SSW-540 Home Page

Welcome To Fundamentals of Quantitative Software Engineering

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Course Schedule
(https://sit.instructure.com/courses/71299/files/12892242?wrap=1)
(https://sit.instructure.com/courses/71299/files/12892242/download?download_frd=1)

Modules (https://sit.instructure.com/courses/71299/modules)

Assignments
(https://sit.instructure.com/courses/71299/assignments)

Campus office hours
N/A

Virtual office hours
Fridays, 10:30-12:30pm

Or by appointment on
Zoom or phone

IMPORTANT COURSE INFORMATION - PLEASE READ!

We use a primary text book in this course: Ian Sommerville's **Software Engineering**, **10th Edition**. Please acquire the textbook as soon as possible. Various options are available from the Stevens bookstore. We also use Charles Severance's web-based materials on Python that you may download without cost at **http://www.py4e.com/book (http://www.py4e.com/book)** . These books are referenced in the Course Schedule and the Syllabus. (as **IS** and **PY**, respectively).

Throughout the term, students participate in online, graded discussions as well as submit Python and other assignments and take 3 quizzes during the term leading up to the final examination at the end of the term. The discussions require your careful consideration of material provided or material you are asked to find. After you provide your input on the discussion topic, you must also comment intelligently on at least one other student's contribution. Your discussion grade will be based on the quality of your initial contribution and your comments to others.

This course requires you to do a small amount of Python programming. Python reading as well as a Python exercise is assigned almost every week. If you are already facile in programming in another language, you will find Python an easy-to-learn addition to your repertoire. If you don't program (yet), Python will be a good first language for you to learn! Please use Python 3.6 or a later Python release.

A lecture will be delivered on Zoom each week during the class session at 6:30pm Eastern time on Wednesdays. Attendance is strongly encouraged but a recording of the lecture is posted for your review. The week's lecture slides have been posted on Canvas. Each week is shown in the **Course Schedule (https://sit.instructure.com/courses/71299/files/12892242?wrap=1)** ↓ **(https://sit.instructure.com/courses/71299/files/12892242/download?download_frd=1)** . All work is due at 10 p.m. of the due date listed in Canvas, always referencing Eastern time in the USA.

- Individual and group project exercises are due on Wednesdays at 10 pm of the week following their assignment. Students may convene in their assigned groups after the lecture in a pre-assigned breakout room, or any other time that is convenient using Zoom.
- Quizzes are due on Mondays at 10 pm Eastern time. Canvas **does not permit** students to take quizzes after their due date/time. If you must miss a quiz, arrange an alternative quiz with the professor before the due date.
- Python assignments are due on the Monday at 10 pm Eastern. For each day late, you **lose 5%** from the possible points. When warranted, extensions may be granted but only if arranged in advance. Python assignments submitted on time may be **re-submitted for regrading once** after you have received feedback on the initial assignment, within a week of the assignment's due date.
- Graded discussions include an initial contribution and comments on at least one other student's contribution. Discussions **close to all comments** at **10pm on Wednesday** of the week following their assignment. To give others an opportunity to comment, **initial discussion entries** are due on **Sunday at 10pm**. Late initial contributions are penalized **25%**! Submissions of discussion contributions or comments will not be accepted at all after the discussion closes on Wednesday evenings.

When due	Sun	Mon	Tues	Wed
10 p.m. Eastern	**Initial discussion** input due	**Python** due **Quizzes** close/due		**Individual and group project exercises** due; **Discussions close**

An *open book* quiz is given every 4th week, covering that week's and the weeks' material since the last quiz. Be sure to complete your quiz before the **Monday 10 pm deadline**! Three quizzes are given. The final two weeks of material (Software Dependability lectures and text chapters) are covered in the Final Examination along with all of the previous weeks' lectures and readings.

If you have any questions, email me at **ooyeleke@stevens.edu (mailto:robbie.cohen@stevens.edu)** . I will respond to your message or email as soon as possible. My office hours this term are TBA and

by appointment. Due to COVID-19, I will not be on campus this term., but I will available most weekdays for impromptu meetings by phone or on **Zoom (https://stevens.zoom.us/j/5091134689)** .

I look forward to a great term!

GRADING SCALE: Tentative Percentages and grades are shown below. If there are any modifications, it will only be to improve grades and will post on Canvas. Note: No grades will be rounded up and any modification to the scale will be done for the entire class.

Name:	**Range:**
A	100 % to 94.0%
A-	< 94.0 % to 90.0%
B+	< 90.0 % to 87.0%
B	< 87.0 % to 84.0%
B-	< 84.0 % to 80.0%
C+	< 80.0 % to 77.0%
C	< 77.0 % to 70.0%
F	< 70.0 % to 0.0%

Click on the icon below to access:

(https://sit.instructure.com/courses/71299/modules)

(https://sit.instructure.com/courses/149/gradebook#tal assignment)

(https://sit.instructure.com/courses/71299/modules)

Course Content

(https://sit.instructure.com/courses/71299/modules)

*All Canvas courses are supported by the **Office of Learning Technology** (https://my.stevens.edu/information-technology/learning-technology) in the **Division of Information Technology** (https://my.stevens.edu/it)*

Questions about course content should be directed to the instructor.

Stevens Institute of Technology

SSW540: Fundamentals of Quantitative Software Engineering
Course Schedule –Fall 2023

Texts: Sommerville, Ian, Software Engineering, 10th Edition, Addison Wesley, 2016, ISBN-13: 9780133943030.

Severance, Charles, Python for Everybody: Exploring Data in Python 3. Download from **http://www.pythonlearn.com/book.php**

Week #	Week of	Reading		Weekly Topic	Class Assignments, Discussions and Quizzes
		IS	PY		
0					Optional Pre-Reading on Canvas: *"The Coming Software Apocalypse"*
1	5-Sep	1, 19	1-2	Introduction to software & systems engineering fundamentals	*Discussion: Introduce Yourself & state all programming languages you're proficient in (very important as this will be used for team formation for group project)* *Graded Discussion: Ethics*
2	12-Sep	2-3	3	Software development processes	*Graded Discussion: Agile Methods*
3	19-Sep	4	4	Software requirements engineering & use cases	*Group Exercise: Project Use Cases*
4	26-Sep	5	-	Software modeling & UML	**Quiz** #1 for mods 1-4
5	3-Oct	6, 21	5	Software architecture styles	*Indiv. Exercise: Software modeling*
6	10-Oct	7	6	O-O software design	*Group Exercise: Software Objects*
7	24-Oct	8-9	7	Software testing & evolution	*Indiv Exercise: Testing Software*
8	31-Oct	15	-	Software reuse	**Quiz** #2 for mods 5-8
9	7-Nov	22	8-9	Software project and risk management	*Group Exercise: Project Risks* P7: Finding & counting unique items
10	14-Nov	23	10	Software project estimation Add'l reading: "*The Mythical Man Month*"	*Indiv. Exercise*: *UCP Calculation*
11	21-Nov	24	11	Software metrics and measurement	*Graded Discussion: Quality Metrics*
12	28-Nov	25	-	Configuration management & version control	**Quiz** #3 for mods 9-12
13	5-Dec	10-11	16	Engineering dependable software systems Add'l reading: "Toyota Acceleration Issues"	*Graded Discussion: Dependability Tools*
14	12-Dec	12-14	-	Safety, security and resilience in software	*In Class:Abuse/Misuse Cases* Group Member Evaluations
15	TBA - May	-	-	**FINAL EXAM (covering all modules)**	Course Evaluation

Course Components:

			Discussions	Projects (In-class individual and group exercises)	Quizzes	Final Exam
% of final grade			10%	(cumulative weight) 20%	30%	40%
Days due; always 10 pm			Wed	Wed	Mon	Wed