McMaster University
Department of Computing and Software
Dr. W. Kahl

SFWR ENG 2S03 — Principles of Programming

8 September 2006

Outline

It is the student's responsibility to be aware of the information in this course outline!

Instructor: Dr. W. Kahl, Department of Computing and Software, McMaster University, ITB-245
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Office Hour: Wednesday, 12:30-13:20

Calendar Description

> **Fundamental concepts of imperative programming languages; (Assertion, Assignment, Control flow, Iteration, recursion, exceptions); Data representations; Basic concepts of operating systems; Composing and analyzing small programs.**

Goals:

Students who successfully complete this course should be confident in producing good-quality imperative programs in C. They should have a firm understanding of the execution model of imperative programming languages, and of coding-level software engineering practices. They should be familiar with common programming patterns and data structures, and should be **experienced** in the use of these tools for solving programming problems.

These goals all have a ***knowledge and understanding*** component, which contributes to the central ***skills*** aspects of this course. **Knowledge and understanding will be examined predominantly by examining programming-related skills**, including **problem-solving skills**.

Even though software engineers are not expected to be coders throughout their careers, they are still **expected to be good at programming**. For your initial activities in your professional career, programming will most likely be a major component, and the one thing that employers expect you to be really good at. The role of this course in the curriculum is to equip you with those basic skills early on, since they will also be essential for coping with the more advanced courses waiting for you.

Acquiring skills is not a spectator sport.

You will need to be **learning by doing**, and **regularly** spend time on **solving** the assignments and other exercises **yourself.** Properly practiced **pair programming** is strongly recommended **for all programming exercises** to improve your efficiency in tackling programming problems.

Course Pages: http://www.cas.mcmaster.ca/~kahl/SE2S03/2006/

This is where you find further information, especially concerning tutorial organisation. Electronic versions of the assignment sheets will also be kept there.

It is the student's responsibility to be aware of the information in the course web pages, and to check regularly for announcements.

Main Textbook

Harvey M. Deitel, Paul J. Deitel. *C — How to Program.* Prentice Hall. Fourth Edition, 2003. ISBN 0-13-142644-3

Tutorial Exercises

There will be weekly **exercise sheets**. Every student is expected to complete these exercises *before* the corresponding tutorial exercise session. The tutorial exercise sessions are intended for ***discussion*** of ***student solutions***.

At least some of the problems on the exercise sheets tend to be very similar in flavour to questions on midterm and final examinations.

Details of the tutorial organisation will be announced separately.

Grading

All examinations in this course will be **Closed Book**. That is, no written or printed material, nor otherwise recorded media, nor a calculator or other electronic aids may be used during the examinations.

The **final examination** will be scheduled by the Registrar's Office in the usual way. It will be a closed book examination of three hours duration and cover the material of the lectures, tutorials, handouts, and assignments.

In addition, there will be **three midterm tests**; details to be announced.

All grades will be percentage grades.

For every student, the preliminary course grade is calculated as a weighted average of the grade of the final exam and the grades of the three midterm tests. Those midterm test where you have a better mark than on the final will have weight 20% each, and those tests that are not better than the final count 10% each.

Besides the tests and the final exam, there will be one **surprise quiz** counting a **bonus 2%**, i.e., the result will be **added** to the preliminary course grade without any weighting, producing the final course grade.

The course grade will be converted from a percentage grade to a letter grade according to the scale of the Registrar's Office.

The instructor reserves the right to conduct any deferred exams orally.

Academic Integrity

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at http://www.mcmaster.ca/senate/academic/ac_integrity.htm.

The following illustrates only three forms of academic dishonesty:
(1) Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.
(2) Improper collaboration in group work.
(3) Copying or using unauthorised aids in tests and examinations.

Discrimination

The Faculty of Engineering is concerned with ensuring an environment that is free of all adverse discrimination. If there is a problem that cannot be resolved by discussion among the persons concerned, individuals are reminded that they should contact the Department Chair, the Sexual Harassment Office or the Human Rights Consultant, as soon as possible.