

 FLORIDA ATLANTIC UNIVERSITY	COURSE CHANGE REQUEST Graduate Programs		UGPC Approval _____ UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner _____ Catalog _____
	Department CEECS College Engineering and Computer Science		
Current Course Prefix and Number CEN 5035	Current Course Title Software Engineering		
<i>Syllabus must be attached for ANY changes to current course details. See Guidelines. Please consult and list departments that may be affected by the changes; attach documentation.</i>			
Change title to: Change prefix From: _____ To: _____ Change course number From: _____ To: _____ Change credits* From: _____ To: _____ Change grading From: _____ To: _____ Academic Service Learning (ASL) ** Add <input type="checkbox"/> Remove <input type="checkbox"/>		Change description to: Change prerequisites/minimum grades to: Graduate standing for CEECS students, and instructor's approval for students from other major. Change corequisites to: Change registration controls to: Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade.	
Effective Term/Year for Changes: Spring 2021		Terminate course? Effective Term/Year for Termination:	
Faculty Contact/Email/Phone Hanqi Zhuang/zuang@fau.edu/ 297-3413			
Approved by Department Chair _____ Hanqi Zhuang College Curriculum Chair _____ Francisco Presuel-Moreno College Dean _____ <i>McCardie</i> UGPC Chair _____ UGC Chair _____ Graduate College Dean _____ UFS President _____ Provost _____		Date _____ _____ 10/25/2020 _____ _____ _____ _____	

Email this form and syllabus to UGPC@fau.edu 10 days before the UGPC meeting.

**Department of Computer & Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus**

1. Course title/number, number of credit hours	
Software Engineering/ CEN 5035	3 credit hours
2. Course prerequisites, corequisites, and where the course fits in the program of study	
Prerequisites: Graduate standing for CEECS students, and instructor's approval for students from other major.	
3. Course logistics	
Term: Class Location and Time:	
4. Instructor contact information	
<i>Instructor's name Office address Office Hours Contact telephone number Email address</i>	
5. TA contact information	
<i>TA's name Office address Office Hours Contact telephone number Email address</i>	
6. Course description	
<p>Catalog Description:</p> <p>An introduction to basic principles and practices of software engineering. Emphasis is placed on programming language support for software engineering principles, especially techniques for data abstraction, code reusability, and programming-in-the-large. Other topics include software life cycle models, general design, implementation and testing issues, specification and design methodologies, and model-based approaches to software design.</p>	
7. Course objectives/student learning outcomes/program outcomes	
<i>Course objectives (based on ABET criteria)</i>	<p>2. Proficiency in the areas of software design and development, data structures, and operating systems</p> <p>3. An ability to plan and execute an engineering design to meet an identified need</p> <p>6. An understanding of the overall human context in which engineering and computing activities take place</p>
<i>Student learning outcomes & relationship to ABET a-k objectives</i>	<p>(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability</p> <p>(e) an ability to identify, formulate, and solve engineering problems</p>

**Department of Computer & Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus**

	<p>(f) an understanding of professional and ethical responsibility (g) an ability to communicate effectively (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice</p>
8. Course evaluation method	
<p>Course projects (Divided by different milestones) Quizzes</p>	<p style="text-align: center;">80% 20%</p> <p><i>Note: The minimum grade required to pass the course is C.</i></p>
<p>Grading Scale: "A": 90 and above; "A-": 87-89; "B+": 83-86; "B": 80-82; "B-": 77-79; "C+": 73-76; "C": 70-72; "C-": 67-69; "D+": 63-66; "D": 60-62; "D-": 51-59; "F": 50 and below</p>	
10. Policy on makeup tests, late work, and incompletes	
<p>Need proper university accepted documents to have permissions on makeup tests, late work and incompletes</p>	
11. Special course requirements	
<p>N/A</p>	
12. Classroom etiquette policy	
<p>University policy requires that in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular phones and laptops, are to be disabled in class sessions.</p>	
13. Attendance policy statement	
<p>Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.</p>	
14. Disability policy statement	
<p>In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/</p>	

**Department of Computer & Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus**

15. Counseling and Psychological Services (CAPS) Center
Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to http://www.fau.edu/counseling/
16. Code of Academic Integrity Policy Statement
Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001 .
17. Required texts/reading
Reading material will be posted on Canvas
18. Supplementary/recommended readings
Lecture notes, working environments, tooling, and other references will be posted on Canvas
19. Course topical outline, including dates for exams/quizzes, papers, completion of reading
Tentative course topic outline (subject to change depending on lecture progresses): <ol style="list-style-type: none">1. Overview principles of software engineering2. Agile software development3. Modeling software structure and behavior (UML 2.0 and metamodeling)4. Business Modeling (Business Model Canvas, Value Proposition)5. BPMN6. ArchiMate 3.0 Modeling7. General principles of Model driven development (MDD)8. Use case modeling9. System architecture and design10. Platform-based development: IBM Cloud11. Cognitive Services/AI – Watson Services, Node-RED, IoT12. Service Oriented Architecture (SOA)13. Micro-services14. DevOps15. New OMG standard – <i>Essence – Kernel and Language for Software Engineering Methods</i>
Project Assignments with tentative dates (subject to change depending on schedule): Project 1: Project proposals

**Department of Computer & Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus**

Project 2: Business Model Canvas (Upwave)

Project 3: Architecture modeling (archimatetool.com)

Project 4: Use case modeling

Project 5: IoT development by IBM Cloud, Watson Services using Node RED, first prototype

Project 6: Final Project demo and delivery

Exams (tentative dates):

1. Two quizzes will be announcement in class