

Disclaimer: Please note that the specifics of this Course Syllabus can be changed at any time, and you will be responsible for abiding by any such changes. All changes will be communicated with you via Blackboard course announcement and/or update on Blackboard's syllabus section.

MCourse Name: Software Processes
Class Room# Delta 214
Instructor: Soma Datta, Ph.D.

Course #: 10466 SWEN 5234-01
Class Time: Wed 1.00 PM – 3.50 PM
Office Hours: 11:00 -12:30 Tu/W/Th

Course Description

Detailed coverage of the theory, application, assessment and evaluation of the Unified Process Model. Course will cover the process modeling, process assessment, quality assessment of process models and process improvement techniques. Introduction to Agile and other processes.

The course introduces several software processes through real life examples and research papers.

Instructor

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Teaching Assistant: Kenneth Akpo

Office Hours: Tu 9 AM to 12 PM, W 10 AM to 3 PM, Th 4 PM to 8 PM

Course Structure

This class is discussion orientated. First part of the course will be concept presentation; it will be followed by examples about different processes. The class will be divided into groups and each group will be assigned projects/processes and papers to lead the discussions. The final part of this course is the preparation for in-class presentation of a publication-quality research paper.

Learning Outcomes

- After completion of the course the students are expected to be able to:
- Understand what software process is
- Knowledge of what a process is
- The purpose of a software process
- Differentiate and explain different software processes

- Describe and discuss the pros and cons of the Waterfall Model, Iterative, Evolutionary, V-model, and Component Based software processes.
- Skills to manage the core elements in a software process.
- Describe the responsibilities of the core actors in a software process: project managers, requirements managers, architects, designers, developers, test managers, testers, quality managers, change agents, and finally customers.
- Describe the execution of the core elements in a software process: requirements elicitation and management, project management, design management, development, test management, testing, quality control (reviewing), deliveries and deliverables, and finally customer involvement.
- Discuss alternate paths and needs to manage change in software processes.

Course Grading and Deliverables

Attendance Mandatory

Class Participation (8%)

Students are expected to read about the topic in a Class, come to class prepared to discuss their thoughts and take part of the classroom discussions. Each class will add 1% towards your class participation.

Short written exercise/Software Processes/in class work (30%)

Each team will write/detail the software process used and upload as per the assignment date by 11.59 PM using the following template:

- A paragraph (3-5 sentences) about the process
- At least two to three bullet points to highlight the advantages of the process they used.
- At least two bullet point of the disadvantages of the process used
- Mention if applicable for an alternative process and why

A template is uploaded on Blackboard.

Project proposal (5%)

The first deliverable of the course project is a project proposal. The project proposal should be maximum of three pages in length (plus references). The project proposal should be submitted by the end of Class 5.

Project paper (20% document+12%presentation)

A large portion of the course deliverables is a course research project. You are expected to work on the course project in groups of 2-3 students. Each group is expected to write a research paper by the end of the semester. The topic is to be discussed with the instructor. Examples include a new contribution on a specific software processes topic, a survey paper of a software processes related topic (typically involves surveying 10 – 20 papers), or building a software using one of the software processes with detailed

discussion on comparing different software processes.

The final report (4 pages in length) should be submitted by the end of Class 12. The final submission is expected to be of publishable quality. All project-related documents (i.e., project proposal and project report) should use the IEEE conference publication format. If the paper is deemed publishable, the instructor will work with the student to make appropriate changes to the final report and submit the paper for publication.

Mid Term Exam 15%

Final Exam 10%

Grading System

Letter Grade	Grade Points Per Semester Hour	Grade Points
A	4.00	93.0-100.0
A-	3.667	90.0-92.9
B+	3.333	87.1-89.9
B	3.000	85.0-87.0
B-	2.667	80.0-84.9
C+	2.333	77.1-79.9
C	2.000	73.0-77.0
C-	1.667	70.0-72.9
D+	1.333	67.1-69.9
D	1.000	63.0-67.0
D-	0.667	60.0-62.9
F	0.000	below 60.0

Course Schedule

Class	Session	Notes
Class Week 1	<ul style="list-style-type: none"> • Introduction/ Syllabus 	Decide on groups
Class Week 2	<ul style="list-style-type: none"> • What is Software process? Software Lifecycle, purpose, knowledge of processes 	Class Discussions (CD)
Class Week 3	<ul style="list-style-type: none"> • Waterfall, V model, Spiral model, Rational Unified Process, Agile Process 	CD
Class Week 4	<ul style="list-style-type: none"> • Project Discussions 	Group Discussions (GD)
Class Week 5	<ul style="list-style-type: none"> • Waterfall, V model, Spiral model, Rational Unified Process, Agile Processes/ Paper presentations 	CD, 30 mins GD, 5 mins. group presentation. **

Class Week 6	<ul style="list-style-type: none"> Waterfall, V model, Spiral model, Rational Unified Process, Agile Processes/ Paper presentations 	CD, 30 mins GD, 5 mins. group presentation. **
Class Week 7	<ul style="list-style-type: none"> Mid-Term 	Individual Test taking
Class Week 8	<ul style="list-style-type: none"> Project Prep day 	Teams work in class
Class Week 9	<ul style="list-style-type: none"> Core actors in software processes/ DFD's 	**
Class 10 -7	<ul style="list-style-type: none"> DFD's 	
Class 11 -13	<ul style="list-style-type: none"> DFD's 	Debate in Class
Class 12 -14	<ul style="list-style-type: none"> Project Presentations 	Group Presentations
Class 13 -20	<ul style="list-style-type: none"> Review 	
Class 14 -21	<ul style="list-style-type: none"> Finals 	Individual Test taking
Class 15	<ul style="list-style-type: none"> - 	
Class 16	<ul style="list-style-type: none"> - 	

Policies

Honesty Code

The Honesty Code is the university community's standard of honesty and is endorsed by all members of the University of Houston-Clear Lake academic community. It is an essential element of the University's academic credibility.

It states:

I will be honest in all my academic activities and will not tolerate dishonesty.

Disabilities

If you have any special needs due to a disability please let me know. For information on disability accommodations and access, please contact the Disability Services Office, Bayou Room 1402 or call 281-283-2627.