Instructor: Dr. Greg Trayling          Webpage: people.rit.edu/gjtsps/courses/209

- Office: ORN (13)-1322
- E-mail: gjtsps@rit.edu (that’s a jay in the middle)
- Phone: 475-4504

Office Hours: Tues: 2:30 PM – 4:30 PM and any other time I’m in my office is fine.

Workshops: MoWe 5:30 – 6:50 PM in GOS 3130.
This class meets from Monday October 23rd to Monday December 11th
(14 classes = 13 workshops + 1 in-class Test).

Test Dates: Wed Nov 15th (in class) and Friday Dec 15th (as on SIS: 2:45-4:45 GOS-3365).

Text: Free online: https://openstax.org/details/books/university-physics-volume-3

Course Description: The following main topics will be covered from Unit 1, Optics:

- Geometric Optics and Image Formation
- Interference
- Diffraction

Pre-requisites: Prerequisites: (PHYS-211 or PHYS-211A or PHYS-206 or PHYS-216) and PHYS-208 and (MATH-181 or MATH-181A) or equivalent courses. This course is without exception only for students who have earned credit for PHYS-208 either through transfer credit or through successful completion of the AP-C Electricity and Magnetism exam.

Co-requisite: MATH-182 or MATH-182A or MATH-172 or equivalent course.

Any unusual cases should see Dr. Dawn Hollenbeck over in CAR-1264 for approval.

Grading and Tests: Tests (two 80-min tests, the Final is the 2nd one.) 40%, 45%
Written homework, labs 15%

You must have a passing grade on your final test average in order to pass the class.

Grading will be close to the usual scale. These cutoffs may be lowered but not raised:

A-type: 90-100, B-type: 80-89, C-type: 70-79, D: 60-69, F: <60
Need extra help? – It’s free at the Bates Science Study Center (GOS-1200). Open every day and staffed by sometimes knowledgeable and possibly friendly faculty, graduate students and upper-level physics majors.

Students should bring the following items to workshop:

- A working calculator with batteries. It might be a really good idea to bring a backup during exams, or at least extra batteries.
- A pen or pencil. If you tend to make a lot of mistakes, please consider using a pencil.
- A working brain, preferably one that’s not asleep.

Do not bring any food or drink of any kind into the workshops. Violators risk having their food confiscated and possibly eaten by the TA. Please turn cell phones off, or better, don’t bring them at all, especially if they have really annoying jingles that get stuck in the Instructor’s head. Don’t bring your friends in to help you because they did the lab during the previous hour. No skateboarding or rollerblading into class. Don’t run with calipers. Meter sticks are not swords. Don’t bring your pet ferret. No yawning. Pokémon no.

Exam Policy: Below is the official exam policy from the Department which will be followed at all times.

“There will be no makeup exam except in rare cases approved by the Physics Department Head.”

Make-up exams are provided only in unusual circumstances. A request for a make-up exam must be submitted in writing to the School of Physics & Astronomy and copied to your instructor. All requests must be submitted using the Make-Up Exam Request Form available from your instructor. Submission of the request is in no way a guarantee that it will be approved. All requests are considered by the School Head on a case-by-case basis. Whenever possible, you must allow sufficient and reasonable lead time for a considered response to your request.

In general, if you think you might have an exam conflict or problem ahead of time, let me know as soon as possible.

| Test #1: In Class (Week 12)       | November 15th |
| Test #2: As on SIS (Finals Week) | December 15th |

Test #1 will be given during the class timeslot. The Tuesdays mentioned on SIS will not be used for any activities. That was a back-up exam slot that won’t be needed, but of course you’ll be studying physics in all your free time anyway.
Policy on Cheating: Don’t.

Students are expected to attend all workshops. Work may be collected at any time during the workshops, and attendance will be recorded for every class. The goal is always that every student will pass, but there is an extremely strong correlation between those few that skip even a few classes and those that fail. Even if you are in a technical major and you think you know all this first-year stuff, the instructors are experts in physics and there will always be something useful to pick up. In general, if you miss a workshop for any reason, e-mail me so I know what’s going on and can add that e-mail to the records file to look at when it comes down to grading in the end.

Emergency Lab Make-ups: With my permission, and a really good excuse, students may make up missed labs Wednesdays 5-8 PM in GOS 8-3125. A Physics TA, Frank Schooner, will be present to help but may not be completely familiar with the specific activity details. Students should bring the worksheet for whatever activity they missed. The make-up must be completed within two weeks of its original date and no make-ups will be allowed during Breaks.

Equipment Damage: It’s understood that in the rough and tumble world of Physics things are going to break, snap, crack, and explode. These things happen. Wear and tear or breakage of equipment is common and is not a strike against the student in any way or something to be embarrassed about, as long as students try in good faith not to break things. It’s more important to inform your instructor if something needs replacing so it can be taken care of before the next class needs the equipment. Hiding a piece of broken equipment in your group’s box doesn’t magically repair it.

How to get a high mark in physics: There’s always been this sort of cultural mystique about physics; that it’s the hardest course on campus and you have to be a brainiac to even pass it. Yes, it does help to have some natural talent for math and abstract ideas, but the grading simply reflects the quality of work done during the course. It’s all about consistency. The people who end up with a passing grade in the end simply show up to every workshop, make sure they understand the points covered, and complete their homework on time. If you do this, you should do well on the exams, which make up most of the total grade for the course. More than any other discipline, physics builds up in a logical progression from one class to the next, so it’s very important not to skip anything. You may not realize it at the time, but you learn quite a lot by being involved in the workshop activities.

Remember: Professors don’t decide grades; students decide their grades by their actions during the quarter and professors just make sure that the grades are assigned correctly.