Instructor
Stan Warford
Email: Stan.Warford@Pepperdine.edu
Office: RAC 112
Phone: 310-506-4332 (on campus, x4332)

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/cosc330/

Objective
The primary objective of this course is for you to obtain a working knowledge of the lower levels of
abstraction of a computer system. In Computer Science II, you learned the C++ programming language.
C++ is at Level 6, the high-order languages level. In this course you will learn Level 5, the assembly
level, and Level 3, the instruction set architecture level, as well as Java at Level 6.

Each level of abstraction in a computer system has a language, so learning the lower levels of
abstraction is equivalent to learning new languages. The language at Level 5 is assembly language and
the language at Level 3 is machine language. Your knowledge will be a working knowledge because you
will learn how to program in these languages. Most programming in the industry today is at Level 6 and
not at these lower levels. So, why learn these lower level languages? Because an in-depth understanding
of how computers work is possible only by considering the design of the levels of abstraction and the
relationships between the levels.

One secondary objective of this course is to continue to develop your programming skill at Level 6.
Later in the course you will be required to write a large programming project in Java using the object-
oriented techniques from the Programming Principles II course. The project is a language translation
program known as an assembler.

Another secondary objective is to learn the theory of languages – syntax and semantics. Syntax theory
applies to both natural and artificial languages, and will be the basis of your language translation
program.

Required text

Text rebate
As the author of our text, if you purchase it new I will personally refund on your request 15% of the
retail price you paid.

Final grade
30% Homework
40% Tests (20% each test)
30% Final - cumulative
Learning outcomes
The program learning outcomes (PLO) for the computer science/mathematics major are the ability to:
1. Implement algorithms
2. Prove computational theorems
3. Analyze computational systems
4. Communicate technical results

The course student learning outcomes (SLO) for CoSc 330, Computer Systems are the ability to:
Translate a program in an high-order language to assembly language. (PLO 3)
Convert data between high-level representation and binary. (PLO 3)
Analyze an artificial language specified by a regular expression, finite state machine, or grammar. (PLO 3)
Implement a translator from assembly language to machine language. (PLO 1)

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, Thursday, February 9
Test 2, Thursday, March 16
Final, Wednesday, April 26, 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. Programming assignments are due electronically on Sun at midnight 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
Course evaluations are required online near the end of the semester and count as a homework assignment. After you complete the evaluation, save your proof of completion for this course as a PDF document and email it to me.

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.