

Modern Physics

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Texts: *TZDII: Modern Physics for Scientists and Engineers*, 2nd Edition, John R. Taylor, Chris D. Zafiratos, & Michael A. Dubson (Prentice Hall, 2002).

CRC: Pocket Book of Integrals and Mathematical Formulas, 5th Edition, Ronald J. Tallarida (CRC Press, 2015).

Course overview: In this second semester of Modern Physics we will focus on the 3-D Schrödinger equation, EM radiation by particles, statistical mechanics, and nuclear physics.

Homework: Homework will be assigned daily and due two classes later. Homework solutions are essays about the universe and expected to explain the solution, not just calculations. Please do not wait until the last minute to do the homework and do not hand in first drafts. You may need some extra help from faculty or your peers. If you use resources other than the text book (on line, in person, or in print), you must cite them.

Exams: Two exams with both in-class and take-home portions covering the material completed before the exam. Questions will include both math and physics problems similar to the homework. The final exam will be cumulative. You must do the math (algebra and derivatives) by hand, but you may use a table (CRC Pocket Book of Integrals and Mathematical Formulas) for integration. You must cite any resource you use.

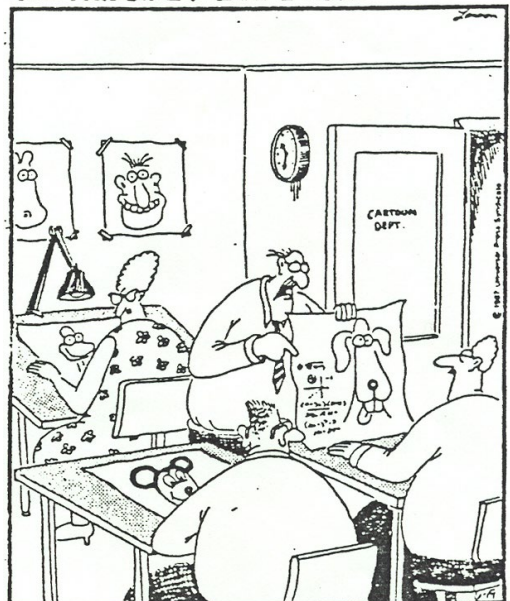
Laboratory: The laboratory is required. Failure to pass the lab will result in failure in the course.

Class Presentations: You will be required to do one presentation on scientific articles vaguely related to the material. The presentations will be during the first 10 minutes of class on Fridays.

Class Participation: While participation in class is not a formal assignment, you are expected to attend and your contribution to the class will be considered in determining your final grade.

Grading: The grades will be a simple average of the homework, 2 exams, final (worth twice a regular exam), and the laboratory. One quarter of a grade point is reserved for the discretion of the instructor based on participation and improvement.

THE FAR SIDE / GARY LARSON



"Hey! what's this, Higgins? Physics equations?...Do you enjoy your job here as a cartoonist, Higgins?"

WEBSITE: myslu.stlawu.edu/~aodo/SLU/physics/222/index.htm

Class Documents (syllabus, calendar, texts, information about Aileen)

Assignment lists, copies, due dates, and solutions

Title IX Syllabus Statement: <https://www.stlawu.edu/offices/title-ix>

MEMBERS OF THE ST. LAWRENCE COMMUNITY—students, employees, and guests— should expect to be free from retaliation, discrimination, harassment, and sexual misconduct, behavior that is inherently abusive of the humanity that each of us brings to the campus community. St. Lawrence University and its faculty are committed to supporting our students and seeking an environment that is free of discrimination, harassment, and sexual misconduct. St. Lawrence strongly encourages students to report retaliation, discrimination, harassment, including sexual harassment, sexual exploitation, domestic violence, dating violence, stalking, or sexual assault to St. Lawrence University's Title IX office. Discrimination on the basis of sex includes discrimination on the basis of assigned sex at birth, sex characteristics, pregnancy and pregnancy related conditions, sexual orientation, and gender identity.

If you speak with a faculty member about an incident that involves a Title IX matter or matter of other discrimination or harassment, that faculty member must notify SLU's Title IX Coordinator that you shared that experience. This is true even if you ask the faculty member not to disclose the incident. Moreover, if you disclose an incident of retaliation, discrimination, harassment, or sexual misconduct in an academic assignment, the faculty member must also report that experience to the Title IX Coordinator.

Once a report is made, the reporting individual can expect to receive email outreach from the Title IX Coordinator, who will provide resources and possible resolution options. If the impacted person is not a threat to themselves or others, the impacted person will be free not to respond to the offer to meet. You can find more information for resources and reporting options at: <https://www.stlawu.edu/offices/title-ix/reporting-options-confidential-and-nonconfidential-resources>.

Title IX also protects students who are pregnant or need assistance for pregnancy related conditions. If you are pregnant, the Title IX Coordinator can assist you in understanding your rights and options as well as provide supportive measures.

Lindsey Tropper (Cohen) is the Title IX Coordinator at St. Lawrence University (Student Center Room 302; lcohen@stlawu.edu; 315-229-5334).

STUDENT ACCESSIBILITY SERVICES: <mailto:studentaccessibility@stlawu.edu>

If you have a learning difference/disability or other health impairment and need accommodations please be sure to contact the **Student Accessibility Services Office** right away so they can help you get the accommodations you require. If you need to use any accommodations in this class, please meet with your instructor early and provide them with your Individualized Educational Accommodation Plan (IEAP) letter so you can have the best possible experience this semester.

Although not required, your instructor would like to know of any accommodations that are needed at least 10 days before a quiz or test. Please be proactive and set up an appointment to meet with someone from the Student Accessibility Services Office.

Color-Vision Deficiency:

If you are Color-Vision Deficient, the Student Accessibility Services office has on loan glasses for students who are color vision deficient. Please contact the office to make an appointment. (The Physics Department also has a pair of glasses to loan.)

For more specific information about setting up an appointment with Student Accessibility Services please see the listed options below:

Telephone: (315) 229-5537, Email: studentaccessibility@stlawu.edu,

Website: <https://www.stlawu.edu/student-accessibility-services>

The Peterson Quantitative Resource Center (PQRC): <mailto:pqrc@stlawu.edu>

Located in Valentine Hall, it offers free, no appointment necessary peer tutoring across a range of courses with quantitative content. The PQRC student staff of mentors is trained to assist students to develop and to improve their quantitative skills and understanding. More information about the PQRC's current hours and modes of operation can be found at the PQRC webpage.