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Summer 2010

CEG 220-01: Introduction to C Programming for Engineers - I

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CEG 220 Introduction to C Programming for Engineers – I Summer 2010

Lecture Section 1 Tu & Th 6:05 – 7:20 p.m., RC 148 (only section)
Lab Section 5 Tu 7:40 – 9:20 p.m., RC 154A (only section)
Last Update: June 15, 2010

Description:

This course provides a general introduction to computers as a problem-solving tool using the C programming language. Emphasis is on algorithms and techniques useful to engineers. Topics include data representation, debugging, and program verification. Some programming assignments may involve complex arithmetic and trigonometric and exponential functions. 4 credit hours. The course includes a scheduled laboratory section for which you must register.

Prerequisites:

MTH 229 (Calculus I) or EGR 101 (Engineering Mathematics). Some prior experience with computing or a programming language is helpful but not required.

Instructor:

Dr. Ronald F. Taylor, RC 340, 775-5122, ronald.taylor@wright.edu
Office hours: 3:00 – 5:00 p.m. Tuesday and Thursday. By appointment also.

Teaching Assistant:

Mr. Tao Zhang, Joshi Center Room 484, 775-5156, zhang.66@wright.edu
Office hours: 3:00 – 5:00 p.m. Monday and Wednesday. By appointment also.

Textbook:

C Programming: A Modern Approach, 2nd Edition, K. N. King, W. W. Norton and Company, 2008,
ISBN 978-0-393-97950-3. (Required)

C Programming for Scientists and Engineers with Applications, R. N. Reddy and C. A. Ziegler, Jones and Barlett Publishers, 2010, ISBN13 978-0-7637-3952-2. (Recommended)

Software:

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

Grading:

Three Exams @ 15 % each: 45 % (no comprehensive final during summer term). Maximum of ten Lab assignments: 25% . Maximum of five Projects : 30%. Closed book, closed notes Exams.

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:

You are expected to attend all lectures and lab sessions. Attendance will be taken at all lab sessions, but attendance is not part of the above grading formula. Lab assignments and Projects are due at the time and date

specified on the documents. No late exams unless verifiable emergency. Grade on late Labs or Projects will be reduced by 10%. Submittals more than 24 hours late will not be graded - "zero" grade assigned. 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 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 and programs and related documents will be submitted 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:

Topics may vary. Exam dates and times are firm. More specific and detailed reading assignments may be discussed each week in lecture. The Table below reading assignments are from the Required text.

Week 1	Intro, C Fundamentals, IDE, Constants, Variables, Data Types, Input/Output	Chap 1 - 3 Chap 7.1-7.5	Project 1 Assigned	Lab 1 Due
Week 2	Input/Output, Operators, Expressions, Math functions, Character Functions, Math Expressions	Chap 4 Chap 23.3, 23.5	Project 1 Due	Lab 2 Due
Week 3	Problem Solving, Selection Statements	Chap 5	Project 2 Assigned	Lab 3 Due
Week 4	Loops Exam 1 Thurs	Chap 6	Project 2 Due	Lab 4 Due
Week 5	Loops, File Ops, Advanced Input/Output Arrays	Chap 6, Chap 22	Project 3 Assigned	Lab 5 Due
Week 6	Arrays, Functions Program Organization	Chap 8, Chap 9, Chap 10	Project 3 Due	Lab 6 Due
Week 7	Functions Strings, Arrays and Strings	Chap 9 Chap 13, Chap 23.6,	Project 3 Due	Lab 7 Due
Week 8	Arrays and Strings Exam 2 Thurs	Chap 13	Project 4 Assigned	Lab 8 Due
Week 9	Pointers Pointers and Arrays	Chap 11 Chap 12	Project 5 Assigned	Lab 9 Due
Week 10	Pointers and Arrays Review Exam 3 Thurs	Chap 12	Project 5 Due	Lab 10 Due