COURSE CHANGE REQUEST
Graduate Programs

FLORIDA ATLANTIC UNIVERSITY

UGPC Approval _____
UFS Approval _____
SCNS Submittal _____
Confirmed _____
Banner _____
Catalog _____

Department CEECS

College Engineering and Computer Science

Current Course Prefix and Number	*Current* Course Title
CEN 5035	Software Engineering

*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.*

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 ☐   Remove ☐

* Review Provost Memorandum
** Academic Service Learning statement must be indicated in syllabus and approval attached to this form.

Change description to:

Change prerequisites/minimum grades to:
Graduate standing

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		*Date*
Department Chair	Hanqi Zhuang Digitally signed by Hanqi Zhuang Date: 2020.10.21 15:41:13 -04'00'	
College Curriculum Chair	Francisco Presuel-Moreno Digitally signed by Francisco Presuel-Moreno DN: cn=Francisco Presuel-Moreno, o=Florida Atlantic University, ou=Ocean and Mechanical Engineering, email=fpresuel@fau.edu, c=US Date: 2020.10.22 12:41:34 -04'00'	
College Dean	MCardei Digitally signed by Mihaela Cardei DN: cn=Mihaela Cardei, o=Florida Atlantic University, ou, email=mcardei@fau.edu, c=US Date: 2020.10.25 19:26:58 -04'00'	10/25/2020
UGPC Chair		
UGC Chair		
Graduate College Dean		
UFS President		
Provost		

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

FAUchangecourseGR, revised Fall 2019

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

3. Course logistics
Term: Class Location and Time:

4. Instructor contact information	
Instructor's name *Office address* *Office Hours* *Contact telephone number* *Email address*	

5. TA contact information	
TA's name *Office address* *Office Hours* *Contact telephone number* *Email address*	

6. Course description

Catalog Description:

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.

7. Course objectives/student learning outcomes/program outcomes	
Course objectives *(based on ABET criteria)*	2. Proficiency in the areas of software design and development, data structures, and operating systems 3. An ability to plan and execute an engineering design to meet an identified need 6. An understanding of the overall human context in which engineering and computing activities take place
Student learning outcomes & relationship to ABET a-k objectives	(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 (e) an ability to identify, formulate, and solve engineering problems (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

8. Course evaluation method

Course projects 80% (Divided by different milestones) Quizzes 20%	*Note*: The minimum grade required to pass the course is C.

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

10. Policy on makeup tests, late work, and incompletes

Need proper university accepted documents to have permissions on makeup tests, late work and incompletes

11. Special course requirements

N/A

12. Classroom etiquette policy

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.

13. Attendance policy statement

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.

14. Disability policy statement

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/

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):
1. Overview principles of software engineering
2. Agile software development
3. Modeling software structure and behavior (UML 2.0 and metamodeling)
4. Business Modeling (Business Model Canvas, Value Proposition)
5. BPMN
6. ArchiMate 3.0 Modeling
7. General principles of Model driven development (MDD)
8. Use case modeling
9. System architecture and design
10. Platform-based development: IBM Cloud
11. Cognitive Services/AI – Watson Services, Node-RED, IoT
12. Service Oriented Architecture (SOA)
13. Micro-services
14. DevOps
15. New OMG standard – *Essence – Kernel and Language for Software Engineering Methods*

Project Assignments with tentative dates (subject to change depending on schedule):
Project 1: Project proposals
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