INTRODUCTION TO MODERN PHYSICS (PHYS 300)
Spring 2009

Class meetings: Natural Sciences Building, room 128,
Tuesday and Thursday: 11:00 - 12:15 a.m.

Instructor: Dr. Sergio B. Mendes, Associate Professor
Dept. of Physics and Astronomy

Contact info: sbmend01@louisville.edu, (502) 852-0908

Office hours: Tuesday 2:00 – 3:00 p.m. and Thursday 2:00 – 3:00 p.m. at the Belknap Research Building (BRB), room 240. If you need an extra-appointment, please email or call in advance for confirmation.

Goals: Introduction to special relativity and quantum theory, with applications to atomic, nuclear, and solid state physics.

Textbook: Modern Physics, Tipler & Llewellyn, 5th ed., Freeman (2007). Some chapters and sections of the book will be omitted due to time constraints.

Instructor web site: http://www.physics.louisville.edu/sbmendes/
You will find classnotes, additional literature, homeworks & solutions, exams & solutions, quizzes & solutions, etc.

Publisher web site: http://bcs.whfreeman.com/tiplermodernphysics5e/
You will find review of classical concepts, "more" sections, errata, etc.

Educational web site: http://phet.colorado.edu/simulations/index.php, from University of Colorado at Boulder. Many simulations including photoelectric effect, blackbody radiation, Rutherford scattering, Davisson-Germer experiment, Stern-Gerlach experiment, etc.

Evaluation:

- 3 exams (2 mid-terms and 1 final-exam) equal weight for each: 75%
- Homework (approximately 6-9 assignments): 25%
- Quiz (extra-credit): 10%

Grading:

- A = 100% - 85%
- B = 84% - 75%
- C = 74% - 65%
- D = 64% - 55%
- F = below 54%

The instructor reserves the right to lower the grade limit.

Preliminary (Tentative) Schedule of Classes:

Class #	Date	Chapter
1.	Jan 08	3
2.	Jan 13	3
3.	Jan 15	3 & 4
4.	Jan 20	4
5.	Jan 22	4
6.	Jan 27	5
7.	Jan 29	5
8.	Feb 03	5
9.	Feb 05	6
10.	Feb 10	Midterm # 1
11.	Feb 12	6
12.	Feb 17	6
13.	Feb 19	6
14.	Feb 24	7
15.	Feb 26	7
16.	March 03	7
17.	March 05	7
18.	March 10	8
19.	March 12	Midterm # 2
20.	March 24	8
21.	March 26	8
22.	March 31	8
23.	Apr 02	9
24.	Apr 07	9
25.	Apr 09	9
26.	Apr 14	1

27.	Apr 16	1
28.	Apr 21	1
29.	Apr 28, 11:30 am - 2 pm	Final Exam

The instructor reserves the right to make changes and adjustments in the schedule as needed.