2011-2012 Semester 2

COMP10060: Computer Science for Engineers 1

First Year Engineering

Prof. John Murphy

http://www.csi.ucd.ie/Staff/jmurphy/fecs/default.htm

Contact details

j.murphy@ucd.ie (preferred), office B2.22, tel. 716 2928

Aim of this course

"This course provides students with an introduction to computer programming. Major topics include algorithm development, programming fundamentals, control flow, and data structures. By the end of the course, students will be able to write simple programs to solve small-scale problems."

The programming language we will study is C. However, the concepts and principles you will learn here are applicable to problem-solving using computers *regardless* of the programming language.

Lectures

2 lectures per week second semester

Tuesday	*12 am,*	*Science Theatre C*
Thursday	*11am,*	*Science Theatre C*

Tutorials

These will be arranged on demand from the class reps.

Practicals

- 2 hours per week all year *(starting in week 2)*
- group assignments – check your timetable
- location – Eng 321, Mon 11-1, Tues 3-5, Wed 11-1, Fri 11-1
- marked on attendance and practical test during the year **(provisionally four tests spread out during the semester)**

Examinations

- 60-minute mid-term test **(provisionally 21st or 23rd Feb 2012)**
- 2-hour exam next Summer

Distribution of Marks

- 20% Practical attendance and practical tests
- 10% Mid-term test
- 70% Final (summer) exam

Textbook

- The course notes are available to you at
  http://www.csi.ucd.ie/Staff/jmurphy/fecs/default.htm

- There are two books that this course is based on:

  - Brian W. Kernighan and Dennis M. Ritchie, **"The C programming language"** 2nd Ed. 1988, Prentice Hall, Englewood Cliffs, N.J., ISBN: 0131103628.
  - Harry H. Cheng, **"C for Engineers and Scientists: An Interpretive Approach"** McGraw-Hill, ISBN: 9780070166790

- There are many other textbooks offering an introduction to C programming, and a list of some recommended ones follows. You should consult any of these if you want more examples and exercises, and/or a different perspective on C.
  - Al Kelley and Ira Pohl, *A book on C. 4th Ed.* 1998, Addison Wesley, ISBN: 0201183994.
  - Fischer, D. Eggert and S. Ross, *Applied C: an introduction and more.* 2001, McGraw-Hill, ISBN: 0071184597.
  - M. Banahan, D. Brady and M. Doran, *The C book: Featuring the ANSI C standard. 2nd Ed.* 1991, London: Addison-Wesley, ISBN: 0201544334.
  - Kenneth Barclay, *ANSI C: Problem Solving and Programming.* 1991, Prentice Hall, ISBN: 0-13-037326-5.
  - L. S. Foster and W. D. Foster, *C By Discovery, 3rd Ed.* 2000, Scott/Jones Inc., ISBN: 1-57676-041-3.
  - P. Kelly, *A guide to C programming, 3rd Ed.* 1999, Dublin: Gill & Macmillan, ISBN: 0717128334.

Other Important Information on the Practicals

Lectures and Tutorials: *no attendance will be taken.*

Practicals: *attendance will be taken*

You must bring your student card and register on the web
https://csimoodle.ucd.ie/moodle/login/index.php

Required key to enrol: ***To Be Advised***

- The Practicals are probably the most important part of the learning experience for this course. Experience shows that you **CANNOT** learn how to program well without spending a lot of time working and practising at the computer.
- The 2-hour Practical sessions are the **absolute minimum** you will need to become a competent programmer. Therefore, during these sessions, you should not waste time with email, surfing the Web, etc.
- Remember that the demonstrators are there to help you.
- Bring your notes with you to your assigned Practical session.