SE 2A04 Fall 2000

00. Course Preliminaries

Instructor: W. M. Farmer

Revised: 8 September 2000

Mission

1. Understand the professional responsibilities of software engineers.
2. Understand the role of precise specifications in software development.
3. Learn how to read and use specifications in program design, implementation, verification, and analysis.
4. Learn the basic principles of software design with emphasis on programs that are sequential, terminating, and composed of modules.

Work Plan

- Lectures (see schedule in course outline)
  - Much of the material is based on the work of D. Parnas
- A lab exercise every two weeks
  - Done in groups of two
  - All programs will be written in C
- 3 midterm tests done in class
- Final exam

Texts

1. **Required**: *The Mythical Man-Month*, Addison-Wesley, 1995.
2. **Required**: M. Mohrenschildt, M. Directo, and K. Kowalski, *Introduction to Software Engineering: A Collection of Formal Software Specifications*, McMaster Custom Courseware, SE 2A04, September 2000.
3. **Optional**: D. Hoffman and P. Strooper, *Software Design, Automated Testing Maintenance*, McMaster Custom Courseware, SE 2A04, September 2000.
4. **Optional**: *Selected Papers by D. Parnas and Others*, McMaster Custom Courseware, SE 2A04, September 2000.

Mechanics

- Course web site:

  `http://www.cas.mcmaster.ca/~wmfarmer/SE-2A04-00`

- Teaching assistants
  - Three graduate students and one undergraduate student to be announced
  - Provide assistance with lab exercises and programming in C
  - Do most of the grading
- Each student is required to keep a log book

Tentative Schedule

00	Preliminaries	8 September
01	Software Engineering	11,13 September
02	Software Fundamentals	15,18 September
03	Software Development	20,22 September
04	Design Techniques	25,27,29 September
	Midterm 1 on sections 01-04	2 October
05	Software Structure	4,6 October
06	Specification	9,13,16,18 October

Tentative Schedule (cont.)

07	Verification and Analysis	20,23,25,27 October
	Midterm 2 on sections 05-07	30 October
08	Modules	1,3,6,8,10,13 November
09	Software Design Products	15,17,20,22 November
	Midterm 3 on sections 08-09	27 November
10	Project Management	24,29 November, 1 December
	Review	4 December
	Final exam on sections 01-10	

Policy Statements

1. Significant study and reading outside of class is required.
2. Regular class attendance is required.
3. The student is expected to ask questions during class.
4. The student is welcome to discuss lab exercises with other students, but all such interactions must be recorded in the student's log book. Lab exercises must be the student's own work.
5. A student may use his or her texts and notes during the midterm tests and final exam.
6. Lab exercises may not be turned in late and midterm tests may not be taken later without **prior** approval from the instructor.

Policy Statements (cont.)

7. The instructor reserves the right to require a deferred final exam to be oral.

8. Calculators are not needed for this course, and their use will not be permitted during the midterms and final.

9. "If there is a problem [with discrimination], that cannot be resolved by discussion among the persons concerned, individuals are reminded that they should contact their Department Chair as soon as possible."

10. "Students are reminded that they should read and comply with the Statement on Academic Ethics and the Senate Resolutions on Academic Dishonesty as found in the Senate Policy Statements distributed at registration and available in the Senate Office."

11. Suggestions on how to improve the course and the instructor's teaching methods are always welcomed.

Grading

Lab exercises	15%
Midterm tests (15% each)	45%
Final exam	40%
Total	**100%**

- **A student who fails the final exam automatically fails the course.**
- A student's final score will be reduced one half point for each missed class (there is no penalty for the first three missed classes).
- The instructor reserves the right to adjust the grades for a lab exercise, midterm test, or final exam by increasing or decreasing every score by a fixed number of points.

Lab Accounts

- Each student has CAS Unix and NT accounts
  - Account name: your McMaster e-mail name
  - Password: your student number
  - Change your password for both your accounts
- Labs: ABB 273, ABB 274, GS 324
  - Open: 7:00 a.m. to 12:00 midnight
  - Need magnetic key for entry (get one at JHE 201)
- Printing: Get a CAS resource cookie from Derek Lipiec or Chris Bryce in GS 324A

Off-campus Access

- Machines with off-campus access: mills, moore, ritchie
- Use ssh (Secure Shell) to log into these machines from off-campus
  - Available for Windows, Linux, etc. at `www.ssh.com`
- To access off-campus Web sites from on campus, set autoproxy for Netscape to `cas.proxy:8080`