

# CSC406 Computer Systems I

## Syllabus for Winter 2016

Professor: Corin Pitcher

2 Jan 2016

### Overview

A course on computer systems topics, focusing on machine-level programming and architecture and their relevance for application programming. Information representations, assembly language, C programming, and debuggers, processor architecture.

### Instructor Information

- **Instructor** Dr. Corin Pitcher
- **Loop Office** 835, CDM Building, 243 S. Wabash Avenue
- **Email** [cpitcher@cs.depaul.edu](mailto:cpitcher@cs.depaul.edu)
- **Tel** +1 312 362 5248
- **Instructor's Homepage**  
<http://fpl.cs.depaul.edu/cpitcher/>
- **Course's Homepage**  
<http://fpl.cs.depaul.edu/cpitcher/courses/csc406/>  
(for lectures slides, assignments, reading schedules, examples)
- **LMS Homepage**  
<http://d2l.depaul.edu>  
(for grades and video recordings)
- **Office Hours** : <http://www.cdm.depaul.edu/about/Pages/People/facultyinfo.aspx?fid=104>

## Technology Requirements

The assignments in this course will be performed on a Linux server hosted within CDM, for which all students will be issued accounts. You will become familiar with a number of Linux-based tools including emacs (text editor), bash (command shell), gdb (debugger) and gcc (compiler).

You will need:

1. An SSH (Secure Shell) client to complete exercises in class. There are free SSH clients available for Linux, OS X, Android, and Windows.

## Prerequisites

If you are not sure that you have satisfied the prerequisites, speak to the instructor before the second lecture.

## Prerequisite Courses

- **Introduction to Programming** (CSC401)
- Recommended that you complete before this course: **Discrete Structures for Computer Science** (CSC400)

## Textbooks

There are two required textbooks:

- *Computer Systems: A Programmer's Perspective (3rd Edition)*  
**NOTE: 3rd edition!**  
by Randal E. Bryant and David R. O'Hallaron.  
2015. ISBN-13: 978-0134092669.  
Referred to as CS:APP3e.  
<http://csapp.cs.cmu.edu/>
- *The C Programming Language*  
2nd edition  
by Kernighan & Ritchie.  
1988. ISBN-13: 978-0131103627.  
Referred to as K&R.

The course website has links to other documentation and resources that will be used.

## Assessment

The course grade will be based on:

Item	Weight
Homework assignments	30%
Quizzes	30%
Worksheets	10%
Final Exam	40%

The grade boundaries used for the class are (standard Letter boundaries on D2L):

Letter Grade	Percentage $\geq$
F	0%
D	61%
D+	65%
C-	69%
C	73%
C+	77%
B-	81%
B	85%
B+	88%
A-	91%
A	95%

- Worksheets provide guided instruction through simple problems, and should be completed before homework assignments and quizzes. Worksheet completion is self-reported, but may be audited by asking for a demonstration of the completed source code / work.
- The final exam is comprehensive, i.e., requires knowledge of the material covered in the entire course.
- You must pass the final exam (grade D or better) to pass the course.
- To provide the same testing environment for in-class and Online Learning students, the instructor will not answer questions during the exams.

## Expectations

1. The course requires that students actively engage the material on your own. Students should not only read the notes and example programs,

but also experiment with their own variations of those programs. As always, figure out what you can definitely code, code it, try it, and then consider extending the boundaries.

2. Students must keep up with the assigned textbook reading.
3. Students are strongly encouraged to ask questions and offer comments relevant to the day's topic.
4. All electronic interactions are an extension of the classroom and should be treated as such. While disagreement can be part of the discourse, online communication should remain respectful and appropriate rather than demeaning and/or unprofessional.
5. Classroom use of a laptop or tablet must normally be restricted to class-related tasks such as note taking, checking references, testing code examples, etc.

## **Advice**

To succeed in the class you must engage the material actively. You will need to master new tools and new languages.

My advice:

1. start early,
2. be methodical,
3. be proactive in finding solutions, and
4. ask questions about issues you cannot quickly resolve on your own.

Time is of the essence! You need to work early and ask questions early. If you delay, you will be lost in an incomprehensible morass!

## **Policies I**

### **Changes to Syllabus**

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L, and sent via email.

## Attendance

1. Students are expected to either attend class or watch the online recording within 72 hours of its publication online.
2. Students are expected to subscribe to the class forum on Piazza, and read emails in a timely fashion.
3. The final exam date is posted on the schedule on the <http://fpl.cs.depaul.edu/cpitcher/courses/csc406/>. You must attend the final exam. A medical note will be required for an absence. Business trips or vacations are not valid reasons for missing the exam.
4. **Lecture slides are a supplement to lectures only.** The slides are not intended to be read in lieu of listening to the lecture.

## Homework

1. Students must keep backup copies of all submitted homework.
2. Homework submissions must be turned in by the due dates posted on the course homepage. **Late submissions are not accepted.**
3. Homework submissions must be submitted using the method described in the homework assignment. **Email submissions will not be accepted at all.**
4. Submitted work must be worked on individually. You must not use or look at anyone else's solution, and you must clearly acknowledge any code that you obtain from other sources (such as books, magazines, or the Internet). If you are in any doubt, contact the instructor well before the submission date for advice. You may use as much code as you like (without acknowledgement) from the examples discussed in class or given in the textbook / companion source code. Plagiarism will result in penalties up to and including failing the course.

## Policies II

### Absence Notifications

In order to petition for an excused absence, students who miss class due to illness or significant personal circumstances should complete the Absence

Notification process through the Dean of Students office. The form can be accessed at <http://studentaffairs.depaul.edu/dos/academicprocesses.html>. Students must submit supporting documentation alongside the form. The professor reserves the sole right whether to offer an excused absence and/or academic accommodations for an excused absence.

## **Academic Integrity and Plagiarism**

This course will be subject to the university's academic integrity policy. More information can be found at <http://academicintegrity.depaul.edu/>.

The university and school policy on plagiarism can be summarized as follows: Students in this course should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work any assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails be sure to consult the instructor. While students are permitted to discuss assignments at the conceptual level, under no circumstances should students share specific answers (electronically or otherwise).

## **Academic Policies**

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at: <http://cdm.depaul.edu/enrollment>

## **Withdrawal**

Students who withdraw from the course do so by using the Campus Connection system <http://campusconnect.depaul.edu>. Withdrawals processed via this system are effective the day on which they are made. Simply ceasing to attend, or notifying the instructor, or nonpayment of tuition, does not constitute an official withdrawal from class and will result in academic as well as financial penalty.

## **Retroactive Withdrawal**

CDM understands certain extenuating circumstances can hinder one's ability for academic success and completion of course work. Please see <http://www.cdm.depaul.edu/Current%20Students/Pages/Enrollment-Policies.aspx> for additional information.

## **Incomplete Grades**

An incomplete grade is defined in the Student Handbook as follows (note that the policy in the undergraduate student handbook applies to both undergraduate and graduate students): A temporary grade indicating that the student has a satisfactory record in work completed, but for unusual or unforeseeable circumstances not encountered by other students in the class and acceptable to the instructor is prevented from completing the course requirements by the end of the term. Please see <http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx> for additional information.

## **Students with Disabilities**

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at: [csd@depaul.edu](mailto:csd@depaul.edu)

- Lewis Center 1420, 25 East Jackson Blvd.
- Phone number: 312 362 8002
- Fax: 312 362 6544
- TTY: 773 325 7296

## **Dean of Students' Office**

The Dean of Students' Office (DOS) helps students navigate the college experience, particularly during difficulty situations such as personal, financial, medical, and/or family crises. For a list of support services and advocacy information, please visit <http://studentaffairs.depaul.edu/dos/>.

## **Online Course Evaluations**

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect.