SFWR ENG 3BB4 — Software Design III — Concurrent System Design

2007-01-04

Instructor: Dr. Wolfram **Kahl,** Department of Computing and Software, ITB-245
E-Mail: kahl@cas.mcmaster.ca

Calendar Description:

Processes, threads, concurrency; Synchronization mechanisms, resource management and sharing; Objects and concurrency; Design, architecture and testing of concurrent systems.

Course Pages: http://www.cas.mcmaster.ca/~kahl/SE3BB4/2007/

This is where you find further information, especially concerning tutorial organization and software installation. 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:

Neil Matthew, Richard Stones. *Beginning Linux Programming.* Wiley. 3rd Edition, 2004. ISBN: 978-0-7645-4497-2 (888 pages).

For additional reading about Operating Systems, **one** of the following is recommended:

A. Silberschatz, P. B. Galvin, G. Gagne. *Operating Systems Concepts.* John Wiley. Sixth Edition, 2002. ISBN 0-471-41743-2.

A. Silberschatz, P. B. Galvin, G. Gagne. *Applied Operating Systems Concepts.* John Wiley, 2000. ISBN 0-471-36508-4.

Andrew S. Tanenbaum. *Modern Operating Systems.* Prentice Hall. Second Edition, 2001.

Additional reading about Concurrency:

J. Magee, J. Kramer. *Concurrency: State Models & Java Programs.* Wiley, 1999. (both editions could be used).

Additional reading about UNIX systems programming:

Kay Robbins, Steve Robbins. *UNIX Systems Programming: Communication, Concurrency, and Threads.* Prentice Hall, 2003. ISBN 0-13-042411-0 (893 pages).

Tutorials:

Every Friday, 14:30–16:20 there will be tutorial sessions, which occasionally will be used as **technical tutorials,** and otherwise to discuss student work on exercise problems, or to prepare aspects of assignments.

Every student is expected to complete the scheduled work, i.e., exercise problems or necessary reading, *before* the corresponding tutorial session.

Grading:

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

There will be three graded **Assignments**, and several ungraded **exercise sheets**. The contents of the **Assignments** and **Exercises** will **in each examination be covered by questions worth at least 25%.**

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 **two midterm examinations**, details to be announced.

All exam grades will be percentage grades.

For every student, the course grade is calculated as a weighted average:

- 15% of the weight are given to the assignments;
- those midterms that are better than the final count 20% each, and those midterms that are not better than the final count 10% each;
- the remaining weight (between 45% and 65%) is given to the final.

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 Dishonesty

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/univsec/policy/AcademicIntegrity.pdf.

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.