

## Modern Physics II (Physics 304) Syllabus, Fall 2010

Physics 304 is the second semester of a course in modern or quantum physics for students of physics, math, sciences and engineering. Basic principles mastered in Physics 303 will be applied to obtain a solid understanding of the physics of atoms, molecules, solids, nuclei and elementary particles. The course will closely follow the second half of the text by Harris. While Physics 303 and 304 are required courses for physics majors, they provide an excellent introduction to quantum physics and applications for all students. Contact me for more information.

### General information

Instructor: Professor Gary S. Collins, Webster 554, 335-1354.  
 Office hours: whenever my door is open, or by appointment.  
 More about me: [http://defects.physics.wsu.edu/gary\\_collins.html](http://defects.physics.wsu.edu/gary_collins.html)

Course email: <mailto:phys304@gmail.com>  
 Classes: MWF, 12:10-13:00 pm, Webster B11.  
 Required text: Modern Physics, Randy Harris (Pearson, 2<sup>nd</sup> edition, 2008).  
 Angel course web site: <http://lms.wsu.edu/> (access via <http://my.wsu.edu/>)  
 Public home page: <http://www.wsu.edu/~collins/304-10>  
 Syllabus: <http://www.wsu.edu/~collins/304-10/syllabus.pdf> (remember to reload!)  
 Schedule: <http://www.wsu.edu/~collins/304-10/schedule.pdf>

### Course format

Grading will be based on homework, unannounced quizzes, the best 2 out of 3 hour exams and a final exam. I will also assign a subjective participation grade. Letter grades will be assigned using the absolute scale given below. Exams will be closed-book, but you may bring one 8x11-inch page with notes in your own handwriting to each exam. Three sheets for the final exam. Syllabus, schedule and grading contributions are subject to change!

Contributions to final grade

Homework	30%
Quizzes	10%
Hour exams (best 2 of 3)	30%
Final exam	25%
Participation	5%

Absolute grading scale

A	85-100 %
B	70-85 %
C	55-70 %
D	45-55 %
F	0-45 %

### Angel course web site

The Angel course web site will be used for posting homework assignments and homework, quiz and exam solutions. It may be used for additional purposes such as posting of grades and discussions as I become familiar with it.

**Other notes:**

- Attendance is expected. Bring your text. There will be unannounced, closed-book quizzes.
- Exams will be given in evenings 7-9 pm. Classes on those days will be used for review.
- Homework solutions should be written, each on a separate page and on one side only, and stapled together in order.
- Time permitting, I will comment in class on good approaches to homework and quiz solutions and common misconceptions. However, I will spot-grade individual homework solutions and you should therefore check your solutions against those I post!
- Exam problems will be similar to homework problems or example problems in the text.
- The final exam will be designed to take two hours but, with unanimous consent of all students, will be given over three hours to reduce any sense of time pressure.
- In-class teamwork activities and unannounced quizzes will be held from time to time.
- Please mail to <mailto:phys304@gmail.com> to give me your *preferred* email address. I may also use Angel's email facility to mail you all, so update your preferred email address with WSU or arrange to have mail sent to your .wsu account forwarded to your preferred email account.
- You must be able to read course files in portable document format (PDF).
- I strongly encourage you to study together and discuss approaches to solving homework problems among yourselves in a general way. However, submitted homework, quiz and exam solutions should be your own.

**Fine print**

- Academic dishonesty is defined at the following link. In brief, do not plagiarize or use unauthorized assistance such as solution sheets while doing homework, during tests, etc. <http://academicintegrity.wsu.edu/default.asp?PageID=4614>.
- Students with disabilities. If you have a disability recognized by the Disability Resource Center, please see me during the first week of classes to make arrangements to accommodate your disability. For more information, <http://drc.wsu.edu/default.asp?PageID=1799>.
- Safety. The campus safety plan is at <http://safetyplan.wsu.edu/>. Go to <http://oem.wsu.edu/emergencies> to prepare for emergencies. The campus-wide alert system is at <http://alert.wsu.edu/>. Flu advice is at <http://h1n1flu.wsu.edu/>. Be safe!

This syllabus is provisional and subject to change.

Gary S. Collins

August 18, 2010