

CSC 322: Databases for Computational Science

Fall 2013

Instructor:

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Office hours:

M: 8:30-10:00
T, W: 8:30-10:00, 2:30-3:30

TR: 8:30-10:00, 12:30-1:30
F: 8:30-10:00

Text:

None

Class Learning Outcomes:

- Students will understand how data is used in their specific scientific field
- Students will be able to recommend the correct tool (spreadsheet, flat file, or database) to use for a particular scientific application
- Students will be able to build a basic RDBMS and create basic queries
- Students will experience using specialized database tools such as BLAST
- Students will gain experience with using Python to interact with a database

Course Organization:**Lectures and Labs:**

Class time will be divided between lecture and lab. Some days will be all lab, some all lecture, and some days will be split.

Lectures: Cover the highlights of chapters assigned – not a substitute for reading. Student versions of the lecture slides can be obtained from canvas.pointloma.edu. These slides will contain homework assignments and due dates.

Labs: Labs are to be completed on an individual basis unless otherwise stated. Points for lab assignments that look too similar will be divided between the participants. When working in groups, all group members must be at all lab meetings where the lab is worked on.

Project: The final 2 weeks of the course will be dedicated to the creation of a module that can be used in the Database class (CSC 414) for computer science and computer information students to help them understand applications of databases in the “real world.” This module will consist of a 5-7 page paper, PPT slides, and exercises. The previous 12 weeks of the course will help you collect data to this end.

Homework: Should be completed on an individual basis unless otherwise stated. Points for homework assignments that look too similar will be divided between the participants.

Exams: There will be 2 exams. If you will miss an exam for a school function, you must arrange to take it in advance. If you ever miss an exam without giving me prior notice, there is a good chance you will receive a zero unless, of course, there was clearly an emergency. Exam content can include material from lectures, articles, labs, and homework. Exam 1 is scheduled for **Oct. 4**. It will include all material covered to that point. Exam 2 is scheduled for **Nov. 15** and will be comprehensive, but will emphasize material covered since the first exam.

Final Exam: Your culminating experience will be the presentation of your project to the Service Learning class. It will occur during the final exam time for Service Learning, Tuesday at 4:30.

Grading:

Homework and Labs	45%
Exams	40%
Final Project	15%

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.

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.