

PHYS 2710 Introductory Modern Physics  
Spring 2012 TF, 2:30–4:00; SCNCE 113

Instructor: Larry Smith SCNCE 111 283-7520 [Larry.Smith@snow.edu](mailto:Larry.Smith@snow.edu) <http://www.snow.edu/larrys>

Snow College Master Course Syllabus: <https://www.snow.edu/syllabus/pdf.php?syllabus=8220>

Goals: Together we will take an exciting journey through modern physics. Some topics will be brief stops to see the view; others will be lengthier stays to learn the culture of the natives. All of the landscape is astonishing and beautiful. Students will continue to hone their thinking and problem-solving skills. The focus is on student learning; I will create an environment and provide resources to help you learn.

Text: *Modern Physics for Scientists and Engineers*, by Thornton and Rex, third edition.  
ISBN-10: 0534417817 ISBN-13: 9780534417819

Corequisites: PHYS 2220 [MATH 2210 (Calc III) and MATH 2280 (Differential Eqns) would also be nice.]

Course Content: Physics since the year 1900. Includes relativity, quantum mechanics, atomic and nuclear physics, elementary particles, and cosmology. Very exciting and interesting stuff!

Homework: Homework will be assigned regularly. You are strongly encouraged to study in groups to achieve understanding, but what you write on your paper must be your own work—don't turn homework in without understanding it. Paper is cheap so use lots of it. Write every step neatly. Draw diagrams and figures. Pretend you are writing the solution manual as Thornton and Rex's assistant. Each chapter's assignment will be due a class period or so after we finish discussing the chapter in class. Homework done after the due date is much less educational; please turn homework in on time. No late homework after April 17 will be accepted.

Participation: Ask questions in class, come to office hours, and help other students. If you are serious about this class the majority of your learning will take place outside of class time. A large part of the participation grade will come from submitting a written question for me to answer concerning something you didn't understand from reading the chapter. Both asking and answering questions should prove you've delved deeply into the chapter material. You also need to subscribe to the class e-mail list (LS-Green) and participate in the discussion there. You are responsible for information given over e-mail.

Term Paper: Write a 4–6 page research paper about a modern physics topic of your choosing. It should be typed and you should use (and cite properly) at least four sources in addition to any encyclopedias; at least one of these sources must come from a traditional source (journal, book, or magazine). More details on the class web site.

Help: You are encouraged to see me during my regular office hours (M–F 11:30–12:20, T 10:30–11:20), and at other times by appointment. Please also frequent the math/science lab and use your classmates and the class e-mail list as other resources. Don't get behind, and don't stay lost for more than a few hours at a time. Students with medical, psychological, learning or other disabilities desiring accommodations, academic adjustments, or auxiliary aids will need to contact the Disability Resource Center, room 221 Greenwood Center, phone number (435) 283-7244. The Americans With Disabilities Act (ADA) Coordinator at the Disability Resource Center (DRC) determines eligibility for and authorizes the provision of appropriate services and aids.

Quizzes: Frequent unannounced quizzes will keep you apprised of your progress.

Tests: Tests will be in the testing center. Testing Center hours are M-R 9–10:30, F 9–7, Sa 12–4, Su 5–9.

Final Exam: Tuesday, May 1, 5:00-7:00 p.m.; in the classroom. It will be comprehensive.

<u>Grading</u> :	Homework	25%	Quizzes	15%	Tests	25%
	Participation	5%	Term Paper	10%	Final Exam	20%