ESC 151 –C Programming (ANSI C)

Class:

MW: 3:00-5:25

Suggested External Information (in place of a book): http://www.cprogramming.com/tutorial/c-tutorial.html

Instructor: Robert Fiske
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Note on medical reasons for extensions/other requirements

Educational access is the provision of classroom accommodations, auxiliary aids and services
to ensure equal educational opportunities for all students regardless of their disability. Any student who feels he or she may need an accommodation based on the impact of a disability should contact the Office of Disability Services at (216)687-2015. The Office is located in MC 147. Accommodations need to be requested in advance and will not be granted retroactively.

Any medical/family issues you have need to be brought to my attention before you take any quiz/exam, once the exam is in your hands no makeup will be offered. Once you begin to take an exam/quiz you may not leave the room until you turn in the quiz/exam.

Course Objectives: This course is designed to:

1. Introduce the C programming language.
2. Introduce the concepts of computer programming.
3. Teach students to think about how to approach programming challenges.
4. Teach students to debug computer programs.

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

1. Identify, formulate, and solve engineering problems using C language
2. Use techniques, skills, and tools that the C language offers for modern engineering practice

Fulfills the following Engineering Program Objectives and Outcomes:

1. Knowledge/Understanding of Application of Mathematics, Science, and Engineering Principles
2. Knowledge/Understanding of Identification, Formulation, and Solution of Engineering Problems
3. Knowledge/Understanding of Techniques, Skills, and Tools for Modern Engineering Practice

Grading

Quizzes 10%
Programming Assignments 50%
Class Participation 10%
Programming tasks 30%

Grading Scale:

A	100-94
A-	93-90
B+	89-87
B	86-83
B-	82-80
C+	79-75
C	74-70
D	69-60
F	0%-59%

Programming assignments are to be submitted via blackboard before you leave class.

THIS COURSE IS HANDS ON PRACTICE INTENSIVE AND ADDITIONAL PROGRAMING PRACTICE BEYOND
CLASS PERIOD IS HIGHLY RECOMMENDED TO SUCCEED IN THIS COURSE.

Important Notes:

- For a successful completion of the course, students are strongly advised to attend all lectures and computer lab sessions, and to take notes because they are a fundamental instructional part in addition to the textbook.
- If a student misses a class, he/she will be responsible for the missed material. To succeed you have to work consistently; please do not take the attitude that this week I will ignore and catch-up during the next week. For this course that is a sure recipe for failure.

Schedule of topics (subject to change):

May 18: Setting up IDE, hello world
May 20: Using IDE, Math and Variables
May 25: Holiday
May 27: Input, Output
June 1: If else if else
June 3: Switch
June 8: While/Do While loops
June 10: For Loops
June 15: Arrays
June 17: Strings
June 22: Files
June: 24 Functions
June 29: Points
July 1: Pointers Continued
July 6: Structures
July 8: Libraries

Starting with May 27 there will be a quiz every class.

Other recommended sites (comments about if I actually use this site, or just found it after a quick search):

https://stackoverflow.com/ (I use this site often, very helpful)

https://www.cheatography.com/ashlyn-black/cheat-sheets/c-reference/ (found this in a quick searc)

http://www.cprogramming.com/tutorial/c-tutorial.html (found this on google a few years ago, haven't used it extensively, but have checked it out somewhat in depth over time)

https://www.tutorialspoint.com/compile_c_online.php (have used this a few times, it provides an online Linux compilation environment, not as useful as having your own system to work with, but can do most of what you need in this class)

https://en.wikibooks.org/wiki/Algorithm_Implementation/ (I've used this for sample class code a few times, as well as a refresher for things I don't recall how they worked exactly off the top of my head

If you use Visual studio for homework follow these steps to set up your project.

Instructions for Microsoft Visual Studio 2015 C++ Compiler

To create a C Project in Visual Studio 2015:

Open Visual Studio
Select File->New->Project
Select Other Languages->Visual C++->Empty Project
Give the project a name and a place to save the project
Right click “Source Files”
Select Add->New Item...
Select “C++ File (.cpp)”
Give the file a name, but rename the extension to .c instead of .cpp
Select Project->_Project_Name_ Properties.
Select Configuration Properties->C/C++->All Options
Change the dropdown on “Compile As” to say “Compile as C Code (/TC)”
You now have a C project.
If you are using certain functions (such as the base scanf function) you may need to tell visual studio to allow that function.
To do this go back to the project properties.
Select Configuration Properties->C/C++->Preproccessor
Select the text field next to “Preprocessor Definitions”
Add “_CRT_SECURE_NO_WARNINGS;” (minus the quotes) to the beginning of that line.