

Course Syllabus

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CS 650 - Software Engineering Process

Fall 2020

Syllabus and Course Summary

Instructor: Dr. Harry S. Delugach

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WWW: <http://www.cs.uah.edu/~delugach> (<http://www.cs.uah.edu/%7Edelugach>)

Phone: (256) 824-6614

Class Meets: Tue., Thu. 4:20 - 5:40 in ~~OKT N-308~~ [via Zoom](#) (<https://uah-uasystem.zoom.us/j/95401569519?pwd=OFFxQm9FVXNQY1FPZkRvV0FtaUFoQT09>)

Office Hours: 2:30 - 4:00 Tue. Thu. in OKT N-351 or through Zoom

Text: (P) *Software Engineering: A Practitioner's Approach*, by Roger S. Pressman & Bruce R. Maxim, McGraw-Hill, 2020 (9th edition).

Grading

If you feel there is an error in the grading of your work, you must bring it to the instructor's attention within one week after the assignment was returned to you.

Midterm Exam	20 %
Final Exam	30 %
Exercises	20 %
Homework	20 %
Participation	10%

The following grading scale will be used (final averages are rounded to the nearest whole number):

A+ 96.5; A 92; A- 89.5; B+ 86.5; B 83.5; B- 79.5; C+ 76.5; C 73.5; C- 69.5; D 59.5

Course Objectives

- To understand essential concepts in the disciplines of software engineering.
- To introduce disciplined approaches to software development that result in high quality products

that meet customer needs, and are produced within budget and time constraints.

- To develop an understanding of the role of quality processes in producing a quality software product
- To understand the role of documentation in supporting the software development process, including semi-formal methods such as UML.
- To apply object-oriented concepts and approaches to software modeling using UML.
- To work in groups in developing software products, including performing technical reviews.

General Information

Please read the [general guidelines and policies](#)

(<http://www.cs.uah.edu/~delugach/Courses/Syllabus-General.html>) that apply to this course, They are a part of this syllabus. This syllabus is freely available to anyone. Other course materials, announcements, discussions, etc. will be distributed using Canvas (canvas.uah.edu).

Canvas Online Access

Communication in this class will be conducted through Canvas by Instructure, the university's course management system. To access Canvas, go to uah.instructure.com or access it through [the Central Authentication Service \(SSO\)](#) (<http://sso.uah.edu/cas>). You'll find instructions there about id/password and access information. You may also reach the Help Desk at <http://www.uah.edu/oit> (<http://www.uah.edu/oit/contact>) or phone them at 256-824-3333.

Homeworks

There will be four homework assignments, to be done individually. You may discuss the problems with your classmates, but all work submitted must be your own. Assignments will be turned in via Canvas, and your graded assignments (with instructor feedback) will be returned to you through Canvas.

NO hand drawn figures OR hand written answers are ever allowed except on hand-written exams.

Exercises

You will have some group exercises to complete in the course. These will be deliverable-oriented requirements and analysis activities. You will be grouped with two or three other students for these exercises. Deliverables and communication in your team must be handled through *Canvas*, using Collaborations, Conferences and or emails as appropriate.

NO hand drawn figures OR hand written answers are allowed in your deliverables.

Discussion Forums

Canvas provides discussion forums for students to post their ideas and responses. These will form an integral part of the course. Questions will be posed by the instructor or by other students, to which all are invited to respond. Part of your participation grade will be based on these forums. You are required to create at least two new reasonable discussion topics, and you are required to respond reasonably to at least four such discussions of others. "Reasonable" in this assignment means contributing to the content and goals of the course. You're required to post at least once every two weeks.

Online Students

If you are enrolled in an online section of this course (section 91), or if you have chosen to participate in the regular section (section 01) as a remote student, you're still expected to view all of the video recorded lectures in their entirety, just as though you were attending in person. The lectures can be viewed under "Panopto" on the navigation bar in Canvas. You are expected to be prepared before viewing, taking notes as appropriate, participating in on-line discussions, and submitting all assignments when they are due. CS 650 is NOT a "self-paced" course; you must keep up with the schedule in the syllabus.

~~For in-class written exams, you will benefit by taking them in class at the scheduled time; however, you are entitled to take the exam at 9am on the first Friday after the in-class exam. To exercise this option, you must inform the instructor at least one week prior to the in-class exam. If you cannot take the exam in Huntsville, you must let the get in touch with Testing Services at <https://www.uah.edu/testing/online-learning-exams> (~~<https://www.uah.edu/testing/online-learning-exams>~~) to arrange for a proctor at least one week in advance.~~




Course Schedule














NOTE: Readings are to be done before the class at which they will be discussed.

DATE	TOPIC	TEXT READINGS	ASSIGNMENTS
Thu Aug 20	Software product and process	Ch. 1, 2, 3	
Tue Aug 25	Process models	Ch. 4, 5	
Thu Aug 27	Principles and Practice	Ch. 7	
Tue Sep 01	Requirements	Ch. 8	
Thu Sep 03	Requirements modeling: scenario-based	Ch. 9	
Tue Sep 08	Requirements modeling: scenario-based	Ch. 9	
Thu Sep 10	Requirements modeling: class-based	Ch. 10	Homework 1
Tue Sep 15	Requirements modeling: class-based	Ch. 10	
Thu Sep 17	Requirements modeling: behavioral	Ch. 11	

Tue Sep 22	Requirements modeling: behavioral	Ch. 11	
Thu Sep 24	Design concepts	Ch. 12	Exercise A
Tue Sep 29	Architectural Design	Ch. 13	
Thu Oct 01	Component-Level Design	Ch. 14	
Tue Oct 06	User Interface Design	Ch. 15	Homework 2
Thu Oct 08	Pattern-Based Design	Ch. 16	
Tue Oct 13	Web App Design	Ch. 17	
Thu Oct 15	Quality Concepts	Ch. 19	Exercise B
Tue Oct 20	Review Techniques	Ch. 20	
Thu Oct 22	Metrics	Ch. 30, 32	
Tue Oct 27	Software Testing	Ch. 22	Homework 3
Thu Oct 29	Quality Assurance	Ch. 21	
Tue Nov 03	Configuration Management	Ch. 29	
Thu Nov 05	Security Engineering	Ch. 27	Exercise C
Tue Nov 10	Estimation Techniques	Ch. 33	
Thu Nov 12	Risk Management	Ch. 35	Homework 4
Tue Nov 17	Process improvement	Ch. 37	
Tue Nov 24	THANKSGIVING WEEK (no class)		
Thu Nov 26	THANKSGIVING WEEK (no class)		
Tue Dec 01	Special Topics		Exercise D
Thu Dec 03	Course Review		
Thu Dec 10	Final Examination 3:00 - 5:30 pm (online)		

Course Summary:

Date	Details	
Tue Aug 18, 2020	 "Test" CS 650 live lecture (https://uah.instructure.com/calendar?event_id=106906&include_contexts=course_47571)	4:20pm to 4:50pm
Thu Sep 10, 2020	 Discussion-1 (https://uah.instructure.com/courses/47571/assignments/415690)	due by 11:59pm
	 Homework 1 (https://uah.instructure.com/courses/47571/assignments/415701)	due by 11:59pm

Thu Sep 24, 2020	 Exercise A (https://uah.instructure.com/courses/47571/assignments/415696)	due by 11:59pm
Thu Oct 1, 2020	 Discussion-2 (https://uah.instructure.com/courses/47571/assignments/415691)	due by 11:59pm
Tue Oct 6, 2020	 Homework 2 (https://uah.instructure.com/courses/47571/assignments/415702)	due by 11:59pm
Thu Oct 15, 2020	 Exercise B (https://uah.instructure.com/courses/47571/assignments/415697)	due by 11:59pm
Tue Oct 20, 2020	 Discussion-3 (https://uah.instructure.com/courses/47571/assignments/415692)	due by 11:59pm
Tue Oct 27, 2020	 Homework 3 (https://uah.instructure.com/courses/47571/assignments/415703)	due by 11:59pm
Tue Nov 3, 2020	 Discussion-4 (https://uah.instructure.com/courses/47571/assignments/415693)	due by 11:59pm
Thu Nov 5, 2020	 Exercise C (https://uah.instructure.com/courses/47571/assignments/415698)	due by 11:59pm
Tue Nov 10, 2020	 Midterm Exam (https://uah.instructure.com/courses/47571/assignments/415705)	due by 4:20pm
Thu Nov 12, 2020	 Homework 4 (https://uah.instructure.com/courses/47571/assignments/415704)	due by 11:59pm
Tue Nov 17, 2020	 Discussion-5 (https://uah.instructure.com/courses/47571/assignments/415694)	due by 11:59pm
Tue Dec 1, 2020	 Discussion-6 (https://uah.instructure.com/courses/47571/assignments/415695)	due by 11:59pm
	 Exercise D (https://uah.instructure.com/courses/47571/assignments/415699)	due by 11:59pm

 **Final Exam**

 **Team Participation**

<https://uah.instructure.com/courses/47571/assignments/415706>
