Fall 2004

CEG 220: Introduction to C Programming for Engineers I

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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. Prerequisite: MTH 229 (Calculus I).

Instructor: Dr. Ronald F. Taylor, RC 356, 775-5122, rtaylor@cs.wright.edu  Hours: 10:00 - 11:00 a.m. and 2:00 - 3:00 p.m. on Tue and Thu. Also by appointment.


Software: Visual C++ 6, Microsoft Corp. Students are not required to purchase software as it is available in on-campus computer labs. Programs can be created with any text editor since the source files are simple ASCII files. Other C compilers may be used but the files submitted as Projects must be compatible with Visual C++ 6. Check at the main desk of Dunbar Library about the availability of Microsoft Visual Studio. You only need to load the Visual C++6 software components from the Visual Studio.

Grading: Two Exams @ 20% each: 40%. One Comprehensive Final: 25%. Six Projects: 35%. Closed book, closed notes Exams and Final. Quizzes may also be given in class or as take-home. Quiz points will be included as part of the 40% 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: Projects are due at the start of class on due date specified. No late exams unless verifiable emergency. Grade on late Projects will be reduced by 20%. Submittals more than one day 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 University Academic Integrity Policy:

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

Course Home Page: The course web site will be available by the beginning of the second week of class.

http://www.cs.wright.edu/people/faculty/rtaylor/ceg220

Schedule: Topics and project dates may vary. Exam dates are firm. Sept. 27 - last drop date without grade; Oct 25 - last drop date "W" grade; no class Nov 11 - holiday.
Syllabus

CEG 220 Introduction to C Programming for Engineers
Section 2 - Fall 2004

MW 6:05 – 7:20 p.m. in Russ Engineering Center Room RC148

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. 4 credit hours. Prerequisite: MTH 229 (Calculus I).

Instructor: Robert Helt, Russ Engineering Center Room RC160 (Student Lounge Area) E-mail: rhelt@cs.wright.edu Hours: 4:30 to 6:00 p.m. MW or immediately following class. Other hours arranged by appointment through email requests.

Textbooks:

Software: Visual C++ 6, Microsoft Corp. Available in on-campus computer labs (Russ Engineering Center RC152C). Students may checkout software media from the Dunbar Library for installation of Visual C++ on a home PC after signing a licensing agreement. Alternate C compiler is UNIX GNU C compiler. Other C compilers must be approved by the instructor.

Grading:
- Programming Projects: Programming projects are assigned on Monday. Each project is due the following Monday, one week from when it was assigned. Each programming assignment is worth 10 points. Programming assignments will be graded as Satisfactory or Unsatisfactory! For a project to be satisfactory, 1) the source code file must contain the required header information, 2) the source code must meet style and documentation guidelines, 3) the program must compile and run without warnings or errors, 4) and the program achieves all the objectives of the project. If a project is graded as satisfactory, seven to ten points will be awarded, depending on how well the project is planned and implemented and conforms to the four standards cited above. Each time a programming project is turned in and is graded as unsatisfactory, one point will be lost. Unsatisfactory projects must be resubmitted not later than midnight two days after it is returned. If any portion of the assignment is turned in late, one point will be lost for each day it is late. Any unsatisfactory assignment that is finally graded satisfactory will not be worth less than 6 points. The programming projects will comprise 25% of the grade. All six projects must be completed with a grade of Satisfactory to pass the course!
- Examinations: There will be two 45-Minute Exams that will comprise 40% of the final grade. There will be one Comprehensive Final Exam worth 35% of the final grade. All exams will be closed book, closed notes, no electronic devices in view.
- Grades: A: 100-90, B: 89-80, C: 79-70, D: 69-60, F: 59-0 or all programming projects not completed with a grade of Satisfactory.
Policy: All programming projects will be turned in electronically by email and are due before midnight on the dates specified. See the CEG220 Home Page for detailed requirements and instructions for turning in programming projects. No make-up exams will be given unless a serious illness or a bonified emergency can be verified. Exceptions to the policy for turning in work late and giving make-up exams may be made in unusual circumstances when the student provides documentation in writing from an appropriate source. **All work must be your own; copying or sharing program code will constitute a breach of academic integrity and could result in failure of the course for all individuals involved.** Sharing programming ideas and general computer skills with others outside of class is encouraged, especially through the CEG220 News Group @ "wright.ceg.220".

CEG220 Section 2 Home Page:  http://www.cs.wright.edu/~rhelt/ceg220/ceg220.html

Schedule: Topics and lecture dates may vary. Programming project due dates and exam dates are firm.

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<th>Week</th>
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<td>1</td>
<td>Introduction to Computers and Engineering Problem Solving</td>
<td>All Chapter 1</td>
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<td>Simple C Programs</td>
<td>All Chapter 2</td>
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<td>3</td>
<td>Control Structures and Data Files - Start Chapter 3</td>
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<td>4</td>
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<td>Arrays, Matrices, and Strings</td>
<td>Conclude Chapter 5 - Programming Project No. 4 due on 18 October - Exam No. 2 on 20 October</td>
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<td>Structures</td>
<td>Conclude Chapter 7 and Course Review - Programming Project No. 6 due on 8 November</td>
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<td>Final Exam on 17 November, 8:00 p.m. – 10:00 p.m., Russ Engineering Center Room RC148</td>
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