

ENGR 1371 – Computing for Engineers
Engineering Studies Program
Armstrong Atlantic State University
Fall 2009

GENERAL INFORMATION

Class Hours: TR 11:30 a.m.– 12:45 p.m.

Class Location: Science Center # 2016

Instructor: Dr. Priya T. Goeser

Office Location: Victor Hall # 209

Office Phone: 912-344-2874

Email: Priya.Goeser@armstrong.edu

URL: <http://engineering.armstrong.edu/priya>

Office Hours: M 09:00 a.m. – 10:00 a.m.,
T 02:30 p.m. – 04:00 p.m.,
W 09:00 a.m. – 10:00 a.m. and 02:30 p.m. – 04:00 p.m. or by appointment

Text book: Engineering Computation with MATLAB by David M. Smith (2nd Edition)

References:

- MATLAB for Engineers by Holly Moore
- Introduction to MATLAB 7 for Engineers by William J. Palm III

Course URL: <http://engineering.armstrong.edu/priya/ENGR1371/ENGR1371.html>

PREREQUISITES / CO REQUISITES

MATH 1161 – Calculus I

CATALOG DESCRIPTION

Foundations of computing with an introduction to design and analysis of algorithm and an introduction to design and construction of programs for engineering problem-solving.

COURSE OBJECTIVE

The main objective of this course is to study the fundamentals of programming and to solve engineering problems using MATLAB, a technical computing language.

COURSE OUTCOMES

Upon successful completion of this course, students should be able to:

1. Understand the general principles of abstraction, testing, debugging and problem solving;
2. Develop and write algorithms/MATLAB programs utilizing programming fundamentals such as Arrays, Execution Control, Functions, Character Strings, Cell Arrays and Structures, Principles of Problem Solving and Recursion;
3. Develop and write algorithms/MATLAB programs using procedural programming principles such as Plotting, Matrices, File I/O, Images, Processing Sound and Numerical Methods;
4. Understand the concepts (graphically) of Big O Algebra, Sorting, Dynamic Data Structures: Queues and Priority Queues and Searching Graphs.

Note that the above topics are tentative and the instructor can change them if and when needed.

GRADING POLICY

The grading policy will be based on:

Projects – 20%

Quizzes – 10%

Exam 1- 20%

Exam 2 – 20%

Final Exam – 30%

Final grades will be assessed as:

A - (90 - 100)

B - (80 - 89)

C - (70 – 79)

D - (60 – 69)

F - (< 60)

The instructor reserves the right to adjust the grading percentages and scale if needed.

HOMEWORK AND IN-CLASS ASSIGNMENTS

Homework and in-class assignments will be a combination of written and programming exercises. Assignments will be assigned once every 1-2 weeks. Homework and in-class assignments are for practice only and are not included in the grading policy (unless specified otherwise). However, students are expected to work through all problems covered in these assignments.

PROJECTS

Projects will be a combination of written and programming exercises based on the assignments and other material learnt in the class. Projects will usually be due 1-2 weeks from the date they are assigned. All projects are to be submitted in the required format. Late work and missed work will automatically get a zero for that particular project. No excuses will be accepted, except emergency situations (written documentation required).

EXAMS AND QUIZZES

Exams and quizzes will be closed book and closed notes and are to be individual effort. Exams will cover all course material (lectures, assignments, etc.) up to the class period before the exam. No makeup exams or quizzes will be given except for an emergency situation (written documentation required).

COMPUTER LABS

College of Science and Technology Labs (SC129, SC2016) have MATLAB, Adobe Acrobat Reader and other software necessary for this class.

CLASS ATTENDANCE

Students are expected to attend class, bring their textbooks, writing material, external storage media, etc., and are responsible for all topics covered in class. Disruption of class (using cell phones, playing on the computer, talking, sleeping, etc.) will not be tolerated. A warning will be given the first time and you will be asked to leave the class on further instances.

CLASS TARDINESS

Students are expected to come to class on time. A tardiness of five minutes after class start time will be allowed. After that you will be asked to leave the class except for an emergency situation (with the instructor's approval; written documentation required).

DISABILITIES OR SPECIAL NEEDS

If you have a physical, psychological, and/or learning disability that might affect your performance in this class, please contact the Office of Disability Services located in the Division of Student Affairs in MCC 207 (912-344-2744 or <http://www.sa.armstrong.edu/Disability/>) as soon as possible. The Office of Disability Services will determine appropriate accommodations based on testing and medical documentation. Please notify the instructor that you might need accommodations within two weeks of the start of the semester or two weeks of being diagnosed. Please see the instructor privately after class or in his/her office. You may then choose, by notifying the instructor before the start of each exam or assignment, whether you will need any accommodation. Notification after the start of an exam or last minute notification on an assignment will not be accepted.

ACADEMIC HONESTY

Students must abide by the Armstrong Atlantic Honor Code and Student Code of Conduct <http://www.sa.armstrong.edu/Activities/hccoc.html>. Students are expected to perform their work individually unless otherwise specified by the instructor. Students may discuss assignments/projects in general terms with other students and may receive assistance from the instructor or classmates. Assistance does not mean obtaining working designs or solutions and modifying them; this is considered copying. All instances of academic misconduct will receive a zero for the assignment/project and be reported to the Dean of Students. A second instance of academic misconduct will result in an automatic F in the course and possible disciplinary action.

IMPORTANT DATES

Quizzes: During regular class hours (actual dates to be announced later)

Exams 1-2: During regular class hours (actual dates to be announced later)

Final Exams: Tuesday, December 8th – Monday, December 14th

First day of classes: Monday, August 17th

Last day to withdraw from class without automatic academic penalty of WF (Mid-Term):
Thursday, October 8th

Last day of classes: Monday, December 7th

No class: Monday, September 7th, Labor Day

No class: Monday, October 12th – Tuesday, October 13th, Fall break

No class: Wednesday, November 25th – Friday, November 27th, Thanksgiving break

Last updated on 08-13-09.