



Course Description

This course introduces students to the software development life cycle, including requirements, analysis, design, implementation, testing, deployment, maintenance, and retirement. Topics include documentation, procedures, standards, and practices related to each phase of software development life cycle. This course covers a variety of methodologies used in software development. Upon completion of this course students should have analyzed and implemented appropriate systems development methods

Course Objectives

Upon completion of this course, students should be able to:

- Describe the complete software development lifecycle.
- Analyze system development methods.
- Explain the process of designing and implementing a software product.
- Explain the basics of testing, deployment, and maintenance of software products.
- Explain some of the different approaches needed for creating entertainment
- Using library resources research and design preliminary requirements for a software product.
- Value the importance of designing software using accepted principles used in the software industry.

Course Prerequisites:

None.

Textbook: *Software Engineering, 7th Ed., Ian Sommerville, 2004, Pearson - Addison/Wesley.*

Instructor:

Tom Sinclair

Phone: 303-934-1122x678

Office: A-159A

Office Hours: Noon to 4 PM Wed (all others by appointment)

E-mail: tsinclair@westwood.edu

Course Site: <http://homepage.mac.com/tsinclair/SG150/SG150.html>

Background:

Tom comes to Westwood with over fourteen years of industry experience. He has done systems administration, technical support, IT architecture and systems design with such firms as AT&T, Lucent Technologies and KPMG LLP. He has a Master's Degree in Computer Science from Loyola University of Chicago. He is the Lead Instructor for the Computer Programming department as well as adjunct faculty at Regis University's School for Professional Studies. He is currently writing a textbook on Linux networking

Policies

**If you are going to be absent, you must contact the instructor at the following phone number: (303) 934-1122 Ext 678

Show Up -

This means showing up on time and staying for the entire class period. I realize that your outside life may throw a kink into your schedule from time to time, but if that should occur, you should contact me so that I can make sure that you don't get behind in your course work. Remember, attendance accounts for 20% of your final grade.

Westwood's official attendance policy is:

- A student missing a particular class over the period of two consecutive calendar weeks, will be dropped from the class
- A student missing all classes over the period of two consecutive calendar weeks, will be dropped from school
- Instructors may, depending upon the needs of a particular course or class, require more stringent attendance requirements, including impact on grades, as well as withdrawal. In those cases, the instructor will include the specific additional requirements in their syllabus, which will be addressed at the beginning of the term.

Pay Attention -

Class time is for course work. This means your cell phone is turned off, your pager is set to vibrate and you are not doing any inappropriate Web surfing or gaming. Excessive disruption of class can impact your final grade. In addition, topics discussed in class but are not in the textbook are fair game for test questions.

Do the Work -

There will be regular assignments in this course. While you will be given some time in class to work on them, you may have to work on them outside of class, whether at home, in the library or in the tutoring lab. The assignments are designed to improve your understanding of the material and regardless of whether or not you receive a grade for them, you will do better in this course if you put in some serious effort.

Other -

Teamwork - Not everyone in this class will be at the same level with respect to technical ability and experience. This means that teamwork for labs or class exercises is strongly encouraged. If you finish early, please help someone else with their work.

Makeup work - If you wish to make up an assignment or a test, you must contact the instructor before being allowed to do so. If a make-up is allowed, then you have until the end of the next class period to

complete the work. In addition, you may suffer a penalty on total points awarded for the work, depending on circumstances and at the instructor's discretion.

All students are expected to abide by the general rules of conduct as described in the college catalog, in addition to those set down in the Westwood LAN Acceptable Use Agreement. Additional policies or changes to existing policies specific to this course are to be at the discretion of the instructor and/or the Computer/Networking department.

Week One: 08/11/2005

Syllabus, Lesson plan Overview

Chapter 1 - Introduction

Chapter 2 - Socio-technical Systems

Chapter 3 - Critical Systems

Chapter 4 - Software Processes

Week Two: 08/18/2005

Chapter 5 - Project Management

Chapter 6 - Software Requirements

Chapter 7 - Requirements Engineering Processes

Chapter 4 - Software Processes

Week Three: 08/25/2005

Chapter 8 - System Models

Chapter 9 - Critical Systems Specification

Chapter 10 - Formal Specification

Chapter 11 - Architectural Design

Week Four: 09/01/2005

Chapter 12 - Distributed Systems Architecture

Chapter 13 - Application Architecture

Chapter 14 - Object-Oriented Design

Chapter 15 - Real-time Software Design

Week Five: 09/08/2005

Chapter 16 - User Interface Design

Chapter 17 - Rapid Software Development

Chapter 18 - Software Reuse

Chapter 19 - Component-based Software Engineering

Week Six: 09/15/2005

Chapter 20 - Critical Systems Development

Chapter 21 - Software Evolution

Chapter 22 - Verification and Validation

Week Seven: 09/22/2005

Chapter 23 - Software Testing
Chapter 24 - Critical Systems Validation
Chapter 25 - Managing People
Chapter 26 - Software Cost Estimation

Week Eight: 09/29/2005

Chapter 27 - Quality Management
Chapter 28 - Process Improvement
Chapter 29 - Configuration Management

Week Nine: 10/07/2005

Final Project Due 10/04/2005

Grading -

Attendance and Participation	50%
Project	50%

The above course guide may be changed at the discretion of the instructor to fit the needs of the class.

In addition, students will also be responsible for the content of any supplemental materials provided by the instructor unless otherwise stated.

I, _____, have received and read the course syllabus for and understand those policies outlined in it.

signature