

SFWR ENG 2GA3

Computer Architecture

Jan 2026

Course Outline

Instructor: Dr. Ryan Leduc

Department of Computing and Software
McMaster University

Course Outline

INSTRUCTOR:

Dr. Ryan Leduc

Office: ITB/247, Ext. 27962, E-mail: leduc@mcmaster.ca

Web: <http://www.cas.mcmaster.ca/~leduc/>

Office Hours: Fridays 15:30-16:20.

LECTURES:

- ▶ Location: BSB B135.
- ▶ Time: Tuesday, Thursday, Friday: 14:30-15:20.

Note: Announcements will be posted to the course's Avenue to Learn page. It's your responsibility to check the page regularly.

MIDTERM: TBA.

TUTORIALS: Start of first tutorial is TBA. Location/dates and times will be as scheduled.

OVERVIEW:

TEACHING ASSISTANTS: See Avenue to Learn page for details.

CALENDAR DESCRIPTION:

Instruction-set architecture, computer arithmetic, datapath and control, pipelining, memory hierarchies, I/O systems, multiprocessor systems, measures of performance. Introduction to assembly programming.

GRADING SCHEME and REFERENCES:

- ▶ Assignments 15%
- ▶ Midterm 35%
- ▶ Final Exam 50%

(All work on assignments is to be done individually.)

TEXT:

1. David A. Patterson, and John L. Hennessy, *Computer Organization and Design: The Hardware Software Interface: ARM Edition*, Morgan Kaufmann, 2016. Cost is \$130.53 at Amazon.ca (\$116.70 sale as of Jan 5, 2026) for paperback. Website shop.elsevier.com ebook copy for \$52.49 USD (sale as of Jan 5, 2026).

ACADEMIC DISHONESTY:

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour 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 types of academic dishonesty please refer to the Academic Integrity Policy (<https://secretariat.mcmaster.ca/app/uploads/Academic-Integrity-Policy-1-1.pdf>), located at <https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/>

ACADEMIC DISHONESTY II:

The following illustrates only a few forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not ones own or for which other credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations.
4. Giving a copy of old assignments, midterms, or solutions to other students.
5. Allowing another student to look at or copy your assignment.
6. Using assignment solutions from previous years, other courses, from the internet or the textbook solution manual.
7. Using midterm or exam solutions from previous years that are not given to you by the current instructor.
8. Discussing specifics of how to solve an assignment question with people other than the instructor or the TAs.

Additional Topics:

Please see full course outline posted to course's Avenue page for additional details.