EGR110: Computational Methods (1 hr) Fall 2015

Instructor: Dr. Paul D. Schmelzenbach	Meeting: 1:30-3:30 TR (SB106)
e-mail: PaulSchmelzenbach@pointloma.edu	Office Phone: 849-2933
Office Hours: R 9:00-11:00; 12:30-1:30 MWF; by appt.	Office Location: RS 207

Materials – Student version of MATLAB.

Description – This course will provide an introduction to computational techniques used in physics and engineering with an emphasis on basic programming and visualization. These ideas will be investigated primarily using the software package MATLAB. We will spend approximately 2 hours per week in lab.

Learning Outcomes – This course supports the overall learning objectives of the physics and engineering programs to: apply physical principles, mathematical reasoning, and computational techniques to solve real-world problems and effectively collaborate in teams .

Within these broader outcomes, in this course you will

1. acquire skills to learn how to develop solutions for certain kinds of physics and engineering problems using computational techniques
2. become proficient at using MATLAB including writing .m files and correcting or modifying existing code.

.

Projects and website – Through the semester you will be completing six different projects plus a final project. These projects are to be submitted each week by Thursday evening in the form of web pages which you will be developing throughout the semester. Projects are a major component of this course and are worth 50% of your total grade. A seventh final project will be worth an additional 15% of your grade. Your website (the heart of which will be presentations of your project, but includes a few other items) is worth 10% of your final grade.

Collaboration: I would encourage some collaboration between you and your peers while working on tasks and projects, but your work must be your own. The guideline is: you should never have any trouble explaining your work.

Late Submission Policy: Late submissions of projects will receive a 10% reduction in grade for each 24 hour period it is late (not counting weekends).

Tests – Two tests will be given during this quad. Tests consist of written problems and applications of your knowledge using MATLAB to perform certain tasks or solve certain problems. No make-ups will be given unless prior arrangements have been made. These two examinations are worth 25% of your final grade.

Grades – The grade you earn in this course is based on the following scale: 100-90% A, 89-80% B, 79-70% C, 69-60% D. The points you receive during the course are weighted accordingly: projects 65%, exams 20%, final exam 15%.

Final Grades – The grade you earn in this course is based on the scale shown to the right. The points you receive during the course are weighted accordingly:

- Projects (6): 55%
- Exams (2): 25%
- Final Exam: 20%

A	100 - 91.0
A-	91.0 - 89.5
B+	89.5 - 87.0
B	87.0 - 81.0
B-	81.0 - 79.5
C+	79.5 - 77.0
C	77.0 - 71.0
C-	71.0 - 69.5
D+	69.5 - 67.0
D	67.0 - 61.0
D-	61.0 - 55.0

As with all courses at PLNU, this course supports the cause to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Academic Integrity – All students are expected to uphold the highest standards of honesty and integrity in their academic work. Cheating or plagiarism may result at a minimum in failure on the assignment and may result in an automatic failure in this course.

Academic Accommodations – While all students are expected to meet the minimum academic standards for completion of this course as established by the instructor, students with disabilities may require academic accommodations. At Point Loma Nazarene University, students requesting academic accommodations must file documentation with the Disability Resource Center (DRC), located in the Bond Academic Center. Once the student files documentation, the Disability Resource Center will contact the student's instructors and provide written recommendations for reasonable and appropriate accommodations to meet the individual learning needs of the student. This policy assists the University in its commitment to full compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities (ADA) Act of 1990, and ADA Amendments Act of 2008, all of which prohibit discrimination against students with disabilities and guarantees all qualified students equal access to and benefits of PLNU programs and activities.

FERPA Policy As a student at Point Loma, you have a legal right to privacy as outlined in the federal FERPA (Family Educational Rights and Privacy Act) legislation. See Policy Statements for full text.