

Fall 2017 Phy 380 –Computational Physics

Course Syllabus

Instructor: Dave Pawlowski
Phone: 734-487-8644

Office: 607F Pray Harrold
e-mail: dpawlows@emich.edu

Class Meeting Times: MW 11:00 – 12:15 Strong 224

Text: None

Class Website: Course notes can be found at: <http://chuck.emich.edu/dpawlows/phy380>
Canvas/the physics server will be used to distribute other materials and for the submission of assignments.

Pre-requisites: Phy 224

Office Hours: MTW 12:30 – 2:30;Th 9:30 – 11:00 and by appointment

Course Layout: The goals of this course are to learn a variety of computational tools that will assist you in succeeding in your career after Eastern, no matter what it is. The main topics that will be covered are:

- 1) The UNIX operating system
- 2) Scientific programming in Python
- 3) Typesetting using LaTeX

By the end of the course, I expect that you will have the ability to use/navigate a UNIX based file system, perform remote operations, create programs that can solve interesting physics problems, have confidence to apply techniques to problems that can cannot be solved analytically, and create professional quality documentation using a typesetting program. You will be learning numerical techniques for solving basic algebraic equations, differentiation, integration, methods for solving systems of equations and how to develop and analyze your own algorithms.

Grades: Your grades will be determined by performance on homework assignments, in-class assignments, and attendance/participation. Your final grade will be determined by:

HW Scores	45%	Letter Grades:	>93.0% = A, 90.0-92.9% = A-,
In-class assignments	30%		87.0-89.9% = B+, 83.0-86.9% = B, 80.0-82.9% = B-
Quizzes	25%		77.0-79.9% = C+, 73.0-76.9% = C, 70.0-72.9% = C-
			67.0-69.9% = D+, 63.0-66.9% = D, 60.0-62.9% = D-
			< 60% = E

Physics Cluster: ~~You have access to the physics computer cluster. This resource is available so that you can access your work 24 hours per day/365 days per year anywhere that has an internet connection.~~

Note: As always, this is a guide. My intention is to stick to this guide, however sometimes class policies may be subject to change.