Fall 2009

CEG 221-01: Introduction to C Programming for Engineers

Jay DeJongh
Wright State University - Main Campus, jay.dejongh@wright.edu

Syllabus
CEG 221 Introduction to C Programming for Engineers
Section 01 – Fall 2009

T Th 4:10 p.m. – 5:50 p.m. in Russ Engineering Center Room 355

Description: This course introduces advanced constructs, algorithms, and data structures in the C programming language. Emphasis is on problem solving and techniques useful to engineers. Topics include functions, array, pointers, structures as well as sorting algorithms, linked lists, complex numbers, and numerical methods applications. 4 credit hours. Prerequisite: CEG220 (Introduction to C Programming for Engineers).

Instructor: Dr Jay DeJongh, 341 RC, 775-2555. E-mail: jay.dejongh@wright.edu Office hours: 2:00-3:30 M, 2:00-3:30 T, 2:00-3:30 TH. Other hours by appointment; all you have to do is talk to me and we will find a time to meet.

Textbooks:

C: The Complete Reference, Fourth Edition, Herbert Schildt, Osborne/McGraw-Hill, 2000.

Software: Dev-C++ Version 4.9.9.2 for Windows. Free download from http://www.bloodshed.net.

Grading: Two Exams: 20%. One Final: 30%. Five Projects: 50%. Course Exams and the Final Exam will be closed book, closed notes. A one page, 8.5 x 11 help sheet will be allowed. Quizzes may, but not necessarily, be given. If given, they may be either an in-class written exam, an in-office oral exam, or a take-home. Quiz points will be included as part of the exams grade.

Grading scale: **A:** 100-90, **B:** less than 90-80, **C:** less than 80-70, **D:** less than 70-60, **F:** less than 60-0.

Policy:

Quizzes may be announced or unannounced and may be given at the beginning or at the end of the class. Projects are due at the time and date specified on WebCT. There will be no credit for late project submittals. No late exams or quizzes unless there is a verifiable emergency. Exceptions to the late policy may be made unusual circumstances. All work must be your own; sharing of program code will result in a grade of "zero" for all involved. Sharing ideas, general programming concepts, and general computer skills with others outside of class is encouraged. Students are expected to read and follow the Academic Integrity Policy:

http://www.wright.edu/students/judicial/integrity.html

WebCT:

Grades will be posted, programs will be submitted, and any handouts will be distributed through WebCT. Students should become familiar with WebCT (campus login username and password required) and should read the instructions on the entry page at:

http://wisdom.wright.edu

Schedule

Week	Topic	Reading	Exams	
1	Review of C: Selection, Control Structures, File Operations, Math and Character Functions	Ch 1-3, 8-9, 13-15		
2	Arrays, Strings, Arrays and Functions, Pointers, Searching and Sorting	Ch 4, 6, 21		
3	Typedef, Enum, Structures, Unions, Pointers to Structures	Ch 5, Ch 7		
4	Pointer Applications Exam 1	Ch 5	Exam 1, Thursday	
5	Structures, Dynamic Memory, Dynamic Data Structures	Ch 7, 17, 22 (pg 521-541)		
6	Linked Lists, Recursion,	Ch 6 (pg 164-166)		
7	Complex Numbers, Bitwise Operations	Ch 20 (pg 484-487) Ch 1 (pg 48)		
8	Binary File I/O	Ch 9	Exam 2 Thursday	
9	Binary Files, Pointer to Functions Applications: Numerical Methods			
10	Applications: Numerical Methods, Review			
Final	Tuesday, Nov 17, 5:45-7:45pm			

Project Schedule

All projects are due when noted. There will be no late submittals.

Project	Assigned Sat, 8 am	Due Friday 11:55 pm
1	Mon Sep 7	Sep 18
2	Sep 19	Oct 2
3	Oct 3	Oct 16
4	Oct 17	Oct 30
5	Oct 31	Nov 13