Instructor
Stan Warford
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Office hours
Monday, 11:00 – 11:50
Tuesday, 9:00 – 9:50
Thursday 1:00 – 1:50
Friday, 11:00 – 11:50
And by appointment

Course Web page
The course Web page will be used to post the assignments and late-breaking announcements. You are responsible for checking it regularly.
http://www.cslab.pepperdine.edu/warford/cosc320/

Objective
The goal of this course is threefold:
• To teach the data structures central to computer science
• To teach object-oriented design patterns
• To teach C++ programming

The course is unique because it combines the first two goals into one unified approach in a novel way. Object-oriented design patterns are usually applied to programming in the large. Consequently, teaching OO design patterns is traditionally postponed until later in the curriculum, when they can be applied to large software projects in software engineering or capstone courses. This course is unique, because it applies OO design patterns to programming in the small, thus teaching both data structures and OO design patterns.

Learning outcomes
The computer science program learning outcomes (PLO) for the computer science/mathematics major are the ability to:

PLO 1. Implement algorithms
PLO 2. Prove computational theorems
PLO 3. Analyze computational systems
PLO 4. Communicate technical results

The course student learning objectives (SLO) for CoSc 320, Data Structures are the ability to:

Implement an algorithm using selection and iterative control structures. (PLO 1)
Implement an algorithm using recursive control structures. (PLO 1)
Implement an algorithm using programmer-defined classes and objects. (PLO 1)
Implement searching and sorting algorithms. (PLO 1)
Analyze the time-complexity of an algorithm. (PLO 3)
Present project results in written and oral form. (PLO 4)
Analyze the time complexity of an algorithm. (PLO 3)

Required text
Zung Nguyen and Stan Warford, Design Patterns for Data Structures, handout.
Recommended texts

Erich Gamma, Richard Helm, Ralph Johnson, and John Vlissides, Design Patterns, second edition, Addison-Wesley, 1995.

Final grade
35% Homework
45% Tests (15% each test)
20% Final - cumulative

Class schedule
The course web page has the schedule for the homework assignments, which are due twice weekly. The exam schedule is as follows:

Test 1, Friday, September 19
Test 2, Tuesday, October 14
Test 3, Friday, November 7
Final, Wednesday, December 10, 1:30 p.m. – 4:00 p.m.

Late Homework Policy
Written assignments are due in class on the due date. If you need more time after class, you may hand the assignment in to my office by 5:00 on the due date. If I am not there, deposit the paper in the box next to my door. Programming assignments are due electronically on Courses/Sakai at 11:55 p.m. on the due date. Half credit for homework one assignment late. No credit thereafter. Partial submissions (that is, some problems on time and others late for half credit) are not allowed. You will receive liberal partial credit, so it is better to turn in an incomplete attempt than to turn in for late credit. Note that your total homework score is equivalent to one and a half tests.

Course evaluations
Completion of the online course evaluation is a requirement for this course. They are anonymous and can be viewed by the professor only after final grades have been submitted to the registrar. Email a proof of completion to me before the final exam.

Attendance policy
Attendance is important and may affect your final grade. You are responsible for making sure that your attendance has been recorded. Please provide written documentation for excused absences. There will be no makeup exams. If you miss an exam due to illness or an unexpected major emergency, the final exam score will be substituted for your missed exam score. Doctor’s note required for all missed exams.

Disability notice
Any student with a documented disability (physical, learning, or psychological) needing academic accommodations should contact the Disability Services Office (Main Campus, Tyler Campus Center 264, x6500) as early in the semester as possible. All discussions will remain confidential. Please visit http://www.pepperdine.edu/disabilityservices/ for additional information.

Academic integrity
See http://seaver.pepperdine.edu/academicintegrity/ for the academic integrity standards at Seaver College.
Mission support
See http://www.pepperdine.edu/about/mission-vision/ for the mission statement of the university and http://seaver.pepperdine.edu/about/mission/ for the mission statement of Seaver College. This course supports these mission statements by investigating the truth of its discipline and by preparing students for lives of service to others in the field of computer science.