FLORIDA ATLANTIC UNIVERSITY

COURSE CHANGE REQUEST
Undergraduate Programs

Department Electrical Engineering and Computer Science

College Engineering and Computer Science

UUPC Approval 3-30-26
UFS Approval _____
SCNS Submittal _____
Confirmed _____
Banner Posted _____
Catalog _____

***Current* Course Prefix and Number**	CEN 4010	***Current* Course Title**	Principles of Software Engineering

*Syllabus must be attached for **ANY** changes to current course details. See Template. 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:**

Change WAC/Gordon Rule status**

Add ☐ **Remove** ☐

Change General Education Requirements***

Add ☐ **Remove** ☐

*See Definition of a Credit Hour.

**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See WAC Guidelines.

***GE criteria must be indicated in syllabus and approval attached to this form. See Intellectual Foundations Guidelines.

Change description to:

See attached

Change prerequisites/minimum grades to:

Change corequisites to:

Change registration controls to:

Not available to students who completed CEN 5035.

Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).

Effective Term/Year for Changes:	Fall 2026	**Terminate course? Effective Term/Year for Termination:**	

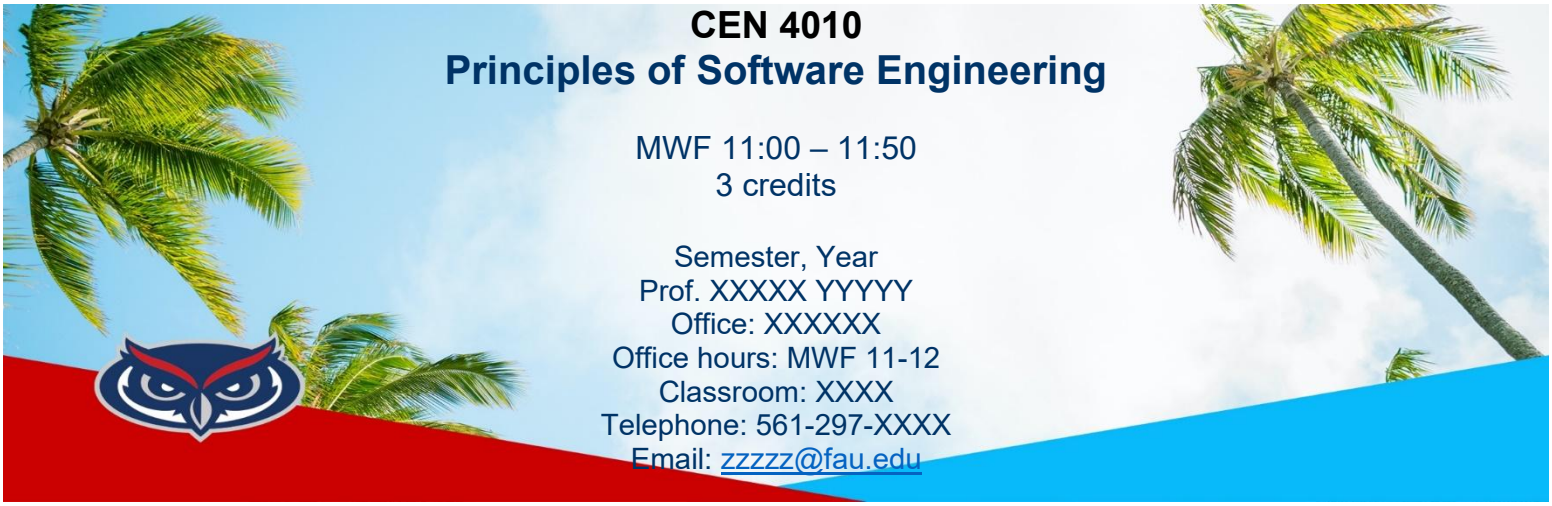
Faculty Contact/Email/Phone Michael DeGiorgio / mdegiorg@fau.edu / 561-297-0003

Approved by		***Date***
Department Chair	Hai Kalva	3/19/2026
College Curriculum Chair	Galan Liu	3/19/26
College Dean		3/30/26
UUPC Chair	Korey Sorge	3-30-26
Undergraduate Studies Dean	Dan Moeroff	3-30-26
UFS President		
Provost		

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.

Change description to (changes in red typeface):

An introduction to the basic principles and practices of software engineering. Exposes students to a wide range of software engineering concepts and state-of-the-art technologies. Emphasis is placed on learning and practicing software engineering principles through team course project and gaining appreciation of "programming in the large." Topics include both technical aspects and non-technical aspects of software engineering, such as software life cycle models, specification and design methods, implementation and testing issues, deployment and post maintenance. Students are required to complete a team project involving written and oral presentations and demonstrations. This is an Academic Service Learning (ASL) course. Students may not enroll in CEN 4010 if they have already taken CEN 5035.



CEN 4010
Principles of Software Engineering

MWF 11:00 – 11:50
3 credits

Semester, Year
Prof. XXXXX YYYYY
Office: XXXXXX
Office hours: MWF 11-12
Classroom: XXXX
Telephone: 561-297-XXXX
Email: zzzzz@fau.edu

TA name	xxxxxx xxxxxxxxx
Office	xxxxxxxx
Office hours	MWF xx:xx – xx:xx
Telephone	561-297-xxxx
Email	xxxxxx@fau.edu

Course Description

An introduction to the basic principles and practices of software engineering. Exposes students to a wide range of software engineering concepts and state-of-the-art technologies. Emphasis is placed on learning and practicing software engineering principles through team course project and gaining appreciation of "programming in the large." Topics include both technical aspects and non-technical aspects of software engineering, such as software life cycle models, specification and design methods, implementation and testing issues, deployment and post maintenance. Students are required to complete a team project involving written and oral presentations and demonstrations. This is an Academic Service Learning (ASL) course. Students may not enroll in CEN 4010 if they have already taken CEN 5035.

Instructional Method

This class is designated as “In-Person w/Recorded Lecture” (section XXX) or “Videotaped Class” (section YYY). In-person class sessions will be automatically recorded and uploaded to Canvas within 24 hours. Student enrolled in section XXX may choose to attend in-person classes or view recordings, whereas students enrolled in section YYY are only able to view recordings.

Prerequisites

One of the following:

- COP 3530 Graduate / Undergraduate (Minimum Grade of C)
- COP 3530C Graduate / Undergraduate (Minimum Grade of C)
- COP 3410 Graduate / Undergraduate (Minimum Grade of C)
- COP 3410C Graduate / Undergraduate (Minimum Grade of C)

Course Objectives/Student Learning Outcomes

By the end of this course, students will gain:

- Proficiency in the areas of software design and development, data structures, and operating systems
- An ability to plan and execute an engineering design to meet an identified need
- An understanding of the overall human context in which engineering and computing activities take place

Course Evaluation Method

The course evaluation breakdown will include the following:

Assessment	**Weight(%)**
1 midterm exam – Take home Exam	25%
Assignments	20%
Project	25%
Project Proposal	5%
Project Progress Presentation/Report	5%
Project Presentation	10%
Project Report	10%
TOTAL:	100%

Course Grading Scale

Grade	**Total (%)**
A	[93 – 100]
A-	[90 – 92)
B+	[87 – 89)
B	[83 – 86)
B-	[80 – 82)
C+	[77 – 79)
C	[73 – 76)
C-	[70 – 72)
D+	[67 – 69)
D	[63 – 66)
D-	[60 – 62)
F	[0 – 59)

Policy on Makeup Tests, Late Work, and Incompletes (if applicable)

Late work will not be accepted. All assignments will be posted well in advance, and students may submit assignments early. Any assignment not turned in by the due date will result in a zero.

Make-up tests are given only if there is solid evidence of a medical or otherwise serious emergency situation that prevented the student from participating in the exam.

Incomplete grades are against the policy of the department, and they will only be assigned if there is solid evidence of medical or otherwise serious emergency situation.

Policy on the Recording of Lectures

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

Attendance Policy

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.

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/

Disability Policy

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/.

Code of Academic Integrity

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.

Required Texts/Readings
Software Engineering
Authors: Ian Somerville
Publisher: Addison-Wesley

Software Engineering
ISBN: 9780133943238

Publisher: Pearson Lifetime eBooks
Edition: 10th

Pearson eText for Software Engineering -- Instant Access
ISBN: 9780137503148
Publisher: Pearson+ Subscriptions
Edition: 10th

Course Topical Outline

- Overview principles of software engineering
- Agile software development
- Modeling software structure and behavior (UML 2.0 and metamodeling)
- Business Modeling (Business Model Canvas, Value Proposition)
- BPMN
- Use case modeling
- System architecture and design
- Platform-based development: IBM Cloud
- Cognitive Services/AI – Watson Services, Node-RED, IoT
- Service Oriented Architecture (SOA)
- Micro-services

Artificial Intelligence Preamble

FAU recognizes the value of generative AI in facilitating learning. However, output generated by artificial intelligence (AI), such as written words, computations, code, artwork, images, music, etc., for example, is drawn from previously published materials and is not your own original work. FAU students are not permitted to use AI for any course work unless explicitly allowed to do so by the instructor of the class for a specific assignment. [Policy 12.16 Artificial Intelligence].
Class policies related to AI use are decided by the individual faculty. Some faculty may permit the use of AI in some assignments but not others, and some faculty may prohibit the use of AI in their course entirely. In the case that an instructor permits the use of AI for some assignments, the assignment instructions will indicate when and how the use of AI is permitted in that specific assignment. It is the student's responsibility to comply with the instructor's expectations for each assignment in each course. When AI is authorized, the student is also responsible and accountable for the content of the work. AI may generate inaccurate, false, or exaggerated information. Users should approach any generated content with skepticism and review any information generated by AI before using generated content as-is.
If you are unclear about whether or not the use of AI is permitted, ask your instructor before starting the assignment.
Failure to comply with the requirements related to the use of AI may constitute a violation of the Florida Atlantic Code of Academic Integrity, Regulation 4.001.
Proper Citation: If the use of AI is permitted for a specific assignment, then use of the AI tool must be properly documented and cited. For more information on how to properly cite the use of AI tools, visit https://fau.edu/ai/citation

AI Flexible Policy:

The use of AI to assist in work assigned in this specific course is permitted only for specific assignments as indicated by the instructor. Use must be properly documented and cited per instructor guidelines.