



THE CITADEL

ELECTRICAL & COMPUTER ENGINEERING

ELEC 206-01, Computer Applications for Electrical Engineers
Course Syllabus for Spring 2017
MWF 8:00am – 8:50am, Room: Grimsley 330

- Instructor:** Jason S. Skinner, Ph.D., P.E.
Office: Grimsley 310
Phone: 843-953-3352
Email: jason.skinner@citadel.edu
Schedule: <http://ece.citadel.edu/skinner/spring-2017-schedule>
- Office Hours:** MW 3pm–4pm, TR 1pm–4pm, and by appointment
- Textbooks:** *Engineering Problem Solving with C++*, 4th Edition, D. M. Etter and J. A. Ingber
– Companion Site
- MATLAB: An Introduction with Applications*, 6th Edition, A. Gilat
– Companion Site
- Software:** Microsoft Visual Studio Enterprise 2015, available at:
The Citadel – Electrical and Computer Engineering – Microsoft Imagine Premium
- MATLAB & Simulink Version R2016a/b, available at:
MATLAB & Simulink Student Version Website
- Prerequisites:** ELEC 106 – Fundamentals of Electrical Engineering
- Objectives:**
1. Introduction to and applications of C++ programming.
 2. Introduction to and applications of MATLAB programming.
- Description:** The computer is presented as a tool for the solution of electrical engineering problems. High-level programming of computers; data manipulation, plotting, and equation solving using application programs such as MATLAB.
- Websites:** Professor - <http://ece.citadel.edu/skinner>
Course - <http://citlearn.blackboard.com>
The CitLearn course website will be used to post course information (such as this syllabus), lecture slides and notes, homework/project assignments, corrections and answers to questions about assignments, and individual grades.
- Important Dates:**
- Monday, January 16 MLK Day (No Classes)
Tuesday, January 17 SCCC Drop/Add ends
Monday, February 27 Exam on C++ Topics
Wednesday, March 15 Last Day to Withdraw with grade of “W” for SCCC
Friday, March 24 Spring Break begins
Sunday, April 2 Spring Break ends
Tuesday, April 25 SCCC Classes end
Wednesday, April 26 @ 1300 Exam on MATLAB Topics

Course Outline:

Reading	Topics	Week
Chapter 1	Course Overview, Introduction to Computing and C++	January 9
Chapter 2	Simple C++ Programs	January 16
Chapter 3,4	Selection and Repetition Control Structures	January 23
Chapter 5	Working with Data Files	January 30
Chapter 6	Modular Programming with Functions	February 6
Chapter 7	One-Dimensional Arrays	February 13
Chapter 8	Two-Dimensional Arrays	February 20
Chapters 1 – 8	Exam on C++ Topics	February 27
Chapter 1	Starting with MATLAB	March 1
Chapter 2,3	Creating, Mathematical Operations with Arrays	March 6
Chapter 4	Using Script Files and Managing Data	March 13
Chapter 5	Two-Dimensional Plots	March 20
Chapter 6	Programming in MATLAB	April 3
Chapter 7	User-Defined Functions and Function Files	April 10
Chapter 11	Symbolic Math	April 17
Chapters 1 – 7, 11	Exam on MATLAB Topics	April 26

Attendance: Attendance is mandatory. Unless circumstances preclude it, it is your responsibility to notify Dr. Skinner of any schedule conflicts or excused absences that will result in your missing class. It is college policy that a grade of F may be awarded to a student if that student misses more than 20% of the course meetings (excused or unexcused). For this course, **9 classes** constitute 20% of the class meetings.

Classroom Decorum: No food or drink is permitted in the classrooms of this building. Proper attire is encouraged, and ECE department policy prohibits hats, cutoffs, shorts, tank tops, and feet without socks in class.

Special Needs Students currently documented or anticipate being documented as Learning Disabled (LD), as having Attention Deficit Disorder (ADD), or with another condition for which you might need special accommodation during the semester must provide written documentation of the condition and of the accommodation needed to me within two weeks of the semester start. You may then choose, by notifying Dr. Skinner 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. Please Note: To request academic accommodations (for example, a note taker), students must also register with Academic Support/Special Services, 953-1820, located in Thompson Hall. It is the campus office responsible for reviewing documentation provided by students requesting academic accommodations, and for accommodations planning in cooperation with students and instructors, as needed and consistent with course requirements.

Homework:

- Homework assignments will be assigned weekly on Fridays and will be due the following Friday.
- Exact due dates will be provided on the CitLearn course website, by email notification, and in class when the homework is assigned.
- You may obtain assistance when doing your homework, and group study is encouraged. **However, copying of homework or sharing code segments is not assistance—it is cheating**. Any assignment in question will be given a grade of zero, and disciplinary action taken.

Tests:

There will be two in-class exams. **Collaboration is not allowed on exams.** Assigned exams are required. Unless authorized to the contrary by Dr. Skinner, such exams take precedence over all other duties or activities. If you know you will miss an exam, you must let Dr. Skinner know as soon as possible so a make-up exam time can be arranged. Make-up exams will only be given for those students that have made a **reasonable** attempt to contact Dr. Skinner.

Grading:

Students will be graded on everything that is required to be turned in. Work turned in after the assigned due date and time will not be accepted and will receive a grade of zero, unless a prior arrangement is made. If you will be absent on the day of an assignment arrange to have a classmate turn in your work for you.

All exams are scheduled well in advance. Due to the potential unfairness of make-up exams, they will only be given in extreme circumstances. Your final grade in the course will be determined as follows:

Homework	50%
Exam 1 (C++)	25%
Exam 2 (MATLAB)	25%

The grading scale used in this course is:

A = 90 – 100, B = 80 – 89, C = 70 – 79, D = 60 – 69, F = 59 or below.

Cheating and Collaborative Work

According to The Citadel's policies for the preparation of work performed outside the classroom:

All papers, reports, senior essays, theses, or other written work performed outside the classroom for which a grade is received will be the individual's work and is subject to the limitations imposed by the definition of plagiarism.

According to Webster's New International Dictionary, 3rd Edition: to plagiarize is defined as "to steal and pass off as one's own the ideas or words of another" or to "present as new and original an idea or product derived from an existing source."

CHEATING IN ANY FORM WILL BE FULLY PROSECUTED.