

Syllabus for COMP251, Computer Organization and Architecture

Fall 2012
Dickinson College
Instructor: John MacCormick

Goals

- Gain an understanding of the aspects of computer hardware that are most important for effective **computer programming**
- Gain an understanding of the aspects of computer hardware needed for studying computer **networks** and **operating systems**
- Achieve a high level of **technical writing skills**
- **Have fun** writing computer programs and playing with some cool simulation tools

Teaching methods

- **readings** from the textbook and answers to review questions on that reading before the material is covered in class
- **lectures** and class **discussions** covering the content of each reading assignment
- in-class **activities** and **experiments** in the majority of class sessions
- three **writing projects** to work on technical writing skills, including peer-review

When and where

- Classes: Monday and Thursday 1:30-2:45pm, Tome 231
- Office hours: please see the instructor's webpage

Book

- Linda Null and Julia Lobur. The Essentials of Computer Organization And Architecture (Second or Third Edition). Jones & Bartlett, 2006 or 2011.

Assessment and grading

- Final grade will comprise:

final cumulative exam	25%
in-class exams (2 x 10% each)	20%
homework exercises	25%
writing projects (3 x 10% each)	30%

- All exams will be open note. You may use any printed, written or electronic materials you wish during the exams, unless otherwise specified.

- **In-class exams:** There will be 2 in-class exams on 10/11 and 11/15. Each will be 75 minutes in length, and will cover material from the preceding lectures (see the course schedule for details).
- **Final exam:** There will be a final exam at 2 p.m. on December 13. It will be three hours in length, and will cover the entire course.
- **Reading assignments:**
 - Most classes have an associated reading assignment that must be completed before the start of class.
 - Each reading assignment consists of one or more sections from the textbook, with details given on the course schedule.
 - To complete a reading assignment, you must read the assigned material, and have a moderate understanding of the major concepts (without necessarily grasping all details).
- **Review exercises:**
 - Associated with each reading assignment is a set of “review exercises”, listed on the class schedule. These review exercises are a subset of the textbook's “review of essential terms and concepts” which appears at the end of each chapter.
 - Some classes will begin with a discussion of the review exercises; students should be prepared to contribute to this discussion.
 - Review exercises will not be graded.
- **Homework assignments:**
 - There will be five homework assignments due at the start of class on 9/6, 9/27, ~~10/4~~ **10/22 [changed 10/3]**, 11/8, and 12/3 respectively. The class schedule details homework exercises associated with each class. These homework exercises are drawn from the “exercises” section at the end of each chapter of the textbook.
 - Each homework assignment consists of the exercises assigned for all classes preceding the due date of the assignment (excluding exercises from earlier homework assignments, of course).
 - Homework solutions may be handwritten, but the instructor may insist on typewritten solutions from students whose work is difficult to read.
 - Most, but not necessarily all, homework exercises will be graded.
- **Writing projects:**
 - There will be three writing projects due at the start of class on 9/20, 10/4, and 11/1 respectively.
 - Writing projects will be 3–5 pages in length.
 - As COMP251 partially fulfills the Dickinson College writing requirement, these projects will focus on the ability to clearly and effectively communicate technical information. Further details will be provided when the projects are assigned.
 - Projects will also include a practical programming or computer architecture component, but grading will focus primarily on writing skills.

Amount of work

You should expect to spend 7-9 hours per week (outside of class time) on reading, homework assignments and projects.

Plagiarism, copying, and collaborating

The College's standard policy on plagiarism applies and you should be familiar with it, but here are some key points that apply particularly to this course:

- All work must be your own.
- Never copy work from someone else or allow your own work to be copied.
- If you use exact words taken from the textbook or any other source, you must use quotation marks and cite the source.
- You may not copy or consult assignment solutions from any source, including online repositories or solutions provided for previous instances of the course.
- Students are encouraged to help each other understand concepts, including concepts that apply to homework exercises. However, all work must still be your own. So if you discuss a homework exercise with someone, you must destroy any written or electronic material that results from the discussion, and re-create it later on your own.
- Be especially careful not to copy computer code from another student or from any other source, including the Internet. Copying computer code is easy and often tempting, but it is not permitted and will suffer the same penalties as any other form of cheating.

Accommodations

The instructor will follow college policy on accommodations for students who need them.

Late Work Policy

Each student is permitted a total of four no-penalty days of lateness over the entire semester; every subsequent day of lateness incurs a 25% penalty for the late assignment. Late days can be used only in whole day units. To use one or more late days on a given assignment, state clearly at the start of your submission how many days you are using, and the total used so far in the semester.