Instructor: Professor Marshall Onellion, 5104 Chamberlin. Office hours: M & F- before class and W: before class and after class until discussion (physics library) or by appointment. Group meetings during finals week are particularly desirable. We will try to schedule such meetings the last week of class.


Homework due each Friday in class starting September 13. Late homework will not be accepted. Solutions will be posted on the course website (http://www.physics.wisc.edu/undergrads/courses/fall2013/241/) about one week after homework is turned in, except the last homework where the solution will be posted before the final examination. Mid-term examinations include mid-term one covering relativity in class on Wednesday, October 9, and mid-term two covering quantum mechanics through the uncertainty relations in class on Wednesday, November 13. The final examination, which is comprehensive, will be at the time and place scheduled by the Registrar. The final grade will be determined using the algorithm:

CALENDAR

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| **  | September 4 | 6   | Chapter 1 special relativity
| 9   | 11  | 13  | Chapter 1 special relativity (HW set 1 due 9/13)
| 16  | 18  | 20  | Chapter 2 relativistic mechanics (HW set 2 due 9/20)
| 23  | 25  | 27  | Chapter 2 relativistic mechanics (HW set 3 due 9/27)
| 30  | October 2 | 4   | Chapter 3 quantum mechanics (HW set 4 due 10/4)
| 7   | 9   | 11  | Chapter 3 quantum mechanics (HW set 5 due 10/11)
| 14  | 16  | 18  | Chapter 3 quantum mechanics (HW set 6 due 10/18)
| 21  | 23  | 25  | Chapters 4-5 quantum mechanics (set 7 due 10/25)
| 28  | 30  | Nov. 1 | Chapters 5-6 quantum mechanics (set 8 due 11/1)
| 4   | 6   | 8   | Chapters 5-6 quantum mechanics (set 9 due 11/8)
| 11  | 13  | 15  | Chapter 6 quantum mechanics (set 10 due 11/15)
| 18  | 20  | 22  | Chapter 7 atomic physics (set 11 due 11/22)
| 25  | 27  | **  | Chapter 7 atomic physics (no homework due)
| December 2 | 4   | 6   | Chapter 7 atomic physics (set 12 due 12/6)
| 9   | 11  | 13  | Chapter 8 (set 13 due 12/13)

There are also two required papers, each 5% of your total grade. You are to read chapters 1-8 of Quantum Enigma by Bruce Rosenblum and Fred Kuttnner for the first paper, and chapters 9-14 for the second paper. Each paper must be at least three pages, single-spaced, Times New Roman 11 point font, stapled together. Handwritten papers, or papers not stapled together, will be given an unsatisfactory grade. The format is:

First line, centered- Title of book, chapters read
Second line, centered- Your name
Third line- blank space
Followed by your text.
The first paper is due in class on October 25 and the second paper due at the final examination. The papers will be graded as follows: good (95%), satisfactory (70%), marginal (40%), unsatisfactory (0%). No appeals to the grades will be entertained. Your score is based on two factors: convince me your read the material, and persuade me of something in the material you found surprising, that you disagree with, or that you found particularly interesting. Merely repeating what is in the book will result in an unsatisfactory grade. Feel free to seek help (which is free) from me or from the Writing Center (http://www.writing.wisc.edu/) as needed.