PHY 306
Relativity and Modern Physics

Dillard University - Fall 2002

revised 13 September 2002

Meeting Times:

Scheduled for Stern 217 `T  03:00p - 04:40p`
Scheduled for Stern 217 `F 10:00a - 10:50a`

Instructor: Rob Salgado ⟵ note the correct spelling
office: Stern 307A
voice: (504)-816-4510 ⟵ note the new number
email: `rsalgado@dillard.edu` ⟵ "the BEST way to reach me"
www: `http://physics.syr.edu/~salgado/` ⟵ temporarily
instant-messengers: AOL, MSN, Yahoo: `dillardphysics` (do not email here)

Office hours: [consult the webpage above for any revisions to the following schedule]

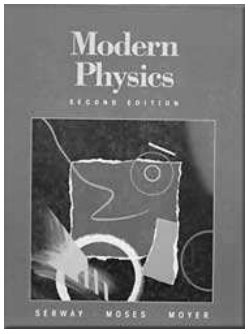
STERN 307A	M W	10:00a-11:00a
	T	1:00p- 3:00p
	R	5:15p- 6:15p
LEARNING CENTER	T	9:00a-11:00a

or drop by my office or make an appointment by email.

Catalog Description: *PHY 306 Relativity and Modern Physics. (4 credits)*
Review of classical physics, the experimental foundations of quantum physics, Schrödinger equations and the wave functions. Atomic and molecular spectra, special relativity, electricity and radiation, introductory nuclear physics. Class meets three hours per week for lecture, one hour per week for recitation.

[Prerequisites: Physics 230/231 and junior standing, Mathematics 203.]

Textbook: "Modern Physics" (2nd edition) by Serway, Moses, and Moyer
(published by Brooks/Cole: ISBN 0-03-001547-2)



If you are unhappy with the textbook, FIND ANOTHER ONE from the library! (I did this for every class I took!)

Electronic Materials: I will maintain a webpage that lists the assigned problems and solutions. Please refer to:
(temporarily at) `http://physics.syr.edu/~salgado/306/`

Homework: Homework will be assigned but <u>not</u> be collected. We will discuss the homework in class. I guarantee that at least two of those problems will appear on a quiz or exam.

Most of the learning you do in this class is done by **doing homework problems outside of class!**

You are encouraged to work on the homework with other students.
However, be sure that <u>you can do the problems **by yourself**</u>
since you'll be working on quizzes and exams by yourself.

If you need help with your homework, please visit me (with your text and your notebook and *with proof that you tried the problems*) during Office Hours.

Classroom Rules:

Come to class ON TIME. Attendance is REQUIRED, in accordance with University regulations (page 17).
Come to class PREPARED, having read or written any assignments.
Turn OFF all phones, pagers, radios, and other disruptive devices.
Limit all discussions to the PHYSICS topic under discussion.
Academic dishonesty will not be tolerated, in accordance with University regulations (page 18).
Treat each other with RESPECT.

Grades:

- 20% REGULAR QUIZZES
- 30% REGULAR EXAMS
- 20% MIDTERM EXAM
- 30% FINAL EXAM

A=90+, B=80+, C=70+, D=60+, F<60.
This class is not graded on a curve.
Borderline cases (between two letter grades): If your exams show an upward trend or you are an active participant in class, your grade may be nudged upwards.

Exams and Quizzes: QUIZZES are generally given at end of each chapter. They will begin at the start of the class period and will end promptly after ten minutes of that period. [No makeups or extensions. Be on time.] After every two chapters or so, we will have an EXAM on these chapters (instead of a quiz on the recently finished chapter). There is a MIDTERM exam and a FINAL exam.

Missed exams:

If you are absent for an exam, you must present a written excuse to me.
Only if that excuse is valid, your next scheduled exam will carry the weight of your missed exam. Otherwise, you will get no credit for the missed exam.

Course outline (tentative):

Q=quiz
X=exam
R=review

August		during this week, we start	
Su Mo Tu We Th Fr Sa			
27	29	introductions; CH 1 - Relativity	
September			
Su Mo Tu We Th Fr Sa			
[2] 3	6	(my new approach to teaching relativity)	
10	13		
17	20Q	CH 2 - Quantum Theory of Light	[Fri: Quiz on Ch 1]
24	27		
October			
Su Mo Tu We Th Fr Sa			
1	4X	CH 3 - Particle nature of Matter	[Fri: Take-Home EXAM Ch 1-2]
8	11		
15R	18X	MIDTERM	[Fri: In-Class MIDTERM Ch 1-3]
22	25	CH 4 - Matter Waves	
29			
November			
Su Mo Tu We Th Fr Sa			
	1Q	CH 5 - QM in one-dimension	[Fri: Quiz on Ch 4]
5	8		
12Q	14	CH 6 - Tunneling	[Tue: Quiz on Ch 5]
19X	21	CH 7 - QM in three-dimensions	[Tue: Take-Home EXAM Ch 4-6]
26 [28	29]	CH 8 - Atomic Structure	
December			
Su Mo Tu We Th Fr Sa			
3 [5]	[F	CH 8 ; review(?)	
I N A L]		FINAL	[tba: In-Class FINAL Ch 1-8]

revised 13 September 2002