

ENGR. 9859 - Computer Engineering Fundamentals

Part II — Computer Architecture

Course Information Sheet

Memorial University of Newfoundland

Fall, 2007

Instructor Dennis Peters, dpeters@engr.mun.ca, EN-3061, 737-8929.

Lectures Monday, Wednesday, Friday 0900–0950 in EN4033.

Tutorial Tuesday 1400–1450 in EN4033.

Office hour Monday, Wednesday 1500–1600, or by appointment.

Web page <http://www.engr.mun.ca/~dpeters/9859/>
—check here for useful information.

TAs Wang Pu and Xiangwen Li

Outline

The objective of this course is to review computer organization and to introduce basic concepts and issues in computer architecture.

- Review of microprocessors and computer organization.
- Fundamentals of computer design: performance metrics and cost.
- Instruction set principles. Example: MIPS.
- Memory hierarchy design: cache, main memory and virtual memory.

Evaluation Scheme & Approximate Dates

Assignments	40%	Oct. 12, Oct. 19, Oct. 26
Final exam	60%	Oct. 31

Textbook

- [1] John L. Hennessy and David A. Patterson. *Computer Architecture: A Quantitative Approach*. Morgan Kaufmann, third edition, 2003.

References

- [1] Nick Carter. *Schaum's Outline of Computer Architecture*. McGraw-Hill, 2002.
- [2] John L. Hennessy and David A. Patterson. *Computer Organization and Design: The Hardware/Software Interface*. Morgan Kaufmann, second edition, 1998.
- [3] W. Stallings. *Computer Organization and Architecture: Designing for Performance*. Prentice-Hall, seventh edition, 2006.
- [4] Andrew S. Tanenbaum. *Structured Computer Organization*. Prentice Hall, fifth edition, 2006.

Other Info.

- Assignments are due by 8:55 am on the due date. Late assignments will not be accepted without prior arrangement or documented justification.
- Any complaints about marks, addition, recording etc., or special circumstances (e.g., illness, bereavement) must be brought to my attention before the final exam. No reconsideration of marks other than the final exam will be made after the exam has been written.
- Academic dishonesty will, as a minimum result in a grade of zero for the offending work, and may be reported to the Dean for treatment through the prescribed formal process. Academic dishonesty includes copying, allowing your work to be copied, and failing to cite sources.
- Asking questions is strongly encouraged.
- Comments, suggestions and constructive criticisms are always welcome.