

Instructor: James Jacobs
 Office: Science Complex. Office: SC 119, Lab: SC 021.
 Phone: 243-4986, 243-4950
 Text: *Traveler's Guide to Spacetime* by Thomas Moore. Chapters 1–11
Modern Physics by Ken Krane. Chapters 3–8, 14 & 12 (if time permits).
 Lectures: Mo,We,Fr, 11:10-12:00 PM. SC Room 231.
 Office Hours: Right after class (short questions). And by Appointment.
 Regular Office Hours to be announced in class.

Homework:

Homework will be given every lecture for the early part of the course and weekly for the latter part of the course. The assigned problems will be collected, graded and returned. Homework will be due at classtime on the dates specified when assigned. Late assignments will be accepted only under extreme circumstances (arranged in advance) and will carry a 5% penalty for each day beyond the due date (no credit will be given after the solutions have been posted). Note that the exams will be similar to the homework in many respects, so working the assigned problems carefully will provide invaluable practice for the exams. Solutions may be put on reserve at the library (or posted on the www. You are encouraged to work together on the homework problems and see me if you need hints.

Exams:

There will be 3 in-class mid-term exams given during the semester and a comprehensive final exam given on Wednesday, December 15th from 8:00 to 10:00am. Since each new topic will build on previous concepts, a general working knowledge of previous material will be expected on all exams. The exams will be closed book except for a calculator (in some cases, a 3 by 5 card for formulas *may* be allowed). There will be no make-up exams. In some cases, the exams may consist of an in-class portion and a take-home portion.

General Remarks

This will be an intensive course. Be sure to keep up on reading assignments and problem assignments. Most of the techniques covered in this course require many hours of determined study to master, but I believe you will find it interesting and rewarding. In addition, some of the material we will cover is non-intuitive for beings who live in a universe where the speed of light, c , is so large and Planck's constant, \hbar , is so small. So if you need help with concepts or with problem sets be sure to see me during my office hours or make an appointment. Please do this *early* rather than waiting until the last minute.

Grading

Midterm exams: 35% (3@11.67% each)
 Homework: 40%
 Final exam: 25%

Tentative Schedule – Topics

| Week: | Chapters | Topics | Exams: |
|-------------|--------------------------|---|--------------|
| Weeks 1–5 | Moore: Ch. 1–11 | Relativity | |
| | | Midterm Exam | Fri. Oct. 1 |
| Weeks 6–10 | Krane Ch. 3–6 | Quantum Mechanics | |
| | | Midterm Exam | Fri. Nov. 5 |
| Weeks 11-15 | Krane Ch. 7,8,14 & 12 | Applications of Quantum Mechanics Special Topics | |
| | | Midterm Exam | Fri. Dec. 10 |

Comprehensive Final: Wednesday, December 15th from 8:00 to 10:00 pm
 Last day to drop: October 11th.