

CSC 354: Algorithms Analysis and Theory of Computation Spring 2012

Instructor:

Dr. Lori Carter
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619-849-2342

Office Hours:

Monday	11-11:30; 12:30-1:30; 2:40-4:00	Thursday	2:30-3:30
Tuesday	9:30 -11:30; 2:30-3:30	Friday	11:00-11:30; 12:30-1:30
Wednesday	11:00-11:30; 12:30-1:30		

Text:

McConnell, Jeffrey, Analysis of Algorithms: an active learning approach, 2nd Ed. We will cover chapters 1-11 in this class.

Course Description:

This course presents approaches to designing algorithms, complexity analysis of algorithms and computational complexity using well-known algorithms as examples as well as examples from biology. Theoretical issues such as intractability, and categories of P, NP, NP-complete will be explored. A background in discrete math and data structures is assumed. Students will be able to write correct and robust software.

Course Learning Outcomes:

- Students will understand the theory of algorithms and computation.
- Students will be able to apply their technical knowledge to solve problems.
- Students will communicate effectively orally and in writing.
- Students will have an understanding of the historical development, contemporary progress and societal role of computer science.

Course Organization:

Lectures: Used to augment reading.

Homework: Algorithm analysis and design is best learned through discussion. Please feel free to work on homework problems in groups. You must, however, turn in individual papers, noting who was a part of your group. Be sure that every person in your group understands how the problem was solved. Selected homework problems will be graded in class, and any student may be asked to work any problem on the board. Homework may be assigned daily, but it will be due every 1-2 weeks, generally when we finish a chapter. **Late homework is not accepted. One homework assignment will be dropped.**

Chpt	due date	Chpt	due date
1,2	Jan 20	7,8	Feb 29
3,4	Feb 3	10	Mar 26
5,6	Feb 15	11	Apr 11
		9	Apr 27

Exams: Three exams will be given in class. Students missing an exam for a school function may arrange to take the exam in advance. Missing an exam for other reasons, short of an officially documented emergency may result in a grade of 0. Material covered may include lectures, reading, homework or labs. Exams are currently scheduled for **February 6, March 14, and April 13.**

Labs: Unless otherwise indicated, lab projects will be completed individually. Discussion of lab assignments is allowed, however, each individual must turn in his/her own work. Allowing someone access to your program file is completely unacceptable. Grading will be by demonstration, oral questioning and lab write-ups.

Final Exam: Cumulative exam covering lectures, homework and reading. The Final is scheduled for **Wednesday 8:00.**

Grading:

Exams: 45%

Homework and labs: 30%

Final: 25%

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 section. In the event of an absence you are responsible for the material covered in class and the assignments given that day. See the Point Loma Nazarene University Catalog for a statement of the university's policy with respect to attendance. Remember that missing more than one and a half week's worth of classes can result in a failing grade.

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.