FLORIDA ATLANTIC UNIVERSITY

COURSE CHANGE REQUEST
Graduate Programs

Department EECS

College Engineering and Computer Science

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

***Current* Course Prefix and Number**	***Current* Course Title**
COP 5339	Object-Oriented Software Design

*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:

Change corequisites to:

Change registration controls to:

Senior undergraduate students and graduate students in the College of Engineering and Computer Science

Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade.

Effective Term/Year for Changes:	**Terminate course? Effective Term/Year for Termination:**
Summer 2022	

Faculty Contact/Email/Phone Hanqi Zhuang, zhunag@fau.edu, 561.297.3413

Approved by	***Date***
Department Chair	2/7/2022
College Curriculum Chair	02/07/2022
College Dean	2/08/2022
UGPC Chair	Mar 3, 2022
UGC Chair	Mar 3, 2022
Graduate College Dean	Mar 3, 2022
UFS President	
Provost	

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

FAU
FLORIDA ATLANTIC UNIVERSITY

COP 5339

OBJECT ORIENTED SOFTWARE DESIGN

Semester: TBD
3 Credit Hours

Instructor: TBD
Office Location: TBD
Office Hours: TBD
Phone Number: TBD
Email: TBD

COVID-19 Statement

Due to the surge in COVID-19 cases and the omicron variant, all students regardless of vaccination status are expected to wear masks while indoors in any FAU facilities, including classrooms and laboratories. Students experiencing flu-like symptoms (fever, cough, shortness of breath) or students who have come in contact with confirmed positive cases of COVID-19 should immediately contact FAU Student Health Services (561-297-3512). Symptomatic students will be asked to leave the classroom to support the safety and protection of the university community. For additional information visit . In classes with face-to-face components, quarantined students should notify me immediately as you will not be able to attend class. I will not be able to offer an online version of the class but will make reasonable efforts to assist students in making up the work.

COURSE PREREQUISITES

Prerequisite: Proficiency in C or C++ programming

COURSE DESCRIPTION

Classes and objects as the basis of software development. Object-oriented analysis and design using OMT, implementation using C++ and Java. Credit will not be given for both COP 4331 and 5339.

COURSE OBJECTIVES

Upon successful completion of this course, students will be able to:

1. Demonstrate and apply the methods of object-oriented design and programming in the context of the software development cycle (AOT 2,6)

2. Demonstrate the use of Unified Modeling Language (UML) diagrams for analysis and design of object-oriented software (AOT 2,6)

3. Apply elements of the Java programming language and implement object-oriented designs in Java (AOT 2,6)

4. Apply the basic concepts for design patterns and apply several common design patterns to improve the quality of software architectures (AOT 2,6)

5. Write programs using advanced features of the Java programming language, such as reflection, multithreading, and generic types (AOT 2,6)

(CO = Course Objective, AOT = ABET Accreditation Outcomes))

COURSE DELIVERY MODE

Attendance Policy for On-campus Sections

Due to the Covid-19 pandemic, attendance is optional and students are encouraged to participate live during the Webex/Zoom lectures.

The course is accessible through FAU's learning management system— Canvas http://canvas.fau.edu . You must log into Canvas with your FAU ID and Password to access the materials and assignments in this course. If you do not know your FAU ID or Password click the following link for help. Link to Office of Information Technology Help. The course is organized into modules with dates provided for each module. Dates and durations for each module may vary so please pay close attention to start and due dates.

The course is organized into modules with dates provided for each module. Dates and duration for each module may vary so please pay close attention to start and due dates. The course begins with the START HERE page, which will familiarize you with the organization and navigation of the course. You will open a new learning module to access the assigned reading materials, lecture notes, and other relevant materials for each subsequent module.

TIME COMMITMENT PER CREDIT HOUR

This course has 3 credit hours. For traditionally delivered courses, not less than one (1) hour of classroom or direct faculty instruction each week for fifteen (15) weeks per Fall or Spring semester, and a minimum of two (2) hours of out-of-class student work for each credit hour. Equivalent time and effort is required for Summer Semesters, which may be offered over a shortened time frame. Fully Online courses, hybrid, shortened, intensive format courses, and other non-traditional modes of delivery will demonstrate equivalent time and effort.

REQUIRED TEXTS & MATERIALS

Cay Horstmann, "Object Oriented Design & Patterns", 2nd Ed., Wiley, 2005

ISBN 0-471-74487-5.

Textbook webpage: http://www.horstmann.com/design_and_patterns.html

MINIMUM TECHNOLOGY & COMPUTER REQUIREMENTS

Students are responsible for applying proper backup procedures to preserve their work on homework assignments and the project. Common methods involve copying files periodically and as necessary to USB flash drives, the FAU drives, Google Drive, DropBox, or some other online service.

Required Computer

Students should have access to a PC running Windows, Linux, or Mac OS with internet access.

Required Software

Students are **required** to download the Java Development Kit (JDK) and a Java Integrated Development Environment (IDE):

- The newest Java JDK from Oracle: https://www.oracle.com/technetwork/java/javase/downloads/index.html and
- An IDE, such as one of these:
  - recommended: **NetBeans**, the latest version from https://netbeans.apache.org/download/index.html

    We use NetBeans in class.
  - Eclipse: https://www.eclipse.org/downloads/
  - the BlueJ integrated Java environment: http://bluej.org/ (this is much less powerful than Eclipse or NetBeans).

Students must install a UML modeling tool. We will write class, sequence, and state transition diagrams. Pick from this list or from a wide range of other tools available online:

- Violet UML Modeling tool: http://sourceforge.net/projects/violet/ . This is very simple and easy to use, with no model validation. We use it in class.

- ArgoUML Modeling tool : http://argouml.tigris.org/

Install the JUnit tool for unit testing, from http://junit.org/, only if it does not come with your choice of IDE.

Internet Connection

- Recommended: Broadband (high-speed) Internet connection with a speed of 4 Mbps or higher

- To function properly, Canvas requires a high-speed Internet connection (cable modem, DSL, 4G cellular, satellite broadband, T1, etc.). The minimum Internet connection speed to access Canvas is a consistent 1.5 Mbps (megabits per second) or higher.

MINIMUM TECHNICAL SKILLS REQUIREMENTS

The general and course-specific technical skills you must have to succeed in the course include but are not limited to:

- Accessing Internet.
- Using Canvas (including taking tests, attaching documents, etc.).
- Using email with attachments.
- Creating and submitting files in PDF format using Microsoft Word or equivalent.
- Copying and pasting functions.
- Downloading and installing software.
- Posting and commenting in an online discussion.
- Searching the FAU library and websites.
- Upload a document to a computer

TECHNICAL SUPPORT

In the online environment, technical issues are always possible (e.g., lost connection, hardware or software failure). Many of these can be resolved relatively quickly, but if you wait until the last minute before due dates, the chances of these glitches affecting your success are greatly increased. Please plan appropriately. If a problem occurs, it is essential you take immediate action to document the issue so your instructor can verify and take appropriate action to

resolve the problem. Most issues in Canvas can be resolved by clicking on the “Help” tab located on the menu bar.

When a problem occurs, click “Help” to:

- Report a Problem
- Live Chat with Canvas Support
- Search Canvas Guides

Additional Technical Support

1. Contact the eLearning Success Advisor for assistance: 561-297-3590
2. If you can, make a Print Screen of the monitor when the problem occurs. Save the Print Screen as a .jpg file. If you are unfamiliar with creating a Print Screen file, see Print Screen instructions.
3. Complete a Help Desk ticket. Make sure you complete the form entirely and give a full description of your problem so the Help Desk staff will have the pertinent information in order to assist you properly. This includes:
    a. Select “Canvas (Student)” for the Ticket Type.
    b. Input the Course ID.
    c. In the Summary/Additional Details section, include your operating system, Internet browser, and Internet service provider (ISP).
    d. Attach the Print Screen file, if available.
4. Send a message within Canvas to your instructor to notify him/her of the problem. Include all pertinent information of the incident (2b-d above).
5. If you do not have access to Canvas, send an email to your instructor with all pertinent information of the incident (2b-d above).
6. If you do not have access to a computer, call your instructor with all pertinent information of the incident. If he/she is not available, make sure you leave a detailed message.
7. If you do not hear back from the Help Desk or your instructor within a timely manner (48 hours), it is your responsibility to follow up with the appropriate person until you obtain a resolution.
8. In case you contacted your instructor and you don't get a reply in two days, please send the message again.

COURSE ASSESSMENTS, ASSIGNMENTS & GRADING POLICY

GRADING CRITERIA

All assignments, homework, projects, programs, quizzes, and exams in this course **must be INDIVIDUAL effort.** Late submissions will not be accepted or graded.

All programming assignments are individual work, the best way to learn how to program is to write your own code. Sharing code is considered cheating. Sharing code includes posting completed work (code) before the assignment official deadline onto sites such as GitHub, emailing code to other students, allowing any access to your work before the official deadline has passed. Other code sharing offenses include submitting another person's work as your own, this includes taking code off sites such as GitHub, Chegg, etc.

Modifying code and submitting it as your own is a fraudulent practice—specifically, plagiarism—and is no different than copying paragraphs of information from a book or journal article and calling it your own. Make sure that you work independently and submit only your own code.

Please take the time to read the documentation. You are responsible for the information outlined in it. Please see the instructor, any teaching assistant, or Engineering Student Services tutoring for assistance. Check the Help Section on Canvas.

Your final grade will be based on the following weighted distribution:

Quizzes ..... 15 %
Homeworks ..... 55 %
Project ..... 25 %
Discussion Forum Assignment ..... 5 %

The **quizzes** include multiple-choice type tests administered online using Canvas.

The **homework** problems require programming in Java and/or writing UML diagrams using a UML modeling tool.

The **project** takes groups of two students through all stages of the development cycle (analysis, design, implementation). It involves design using UML diagrams, patterns, and iplementation with the Java language. The project topic can be a web application, an Android smartphone app, a distributed (or peer-to-peer) application running in a TCP/IP network, or an application using a Java Swing GUI.

The **discussion forum assignment** points are given if the student posts at least 10 times during the semester non- trivial and relevant messages on the *homework and project discussion board forum* on Canvas.

GRADING SCALE (SUBJECT TO CHANGE)

A: 100-93, A-: 94-90, B+: 89-85, B: 84-80, B-:79-75, C+: 74-72, C: 71-68, C- 67-60, D: 59-50, F:49-0

COURSE SCHEDULE (TOPICS)

LATE ASSIGNMENTS POLICY

Late work is not acceptable. All projects will have a due date and a Final due date, assignments will be posted well in advance and students may submit assignments early. No assignments will be accepted after the Final due date.

MAKE-UP POLICY FOR TESTS

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

INCOMPLETE GRADE POLICY

Incomplete grades are against the policy of the department. Unless there is solid evidence of medical or otherwise serious emergency situation and the student is currently passing the class, incomplete grades will not be given.

COURSE POLICIES

Students are **NOT** allowed to work together for homeworks, except for the term project.

All submitted assignments (including all Java programs and models/diagrams) must be the **original work** of the student.

CODE OF ACADEMIC INTEGRITY POLICY STATEMENT

Students at Florida Atlantic University should endeavor to maintain the highest ethical standards. Academic dishonesty is 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 to 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.

PLAGIARISM

Plagiarism is unacceptable in the University community. Academic work must be an original work of your own thought, research, or self-expression. When students borrow ideas, wording, or organization from another source, they must acknowledge that fact in an appropriate manner. Plagiarism is the deliberate use and appropriation of another's work without identifying the source and trying to pass off such work as one's own. Any student who fails to give full credit for ideas or materials taken from another has plagiarized. This includes all discussion board posts, journal entries, wikis, and other written and oral presentation assignments. If in doubt, cite your source.

ONLINE ATTENDANCE POLICY

Since the course is online, you should access the course **at least three times per week** to ensure you do not miss pertinent postings, messages, or announcements. It is imperative that you meet course deadlines and stay active in discussion boards, group projects, etc. If you are

experiencing major illness, absences due to University duties, or other large-scale issues, contact the instructor immediately to formulate a resolution.

NETIQUETTE

Due to the casual communication common in the online environment, students are sometimes tempted to relax their grammar, spelling, and/or professionalism. Please remember that you are adult students and professionals—your communication should be appropriate. For more in-depth information, please see the FAU statement on netiquette.

CLASSROOM ETIQUETTE/DISRUPTIVE BEHAVIOR POLICY STATEMENT

Disruptive behavior is defined in the FAU Student Code of Conduct as "... activities which interfere with the educational mission within classroom." Students who disrupt the educational experiences of other students and/or the instructor's course objectives in a face-to-face or online course are subject to disciplinary action. Such behavior impedes students' ability to learn or an instructor's ability to teach. Disruptive behavior may include, but is not limited to non-approved use of electronic devices (including cellular telephones); cursing or shouting at others in such a way as to be disruptive; or, other violations of an instructor's expectations for classroom conduct.

For more information, please see the FAU Office of Student Conduct.

COMMUNICATION POLICY

EXPECTATIONS FOR STUDENTS

Announcements

You are responsible for reading all announcements posted by the instructor. Check the course announcements each time you log in.

Email/Video Conferencing

You are responsible for reading all of your course email and responding in a timely manner.

Course-Related Questions

Post course-related questions to the FAQ discussion board. This allows other participants with the same question to benefit from the responses. Also, make sure you review this forum prior to posting a question. Someone may have already asked and answered the question in previous

posts.

INSTRUCTOR'S PLAN FOR CLASSROOM RESPONSE TIME & FEEDBACK

Email/Video Conferencing Policy

Except for weekends and holidays, the instructor will typically respond to email (Canvas inbox or FAU email) within 48 hours. You should ask course-related questions in the FAQ discussion board. If you have questions of a personal nature, you should email the instructor.

Assignment Feedback Policy

The instructor will provide feedback on submitted assignments within two weeks of the submission date. Some assignments may require a longer review period, which the instructor will communicate to you.

Course-Related Questions Policy

Except weekends and holidays, the instructor will generally answer questions within 48 hours.

Electronic Communication Policy

In addition to the University's policy, please consider the following:

- Privacy, confidentiality, and security in all electronic communications.
- All electronic communication resources must be used for the course and in alignment with to the University mission.
- Prohibited use of false identity, false identity pseudonyms, or anonymous (sender's name or electronic identification is hidden).
- Access without consent.
- Disruption of services including introducing computer contaminants (viruses).
- Harassment of any kind.

Please see the Office of Information Technology's policies on Cyber Security Awareness.

SUPPORT SERVICES & ONLINE RESOURCES

- Center for eLearning and Student Success
- Counseling and Psychological Services
- FAU Libraries
- Freshmen Academic Advising Services
- Math Learning Center
- Office of Information Technology Helpdesk

- Office of International Programs and Study Abroad
- Office of Undergraduate Research and Inquiry
- Student Accessibility Services
- University Center for Excellence in Writing

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/ .

FACULTY RIGHTS & RESPONSIBILITIES

Florida Atlantic University respects the rights of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede their exercise.

To ensure these rights, faculty members have the prerogative to:

- Establish and implement academic standards.
- Establish and enforce reasonable behavior standards in each class.
- Recommend disciplinary action for students whose behavior may be judged as disruptive under the *Student Code of Conduct*.

SELECTED UNIVERSITY & COLLEGE POLICIES

ACCESSIBILITY POLICY STATEMENT

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations to properly execute coursework due to a disability, must register with Student Accessibility Services (SAS) located in the Boca Raton, Davie, and Jupiter campuses and follow all SAS procedures. For additional information, please consult Student Accessibility Services.

Contact

- **Boca Raton:** (561) 297-3880
  Fax: (561) 297-2184, TTY: 711

- **Davie:** (954) 236-1222
  Fax: (954) 236-1123, TTY: 711

- **Jupiter:** (561) 799-8721
  Fax: (561) 799-8721, TTY: 711

GRADE APPEAL PROCESS

You may request a review of the final course grade when you believe that one of the following conditions apply:

- There was a computational or recording error in the grading.
- The grading process used non-academic criteria.
- There was a gross violation of the instructor's own grading system.

Chapter 4 of the University Regulations contains information on the grade appeals process.

RELIGIOUS ACCOMMODATION POLICY STATEMENT

In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs with regard to admissions, registration, class attendance, and the scheduling of examinations and work assignments. For further information, please see Academic Policies and Regulations.

UNIVERSITY APPROVED ABSENCE POLICY STATEMENT

In accordance with rules of the Florida Atlantic University, students have the right to reasonable accommodations to participate in University approved activities, including athletic or scholastics teams, musical and theatrical performances and debate activities. It is your responsibility to notify the instructor at least one week prior to missing any course assignment.

DROPS/WITHDRAWALS

You are responsible for completing the process of dropping or withdrawing from a course. Please click on the following link for more information on dropping and/or withdrawing from a course. Please consult the FAU Registrar Office for more information.

POLICY ON THE RECORDING OF LECTURES

Because of a new Florida Statute in 2021, the following model language is suggested for inclusion in course syllabi, at the discretion of individual faculty:
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.

* * *

The instructor reserves the right to adjust this syllabus as necessary.