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Spring 2010

CEG 221-01: Introduction to C Programming for Engineers

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Syllabus
CEG 221 Introduction to C Programming for Engineers
Section 01 – Spring 2010

T Th 4:10 p.m. – 5:50 p.m. in Russ Engineering Center Room 346

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, arrays, pointers, and 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: 2:00-4:00 M, W, 11:00-12:00 T, 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: 20%. Eight labs/quizzes 15%. Five Projects: 45%. Course Exams and the Final Exam will be closed book, closed notes. A one page, 8.5 x 11 help sheet will be allowed. The lab/quizzes will be in-class, weekly, usually but not absolutely on Thursdays. The lowest lab/quiz grade will be dropped.

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:

The labs/quizzes will be done in class and turned in by 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 lab/quizzes unless there is a verifiable emergency. Exceptions to the late policy may be made only under the most 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 basics/techniques, Header Files, typedef, Math Functions, 2D, 3D Arrays, Advanced Pointers	Ch 4, 5		
2	Structures, Structures and Functions Pointers to Structures, Structures and Arrays	Ch 7		
3	Structures, Searching, Sorting	Ch 7, Ch 21		
4	Dynamic Memory Exam 1	Ch 5, Ch 17	Exam 1, Thursday	
5	Dynamic Data Structures, Linked Lists, Recursion	Ch 6, 7, 17, 22 (pg 521-541)		
6	Binary File I/O	Ch 9		
7	Binary File I/O Bitwise Operations	Ch 9 Ch 1 (pg 48)		
8	Complex Numbers Exam 2	Ch 20 (pg 484 – 487)	Exam 2 Thursday	
9	Applications: Numerical Methods Pointers to Functions, zeros of functions			
10	Applications: Numerical Methods, Review			
Final Exam	Tuesday, June 8, 5:45 - 7:45pm			

Project Schedule

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

Project	Assigned Sun, 8 am	Due Saturday 11:55 pm
1	Mar 29	Apr 10
2	Apr 11	Apr 24
3	Apr 25	May 8
4	May 9	May 22
5	May 23	Jun 5