Course Syllabus

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Office:	At IIT Chicago Campus/per pre-arranged appointment.
Office Hours:	TBD Central Time
Classroom	Stuart Building 106
Class Hours	Monday, 5.00p pm - 7:40 pm
Online:	IIT Blackboard Classroom for ITMD 511

Textbook:
Software Engineering – A Practitioner's Approach by Roger Pressman, 7th Edition
Publisher: McGraw-Hill Education
ISBN 978–0–07–337597–7
MHID 0–07–337597–7

Additional reading:

Software Engineering – 10th Edition by Ian Sommerville
Publisher: Pearson
ISBN-10: 0-13-394303-8
ISBN-13: 978-0-13-394303-0

Course Prerequisites: [(ITMD 411) OR (ITMD 412) OR (ITMD 510) OR (ITMD 512)]

Course Description

Today Software plays many critical roles in our economies, national security, and many aspects of our daily life. However Software has become increasingly complex and expensive. This is a major challenge facing the software industry. How do we develop reliable quality software systems under budget on time?

Students learn and evaluate development concepts in a systematic approach to the analysis, design, implementation and maintenance of software. The class also includes studies of the various models of the software life-cycle, software development project management, system requirements analysis, and methodologies for practical application of these models to software development, including the use of CASE (Computer Aided Software Engineering) tools. Students apply these principles in projects to improve the quality of their development process and final products.

Course Objectives

Engage students in learning about software application development.

Course Specifics:

Students successfully completing this course will be able to:

- Have a good understating about the software development life cycle.
- Have a good grasp of software requirements analysis and specification methodologies.
- Have some high level understanding in high level architecture design concepts and techniques of different flavors.
- Have some basic knowledge of major implementation practices such as design patterns.
- Good command of different testing, verification, and quality assurance (QA) techniques.

Course Requirements

Student Responsibilities: Class attendance and active participation are essential if students are to receive maximum benefit from the class. Participation requires preparation including completion of reading, labs, projects and exams by the due dates. If you cannot attend class or complete assignments, labs, projects or exams on time, please let the instructor know beforehand so that we can discuss alternative strategies. It is the student's benefit to use their time wisely whether it is in preparation for class, during scheduled class, or in the lab. When students are in any IIT lab environment, they should abide by the college policies. Questions and comments are welcome.

Exams and make-up policy: There will be a midterm and final exam for the course. No retakes of exams are allowed unless there are extraordinary circumstances. Any exams may be taken early if the instructor is given adequate time to prepare testing arrangements.

Assignments: It is extremely critical that students complete all assignments timely otherwise late points will be deducted accordingly. Submitting assignments timely in the order assigned will ensure progression according to the academic design of the course. **The instructor will not accept bulk assignments**.

Email: Every attempt will be made to answer email daily. Please indicate in your email clearly the problem you are experiencing in your subject and body of your email. Please also include your name and course enrolled.

Academic Policy: Any violations of IIT policies regarding academic honesty and or integrity will be referred automatically to the appropriate college authorities for disposition. Please see appropriate pages in the college catalog for definitions and regulations. The minimum penalty for cheating will be a zero for all parties involved on that exam, assignment, lab, project or quiz.

Withdraw policy: No longer attending a class does not constitute an automatic withdrawal. Students are expected to withdraw from the course if they have decided not to pursue the course anymore.

Classroom behavior: During the class time, considerate conduct by all persons is important to a favorable learning environment. Any infringement on the rights of others to get an education will be dealt with in an

appropriate manner. Please set all electronic devices such as cell phones or pagers to silent or vibrate mode. No cell phone talking is permitted in the classroom. If you must take the call, please continue your conversation outside of the classroom and please make it short so as to not miss your lecture material.

General notes: In order to achieve the course objectives, it is important to enjoy the class in addition to complying with the above requirements, and the rules and policies of IIT. Most students sign up for the courses with the best intentions. If you are experiencing course/college related problems, please feel free to discuss it with your instructor before a crisis develops so we can resolve them in a manner beneficial to all parties involved.

Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must obtain a letter of accommodation from the Center for Disability Resources and make an appointment to speak with me as soon as possible. The Center for Disability Resources (CDR) is located in the Life Sciences building, in room 218, with telephone 312-567-5744 or with email at disabilities@iit.edu.

Grading and Evaluation Criteria.

Grade distribution is represented as follows:

- A – 90% and up
- B – 80 to < 90
- C – 70 to < 80
- D – 60 to < 70
- F – 59 and below

The class has the following grade weight based on a point scale

- Midterm Exam - 300 points
- Final Exam/Project - 300 points
- Homework Assignments - 400 points
- Total points - **1000** points

Blackboard – The IIT Online Classroom

We will use IIT's Blackboard system (http://blackboard.iit.edu) to communicate weekly agendas, submit homework, labs, ask questions, to post lecture materials and get feedback. Each student should have been notified of his or her Blackboard account for this course. If you have not been notified, go to above web page where there is contact information. Blackboard weeks start from Monday through Sunday.

Tentative Schedule of Topics/Readings/Assignments: ***Note - You should do all readings prior to class!***

Week	Date	Topic(s)	Reading Assignment(s)	Assignment(s)
1	1-08	- Course Intro. - Intro to Software Engineering	Chapters 1-2	HW1: SW Failure
2	1-15	- Martin Luther King, Jr. Day - No Classes		
3	1-22	- Software Process Models, Agile	Chapter 3	HW2: SEI CMM Level
4	1-29	- Software Principles	Chapter 4	
5	2-05	- Requirements, and Modeling	Chapter 5-7	HW3:
6	2-12	- Requirements, and Modeling	Chapter 5-7	
7	2-19	- Software Design, concepts and architecture	Chapter 8-13	HW4:
8	2-26	- Software Design, Component, UI and Web, Design Pattern	Chapter 8-13	
9	3-05	- Mid Term Examine		
10	3-12	- Fall Break Day - No Classes		
11	3-19	- Software Quality	Chapter 14-15	HW5:
12	3-26	- Software Quality, Assurance and Strategies	Chapter 16-17	
13	4-02	- Testing	Chapter 18-20	HW6
14	4-09	- Formal Modeling and Verification	Chapter 21	
15	4-16	- Software Configuration	Chapter 22-23	HW7:
16	4-23	- Software Project Management	Chapters 24-28	
17	4-30	- Final Exam or Project (TBD)		

- Topics are subject to change
- All assignments will be due before the following actual “class” meeting from the week assigned.