1-3
Tues 3/31	Electric Charge & Coulomb's Law		Ch 11: 4-5
Thurs 4/2	Quiz 9, Electric Field & Potential	HW 9	Ch 12: 1-3
Tues 4/7	Electric Circuit & Ohm's Law		Ch 12: 4-5
Thurs 4/9	Quiz 10, Electrical Energy and Power	HW 10	Ch 13: 1-3
Tues 4/14	Magnetic Force		Ch 13: 4-5
Thurs 4/16	Quiz 11, Faraday's Law	HW 11	Ch 14: 1-3
Tues 4/21	Wave, Sound, & Light		Ch 14: 4-5
Thurs 4/23	Quiz 12, Review	HW 12	
Fri 5/1	**Final Exam 3:15- 5:15**		

*Instructor reserves the right to make changes as needed

Student Code of Conduct You are expected to submit work that is your own and properly acknowledge the work of others. You are responsible for understanding and adhering to the Student Code of Conduct that is printed in the UAF Course Catalog. Abide By It. Violations of the Code will be reported to the Dean of Students.

Special Needs

The UAF Office of Disability Services implements the Americans with Disabilities Act (ADA), and ensures that UAF students have equal access to the campus and course materials. Any student who may need assistance with disabilities, should feel free to contact the instructor or directly to the Office of Disabilities Services (208 WHIT, 474- 5655, uaf-disabilityservices@alaska.edu).

Student Protections & Services

Every qualified student is welcome in my classroom. As needed, I am happy to work with you, disability services, veterans' services, rural student services, etc. to find reasonable accommodations. Students at this university are protected against sexual harassment and discrimination (Title IX), and minors have additional protections. As required, if I notice or am informed of certain types of misconduct, then I am required to report it to the appropriate authorities. For more information on your rights as a student and the resources available to you to resolve problems, please go to the following site: www.uaf.edu/handbook/.

UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: https://alaska.edu/nondiscrimination/.

Your instructor follows the University of Alaska Fairbanks Incomplete Grade Policy: "The letter "I" (Incomplete) is a temporary grade used to indicate that the student has satisfactorily completed (C or better) the majority of work in a course but for personal reasons beyond the students control, such as sickness, has not been able to complete the course during the regular semester. Negligence or indifference are not acceptable reasons for an "I" grade.

Effective Communication

Students who have difficulties with oral presentations and/or writing are strongly encouraged to get help from the UAF Department of Communications Speaking Center (907-474- 5470, speak@uaf.edu) and the UAF English Departments Writing Center (907-474- 5314, Gruening 8th floor), and/or CTCs Learning Center (604 Barnette Street, 907-455- 2860).

Source: xkcd

This syllabus represents an agreement between the instructor and student on the expectations of the class for both parties. Please sign below after reviewing the syllabus and turn in this signature page. Thank you for participating in this class, I look forward to the semester with you.

Instructor: Joe Storm

Instructor Signature:

Student Name Printed: _____

Student Signature: _____