

Physics 27 SYLLABUS

- Schedule #s 56443 Spring 2017
- Lecture classes: Tuesday 10:00 - 11:40 AM
- Lab class: Thursday 2:00 - 4:40

Contact Information:

- Instructor Name: Lauren J. Novatne
- Phone Number: 638 - 3641 ext. 3434
- Email: lauren.novatne@reedleycollege.edu

Office hours:

- Monday 8:00- 9:00 AM, Thursday 11 to 11:50 AM and 1- 2 PM

Required Course Materials:

- All course materials are provided for you, including the reading material.

Course Objective:

This course introduces students to the creation and implementation of payloads and unmanned flight vehicles. The payloads and unmanned vehicles such as rockets, balloons and unmanned aerial vehicles (drones) collect inflight atmospheric data that are later analyzed and presented.

Students will gain skills in understand the complementary roles of experimental investigation and theoretical explanation in science, apply dimensional analysis to determine the units for an unknown quantity or to check the validity of equations, correctly report the units of an observable when it is measured or calculated.

Calendar:

- Final Exam: Thursday May 18th at 10 AM in PHY 70 - the room where the class is held

Exams:

There will not be any exams in this class.

There will be short quizzes given in class, some are announced, and others are not. If you do not communicate with me *PRIOR TO THE END OF THE CLASS MEETING TIME* that you are not going to be present in class, then you will receive a score of ZERO for that quiz, and **you will not be able to make up the activity or quiz**. You may inform me in person, by phone (leave a message on my voice mail if I don't answer the phone), or by email. **Sending a message through a classmate or friend disqualifies you from the exemption**. This is YOUR grade, so YOU must communicate with me regarding your ability to be present. **I do NOT want to know why you will miss class - just that you will not be present**. You will only be able to use three "passes" for the entire semester. After you use up your three passes, you will receive zero points for your absence.

The quizzes are worth 15% of your grade, and will be based on the material that you research online as part of your presentation preparation.

In class Problem Solving:

There are regular computational problem solving sessions in class. Participation both as an individual and in a group, are required. The correct methodology and answers will be provided after each student, and each group, have worked on the solution process.

Computational problem solving in class is worth 15% of your grade.

Field work:

The UAV, rocket and payload that are built during class will be flown and launched in conjunction with Fresno State's Engineering Department and the Tripoli Rocket Club.

The successful flight of the UAV and launch of the rocket, and payload data acquisition is worth 25% of your grade.

Laboratory Reports:

There are a few laboratory activities during the semester which will have lab reports associated with them. The laboratory reports are worth 20% of your grade.

Skills Demonstration:

You will be learning some manual skills as you build your UAV, rocket and payload. One of the skills is soldering. Yours skills demonstration is worth 10% of your grade.

Presentations:

You will be presenting the result of your research, skills, laboratory results and field work in several presentations throughout the semester, as well as a final, culminating presentation at the end of the class. The expectations of each presentation will be discussed in class. You will be presenting to your classmates, and providing feedback to them about their presentations as part of your grade for this category. Your presentations are worth 15% of your grade.

Attendance:

You are required to be here, and be on time for every class. Being 5 minutes past the hour is considered tardy. If you complete the semester with 95% perfect attendance, I will add 2% to your semester grade. Perfect attendance means that you are not late, or you have exercised your “pass” for up to three class sessions for the entire semester.

Here is how I use the attendance to determine whether or not you get the “extra credit” of 2% on your semester grade:

If the number of days that we have class (when I am absent, that day is not counted in the total number of days that we meet) is 60, and you have been tardy 5 times, absent 2 days in addition to being tardy then here’s the formula I use to determine if you have been present 95% of the time:

[Total days of class meeting - # half of your tardy days - # of days you were absent] divided by [total days of class meeting] = your % attendance

$(60 - 2.5 - 2) / (60) = (55.5) / (60) = 0.925$, which is 92.5%. You would NOT get the 2% “extra credit” attendance bonus added to your semester grade. You will need to be present for 57 days of the 60 to get the “extra credit”. How you “spend” your 3 days (as 6 tardies, 3 absences or a combination of tardies and absences), for **this** example, is up to you. Remember, this is 3 days that have NOT been excused. Excused days do not count against your “extra credit” bank.

Grading Policy:

% Grade for the Class	Letter Grade For the Class		Category of classwork	% of Class Grade
90 - 100 %	A		Exams	15%
80 - 89 %	B		Problem Solving	15%
65 - 79 %	C		Field work	25%
55 - 64 %	D		Lab reports	20%
0 - 54 %	F		Skills demonstration	10%
			Presentations	15%

Accessibility Accommodation

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the rehabilitation Act, please contact me as soon as possible.