

PHYSICS 241 – Computational Mechanics – Fall 2011

Location: WorkC 109 and Speare 23,

Class: M-W 11:00am-11:50pm **Lab:** W 2:00-4:00 pm **Office Hours:** Friday 4:00-5:30 pm

Professor: Richard Sonnenfeld, Workman 347,
Tel: 575-838-7113, pcardout@gmail.com

Goals: Every course graduate should be comfortable with
1) Solving classical mechanics problems at a level comparable to standard “college physics” texts.
2) Writing short programs in MATLAB to solve physics problems.

Programming Lab: The programming lab is an opportunity for you to work on your computational homework and get assistance. Attendance is required.

Schedule/Topics: A syllabus and exam schedule will be posted on the web.

Announcements: Announcements (upcoming exams, where next class will meet, changes to HW assignments, etc.) are made in class and (sometimes) posted on the web.

Required Texts: Newtonian Mechanics (the MIT Introductory Physics Series) by A.P. French © 1971, W.W. Norton
Computational Mechanics by R. Sonnenfeld and K. Niemand (this book will be given to you for free in electronic form)

Optional Texts: Introduction to MATLAB 7 for Engineers by W.J. Palm III © 2005, McGraw Hill Higher Ed
ALSO
You should own a “freshman physics” book. (Halliday and Resnick, Young and Freedman are both good choices) Buy one used cheap!

WebPage: I will be using my web-page on <http://www.physics.nmt.edu/~rsonnenf/phys241> to post assignments and class notes.

Grading:

Final:	20%	(Mechanics)
Quiz 1:	10%	(Programming)
Quiz 2:	10%	(Mechanics, Statics)
Quiz 3:	10%	(Mechanics, Dynamics)
Project:	20%	
Homework:	25%	
Participation	5%	

“A” is 90-100, “B” is 80-90 ... etc. (I reserve the right to curve the grades later in the course, but only in your favor.)

Homework: Written homework is usually assigned Monday and collected at beginning of class the following Monday. Programming homework XX is due before midnight on Mondays and is to be uploaded to yourid@babelfish.nmt.edu:~/phys241/hwXX. Late homework is strongly discouraged and may not be accepted. Grading is “all or none” for each problem. In the case of “none” you may rework the problem for 80% credit.

Programming (MATLAB) homework should be done individually. Working with and talking to classmates is encouraged, but you need still to write your own code. If I receive very similar programs, no credit will be given to anyone for the work. Code needs to work when I run it. It will be returned and you can rewrite for 80% credit.