

# Modern Physics

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

*CRC: Pocket Book of Integrals and Mathematical Formulas*, 5<sup>th</sup> 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. You will not turn in the homework twice ... solve the problems the first time!

**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 (TZDII or CRC Pocket Book of Integrals and Mathematical Formulas) for integration. You must cite any resource you use.

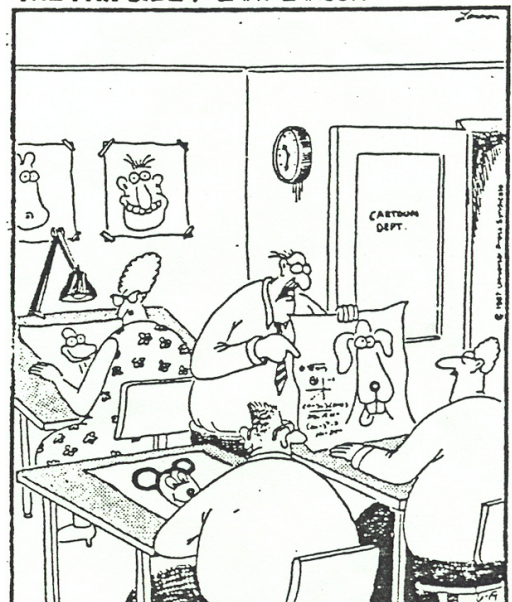
**Laboratory:** The laboratory is required. Failure to pass the lab will result in failure in the course.

**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?"

## SPECIAL INSTRUCTIONS DURING COVID-19

### SAKAI

Lecture Power Points in the Resources Folder

**The Assignments folder on the Sakai site is to be used for submission of all work!**

- Homework is due at the end of the due date (11:50:00 pm)

-- submit them as pdfs *named for the set number* (NO jpg, tiff, etc., just pdf!!)

--- There is a university scanner across from the physics office you may use

-- They will be accepted for one week after the due date with a 10% deduction

-- Resubmissions will be accepted until the exam on the section

- Contact me if you're having problems with the homework and we can negotiate

**WEBSITE:** [myslu.stlawu.edu/~aodo/SLU/physics/222/index.htm](https://myslu.stlawu.edu/~aodo/SLU/physics/222/index.htm)

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

Assignment lists, copies, due dates, and solutions

### STUDENT ACCESSIBILITY SERVICES:

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.

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](mailto:studentaccessibility@stlawu.edu)

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