

CSC 454: Computer Architecture and Assembly Language

Fall 2012

Instructor

Dr. Lori Carter
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Office hours:

Monday	8:30-9:30 AM, 2:30-3:30 PM	Thursday	8:30-10:00 AM, 2:30-3:30 PM
Tuesday	8:30-10:00 AM, 2:30-3:00 PM	Friday	8:30-10:00 AM
Wednesday	8:30-9:30 AM, 2:30-3:30 PM		Anytime during lab

Text:

Patterson and Hennessy, Computer Organization and Design, 4th edition Revised Printing.
Morgan Kaufman

Course Objectives:

- To provide an in-depth treatment of computer architecture, including digital logic, digital systems, computer pipelines, memory organization and processor design, both single and multi-core.
- To gain further understanding of computer organization and architecture by studying the MIPS assembly language and writing and analyzing programs using the SPIM simulator.
- To gain a better overall perspective of the interrelationship between computer architecture and other aspects of computer science including compilers, operating systems and programming.

Course Learning Outcomes:

Students will analyze the interaction between hardware and software. Students will collaborate effectively in teams.

Course Organization:

Lectures: Cover the highlights of chapters assigned – not a substitute for reading. PowerPoint slides found at [\\Happy\Templates\Math and Computer Science\Carter\CSC454](#)

Homework: Homework will be assigned as appropriate to the topic of study. Completing homework assignments in a timely manner is critical to your success in this class. Homework problems may be discussed among students, but no written notes exchanged. Each student must turn in his/her own work. Homework will be graded in class. **Late homework is not accepted.**

Exams: There will be 2 exams. Exams will cover lecture as well as lab material. The first will cover chapters 1, 2 and appendix B. The second will cover Appendix C and chapters 3 and 4. Students missing a midterm exam for a school function must arrange to take the exam in advance. **Exams are currently scheduled for Sept. 24 and Nov. 2.**

Labs and Lab Projects/Quizzes: Labs will be demoed at the beginning of the lab period at which they are due. Discussion of lab assignments is allowed, however, each individual must turn in his/her own work. If I suspect collaboration, where not explicitly permitted, I will interview each of the individuals involved. If any of the involved students is unable to adequately answer my questions regarding the lab, disciplinary action will be taken against all students involved. The grading method for each lab will be discussed when the lab is assigned. In addition to labs, there may be a couple of group problems to solve, and quizzes where the questions will be distributed beforehand. While these are not group quizzes, I would wholly support studying together.

Final Exam: Cumulative exam covering lecture and lab material. The Final exam is scheduled for **Wednesday, December 13, at 1:00 P.M.** The final exam date and time is set by the university at the beginning of the semester and may not be changed by the instructor. Only in the case that a student is required to take three exams during the same day of finals week is an instructor authorized to change the exam date and time for that particular student.

Grading:

Homework	15%	Exams	30%
Labs	35%	Final Exam	20%

Final grades will be determined as follows:

100-93%	A	80-82%	B-	67-69%	D+
90-92%	A-	77-79%	C+	63-66%	D
87-89%	B+	73-76%	C	60-62%	D-
83-86%	B	70-72%	C-	0-59%	F

Attendance: Attendance is expected at each class session. In the event of an absence you are responsible for the material covered in class and the assignments given that day. Regular and punctual attendance at all classes in which a student is registered is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements to be met. There are no allowed or excused absences except when absences are necessitated by certain university-sponsored activities and are approved in writing by the Provost. Whenever the number of accumulated absences in a class, for any cause, exceeds ten percent of the total number of class meetings, the faculty member has the option of filing a written report to the Vice Provost for Academic Administration which may result in de-enrollment, pending any resolution of the excessive absences between the faculty member and the student...If the date of de-enrollment is past the last date to withdraw from a class, the student will be assigned a grade of W or WF (no grade). There are no refunds for courses where a de-enrollment was processed.” (see catalog for full text)

Academic Accommodations: While all students are expected to meet the minimum academic standards for completion of this course as established by the instructor, students with disabilities may require academic accommodations. At Point Loma Nazarene University, students requesting academic accommodations must file documentation with the Disability Resource Center (DRC), located in the Bond Academic Center. Once the student files documentation, the Disability Resource Center will contact the student’s instructors and provide written recommendations for reasonable and appropriate accommodations to meet the individual needs of the student. This policy assists the University in its commitment to full compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities (ADA) Act of 1990, and ADA Amendments Act of 2008, all of which prohibit discrimination against students with disabilities and guarantees all qualified students equal access to and benefits of PLNU programs and activities. **Students with learning disabilities who may need accommodations should discuss options with the instructor during the first two weeks of class.**

Class Enrollment: It is the student’s responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

Academic Honesty: The Point Loma Nazarene University community holds the highest standards of honesty and integrity in all aspects of university life. Academic honesty and integrity are strong values among faculty and students alike. Any violation of the university’s commitment is a serious affront to the very nature of Point Loma’s mission and purpose. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one’s own when in reality they are the results of another person’s creativity and effort. Such acts include plagiarism, copying of class assignments, and copying or other fraudulent behavior on examinations. For more details on PLNU’s policy go to: <http://www.pointloma.edu/experience/academics/catalogs/undergraduate-catalog/point-loma-education/academic-policies> A student who is caught cheating on any item of work will receive a zero on that item and may receive an "F" for the semester. See the PLNU Catalog for a further explanation of the PLNU procedures for academic dishonesty.