



Part-Time Studies

COMP 2825

Computer Architecture

Instructor: Sean Nelson

What are we going to learn?

We're going to learn how computers work at different levels:

- The **device level** – how electrical circuits switch on and off and how these switches can be used to build functional units like adders and memories
- The **microarchitecture level** – how these functional units can be combined to build a system which can execute program instructions stored in memory.
- The **Instruction Set Architecture (ISA) level** – what binary instructions the computer actually uses as it executes your program

...and using this knowledge we'll see what you can do to make your programs run well in modern computer architectures.

In other words, everything about how computers actually work that they don't tell you in programming school!

- Note that we won't be covering the **operating system level**, because it's covered in other courses.

Prerequisites

Official course prerequisites are:

COMP 1409 – Introduction to Object Oriented Programming

COMP 1451 – Understanding Programming

Most importantly, it's very useful to have programming experience, the more the better!

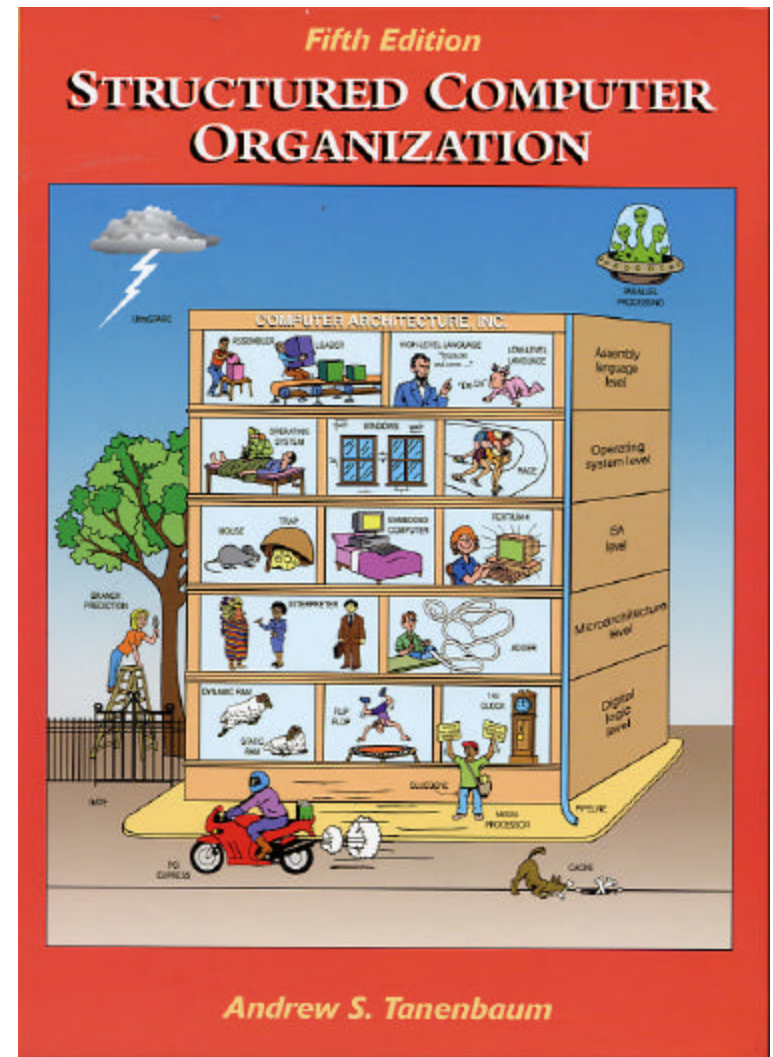
Textbook

The course text is:

Structured Computer Organization

Andrew S. Tanenbaum

Fifth Edition



Course Format

- 12 weeks, Wednesday evenings each week
- 3.5 hours per evening, total of 42 lecture hours
- Additional 6 hours of self-study material using WebCT
- The 48 hours makes this a 4.0 credit course.
- Normal course hours are 6:30 PM to 10:00 PM
- Course Plan shows the material we'll cover each week
- No labs, but we will be taking time to go through exercises
- Some evenings will start with a quiz (total of 6 quizzes)
- Marks breakdown:
 - 20% six quizzes
 - 20% two assignments
 - 30% mid-term exam
 - 30% final exam (will mainly cover 2nd half of course)

Accessing WebCT Material

- You can access the WebCT (Web Computerized Training) material on campus or from home using the myBCIT web site:

my.bcit.ca

- Log in using your BCIT Student ID (A00nnnnnnn) and password (the default password is the same as your Student ID).
- Select the “My Courses” tab and click on the link for this course (COMP 2825).
- An alternate URL for direct access to WebCT (without going through the myBCIT web site) is:

elearn.bcit.ca

- WebCT Help, FAQ info, and guides are available at:

[www.bcit.ca/distance/webcthelp/
studenthelp@bcit.ca](http://www.bcit.ca/distance/webcthelp/studenthelp@bcit.ca)
[604-451-7157](tel:604-451-7157)

Using WebCT

- **Note that the WebCT server may be down 1-3PM Wednesdays.**
- **The Course Plan indicates when you need to go through each WebCT learning module. It's recommended that you go through the modules during the week indicated.**
- **In-class quizzes and exams will include material from the WebCT modules, so it's important to do no later than indicated in the Course Plan.**
- **Each module ends with an “assessment” of up to 10 questions. The assessments are not counted toward your course mark and are there for review only.**
- **It's a good idea to take the assessments right after you go through the material. You can go through the assessments again at any time (prior to the mid-term and final exams, for example).**
- **Although this is self-study material, you should still feel free to ask questions via the WebCT discussion area or e-mail.**

E-Mail

- You can reach the instructor at:

sean.2005@shaw.ca

- The only way to reach you is through your WebCT mailbox.

If you don't monitor your WebCT mailbox, then please configure your WebCT profile to forward e-mail to a mailbox you monitor.

This is the only way to reach you if there's an unexpected schedule change.

Exam and Quiz Guidelines

- Exams and quizzes are all closed book.
- WebCT material will be included in these exams and quizzes.
- Calculators are permitted, but they must be numeric-only (no alphanumeric devices, including cell phones, permitted).
- Exams and quizzes normally start at the beginning of the evening, so it's important to be on time.
- There are review questions and solutions for each lesson in the SHAREOUT folder. It's a very good idea to do these as if they were a quiz to preparation for the actual quizzes and exams.

Course Materials

- **Course materials are located in the “SHAREOUT” folder**
- **Includes copies of:**
 - **Course outline and plan**
 - **Presentation material**
 - **Assignments**
 - **Exercises and solutions**
 - **Review material and solutions**
- **On BCIT computers, you can access the material in this directory:**
J: \ COMP \ 2825
- **From home, you can access the material via FTP at this URL:**
[ftp: // share.bcit.ca / Out / COMP / 2825](ftp://share.bcit.ca/Out/COMP/2825)

Bookstore

