http://shovkovy.faculty.asu.edu/syllabus/2014/Spring/2014_Phy361_Modern_Physics.htm

PHY 361 - Introductory Modern Physics **SPRING 2014** Instructor: **Igor A. Shovkovy**	Days: Tuesday, Thursday Time: 12:00 p.m. – 1:15 p.m. Location: Technology Center 169 (TECH 169)

Office: Wanner Hall **340L** (Polytechnic campus)
Office **telephone** number: **480-727-1953**
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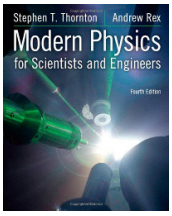
Office hours: Tue, Thu 10:30 a.m. – 11:30 a.m., and by appointment.

Description: This course covers selected topics of modern physics, including special relativity, introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.

Prerequisites: PHY-131 (University Physics II: Electricity and Magnetism) or PHY-151 (Physics II), MAT 272 (Calculus with Analytic Geometry III) or MAT 267 (Calculus for Engineers III). Students will need to be able to apply algebra, trigonometry, and **calculus** to solve physics problems.

Objective: Students are expected to become familiar with the most important subjects of modern physics



Textbook: ***Modern Physics for Scientists and Engineers*** **(4th edition) by S. T. Thornton and A. Rex** (ISBN-10: 1-133-10372-3) This is a required textbook for the course. Some lessons will be supplemented with extra notes.

Attendance policy: Attendance is expected. Students are responsible for all material presented in class, all homework, and for all changes to the schedule or plans announced in class.

General policy: Minimal preparation for lecture is to do the reading assignment for that day. Reading assignments for each class is given in the SCHEDULE of Lectures, Exams, and Homework assignments on the Blackboard course web site.

Grading policy:

Homework	50%
Midterm exams (15%+15%)	30%
Final exam	20%
TOTAL	**100%**

The grades will be determined as follows:
A (90%-100%), **B** (78%-89.99%), **C** (66%-77.99%), **D** (54%-65.99%), **E** (less than 54%)

Homework. Homework is truly one of the most important components in this course. This is because doing homework is the only way to really learn the material and build a good intuition for physics. Solving physics problems effectively is a skill that students must develop. The only known way to achieve this is by practicing. The lectures will only cover the key concepts. The text will elaborate on these concepts and provide further explanation of their meaning and on how one uses them to solve problems. There is no way to do well in this course if you do not give the homework assignments the effort they require. (Allow about 4 hours per week for homework assignments.)
Your homework assignment should be neatly and clearly written. The front page should list your name, the date and the homework assignment number. Each problem should be clearly labeled. The problem solutions should contain detailed explanations. Late homework will not be accepted.

Tests and final exam. There will be two midterm tests on the dates shown below in the tentative schedule (the actual dates will be announced in class). A **comprehensive** final exam will be scheduled by the University (for the actual date, see the University final exam schedule at https://students.asu.edu/final-exam-schedule). No changes may be made in the final exam schedule. The use of textbook will **not** be permitted during the tests and the final exam.

Electronic devices. The use of cell phones, pagers, personal digital assistants (PDAs), iPods, iPads, laptops, and other similar electronic devices is **not** permitted during lectures, exams and quizzes.

Tentative schedule

The exact schedule for lectures, quizzes and examinations will depend on how long it takes to cover the material. The following is my best guess as of now. See also the tentative schedule below.

Dates	
January 14	First class
March 4	Test #1
March 9 - 16	Spring Break - No classes
April 29	Test #2
May 1	Last class
May 6	**FINAL EXAM,** see https://students.asu.edu/final-exam-schedule

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Selected course materials, handouts, and grades will be posted on Blackboard (https://myasucourses.asu.edu).
The Blackboard course name is **PHY 361: Introductory Modern Physics (2014 Spring)**

For student **rights and responsibilities** see: http://campus.asu.edu/downtown/rights-and-responsibilities

Workload Expectations: *The Arizona Board of Regents, the governing board for ASU, NAU, and the U of A, has a policy for how much time students should invest in their courses: "At least 15 contact hours of recitation, lecture, discussion, testing or evaluation, seminar, or colloquium, as well as a minimum of 30 hours of student homework is required for each unit of credit" (http://azregents.asu.edu/rrc/Policy Manual/2-224-Academic Credit.pdf). Therefore, in a 3-credit course, students should expect to invest 45 hours in class meetings (or the online equivalent), as well as 90 hours doing homework and assignments—a total of 135 hours in any given session (A, B, or C). In this course and in other courses in your degree program, your faculty are committed to this standard because it promotes the breadth and depth of learning required in a first-rate university education. As you register for courses, keep this 135-hour standard in mind because during some semesters your work and/or family commitments may prevent you from taking a full load of classes.*

ADA policy: *ASU provides equal opportunity to qualified employees and students, and to members of the general public who have a disability and provides reasonable accommodation as appropriate in employment, the application for employment, services, programs, and activities. Individuals with a disability are those who have a physical or mental impairment that substantially limits one or more major life activity, have a record of such impairment, or are regarded as having such impairment. ADA coordinator must be contacted for assistance in all matters pertaining to compliance with this policy. The Disability Resource Center contact numbers are 480-965-1234 (Voice), 480-965-9000 (TTY).*

Academic Integrity: *Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see http://provost.asu.edu/academicintegrity.*

This course is offered by the *School of Letters and Sciences*. For more information about the school, visit our website: https://sls.asu.edu/. If you have questions or concerns, please send your inquiry to sls@asu.edu.

Last modified January 10, 2014