The University of Texas at El Paso
Department of Computer Science
CS 3331 – Advanced Object-Oriented Programming
Spring 2025 Syllabus

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General Information

Instructor Information:

Name:	Bhanukiran Gurijala, Ph.D.
Email:	bgurijala@utep.edu
Office Location:	CCSB 3.0604
Office Phone:	(915) 747-5827
Office Hours:	MW 2:00 – 3:00 PM Or By appointment
Dates:	January 21, 2025 – May 8, 2024

Course Information:

CS 3331:	Advanced Object-Oriented Programming	
Term:	Spring 2025	
Delivery Method	In-person	
CRN:	23430	
Meeting Day and Time:	TR 1:30 PM – 2:50 PM	
Location:	CRBL C305	
TA:	Arturo Flores	aflores106@miners.utep.edu
IA:	Aaron Beltran	aabeltran4@miners.utep.edu
IA:	Diego Garcia	dagarcia99@miners.utep.edu

Important Dates:

January 21, 2025 – First Day of Classes
February 5, 2025 – Census Day
April 4, 2025 – Drop/Withdraw Deadline (Automatic W)
May 8, 2025 – Last day of Classes
May 15, 2025 – Final Exam (1:00 PM – 3:45 PM)

Please communicate with the instructor, TA, or IA anytime you have questions, concerns, or wish to discuss anything. Reach out as often and frequently as necessary so that you may succeed.

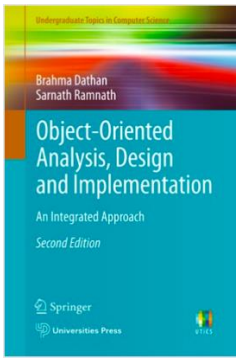
NOTE: When emailing the instructor, TA, or IA, please use [CS 3331 SP25] in the subject and specify the CRN in the subject line or somewhere in the email.

Prerequisites:

CS 2302 with a grade of C or better

Textbook (Required):

Object-Oriented Analysis, Design and Implementation: An Integrated Approach. Brahma Dathan, Sarnath Ramnath. Springer, Universities Press, 2015.



Free e-book available through the publisher. Access through UTEP Library (https://www.utep.edu/library/) Copy/Paste title into "MinerQuest Search" -> Click "To access this resource" -> Directed to Publisher Site -> Download Book

Recommended Books (Not required):

1. *Head First Design Patterns*. Eric Freeman and Elizabeth Freeman. O'Reilly 2004.
2. *Head First Object-Oriented Analysis and Design*. Brett D. McLaughlin, Gary Pollice, and Dave West. O'Reilly 2006.
3. *The Elements of Java Style*. Allan Vermeulen, et al. Cambridge University Press, 2000.
4. Martina Seidl, et al., *UML@Classroom: An Introduction to Object-Oriented Modeling*, Springer, 2015 ([e-book] through UTEP library)
5. Cay S. Horstmann, *Core Java Volume I - Fundamentals*, 11th edition, Prentice Hall, 2018 ([e-book] through UTEP library)

Objectives & Outcomes

Course Objectives:

CS 3331 – Advanced Object-Oriented Programming. An in-depth exposure to the object-oriented programming paradigm, which builds upon programming experience gained in lower-level computer science classes. Emphasis on programming in an object-oriented language with which students are already familiar, and on requirements, testing, code reading, and comprehension.

The class presents a look into the growing capabilities of object-oriented programming as a way to model the real world. Additionally, this course will provide the fundamental knowledge to software modeling through the use of best practices. This course teaches students to approach program development using a systematic approach that is used in industry.

Course materials:

All the course materials will be available through **Blackboard**. Please check Blackboard regularly to stay updated with the class.

Learning Outcomes

Level 1: Knowledge and Comprehension. Level 1 outcomes are those in which the student has been exposed to the terms and concepts at a basic level and can supply basic definitions. Upon successful completion of this course, students will be able to:

a) Explain the differences between an object-oriented approach and a procedural approach.

b) Describe the differences between waterfall and agile software development.

Level 2: Application and Analysis. Level 2 outcomes are those in which the student can apply the material in familiar situations, e.g., can work a problem of familiar structure with minor changes in the details. Upon successful completion of this course, students will be able to:

a) Formulate use-case diagrams and scenarios to support understanding of user requirements.
b) Use object-oriented design notations, including UML class diagrams and state machine diagrams (optionally sequence diagrams) to model problem solutions.
c) Use basic object-oriented design patterns to structure solutions to software design problems.
d) Translate design features, such as classes and relationships, to implementations.
e) Use frameworks and library classes and methods, such as collections, GUI, multithreading, and networking, in problem solutions.

Level 3: Synthesis and Evaluation. Level 3 outcomes are those in which the student can apply the material in new situations. This is the highest level of mastery. Upon successful completion of this course, students will be able to:

a) Design and implement software employing the principles of modularity, encapsulation, information hiding, abstraction, and polymorphism.
b) Design, implement, and use classes and objects by following coding conventions, guidelines, styles, and standards.
c) Design, implement exception handling (including user-defined exceptions) and high order functions.
d) Evaluate existing classes and software for the purposes of extension through inheritance.
e) Create API documents for classes, fields and methods.
f) Design and implement test suites for automated unit testing.
g) Re-factor existing source code to improve its design or efficiency.

Policies & General Information

Grading:

- Attendance – 3%
- Homework/In-class Assignments – 15%
- Quizzes – 7%
- Exam 1 – 10%
- Exam 2 – 15%
- Final Exam – 25%
- Programming Assignments/Project and Final Deliverables/Presentation – 25%

The nominal percentage-score-to-letter-grade conversion is as follows:

- 90% or higher is an A
- 80-89% is a B
- 70-79% is a C
- 60-69% is a D
- below 60% is an F

Additionally, any one of the following will result in a final grade of F, even if the overall average is greater than 60%.

- Earning an average of less than 60% on the programming lab assignments
- Earning a grade of less than 60% on the final exam
- Earning an average of less than 60% on Exam 1 & Exam 2
- Not submitting ALL lab projects by the end of the semester, even if they are too late to receive credit (lab projects should still be functional and will be tested to ensure functionality).

The instructor reserves the right to adjust these criteria downward, e.g., so that 88% or higher represents an A, based on overall class performance. The criteria will not be adjusted upward, however.

Attendance:

Attendance and participation in all lecture sessions are critical factors for your success in this course. Students should be **on time** for all scheduled sessions and **attend the entire session**. Attendance will be taken at every session and will count towards your grade. Attendance may be taken through iClicker, Blackboard, sign-in sheets, rollcall, visual attendance by the instructional team, or other means. It is required that you attend each session. Failure to attend the class will result in poor performance on the course. Please come prepared for all sessions. Please inform the TA/IA and instructor if you will be late or absent from class.

Students should notify the instructor prior to missing a session if possible, and certainly right after if earlier was not possible. The instructor will allow three unexcused absences per semester before having the option to deduct points from the final grade (up to 3 points from the overall grade per subsequent unexcused absence). It is the student's responsibility to obtain the content covered during missed class(es). Participation points also include completing post-lecture and post-labs online quizzes (when applicable) that are administered as surveys to monitor students' overall progress and potential struggles. Any assignments due on the date of the absence will be considered late if not turned in as specified by the assignment guidelines unless an exception is granted by the instructor. Points lost due to an unexcused absence may not be made up. Any points lost due to an excused absence will need to be made up by arrangement with the instructor.

Class Assignments:

Reading, non-programming homework, quizzes, and programming lab assignments will be posted on Blackboard. It is your responsibility to check Blackboard for all assignments. All work must be done individually. While you may discuss the problem in general terms with other people, your answers and your code should be written and tested by you alone. If you need help, consult the TA, IA, or the instructor. All assignment submissions must be newly attempted, never before used original work. The assignments not submitted by the specified due date, will be assessed a late penalty (-10%) for every 24 hours beyond the due date.

Homework Assignments:

Reading and non-programming homework assignments are due at 11:59 pm on the due date specified, unless otherwise indicated; after this a late penalty will be assessed (-10%) for every 24 hours beyond the due date. Many assignments will be required to be done on paper or through

the use of an electronic tablet (white background). All reading and non-programming homework assignments must be handwritten in either pencil, black/blue pen (including electronic tablet), otherwise it will not be graded and will receive a grade of zero. Some homework assignments will permit the use of an online drawing tool. The assignment must be clearly legible for credit. Students should submit a scanned PDF document (or PDF document created by tablet), using a Scanning App on a Smart Phone; if this is not possible, please contact the instructor for alternative arrangements.

Programming Assignments:

Programming assignments are due at 11:59 pm (Mountain Time) on the specified due date, unless otherwise specified. Late programming assignments will be accepted up to 24 hours after the due date/time for up to 85% credit (15% late penalty). Accompanying lab reports must be turned in with the source code, should be typed and submitted as a PDF. Unless for unusual circumstances and at the discretion of the instructor, programming assignments will not be accepted for credit after 24 hours past the due date/time. All programming assignments are subject to a demo session with the TA, IA, or instructor. All programming assignments must be submitted prior to the end of the semester to receive a passing grade for the course, even if it is too late to receive credit. You should expect to spend at least 10-15 hours/week outside of class on reading and homework.

In the case of team programming assignments, self and peer evaluations will be used to assign an individual grade.

Exams:

There will be two (2) exams and one (1) final exam. Exams may be posted and submitted through Blackboard with appropriate due dates listed. The purpose of the exams is to allow you to demonstrate mastery of course concepts. Make-up exams will be given only in extremely unusual circumstances, and at the discretion of the instructor.

The purpose of the midterm exams is to allow you to demonstrate mastery of course concepts covered thus far during the semester. Mid-term exams will take place during the regular lecture session. You will receive an announcement (i.e., in-class, email, Blackboard, etc.) at least one week prior to an exam. Make-up exams will be given only in extremely unusual circumstances. If you must miss an exam, please meet with the instructor, BEFORE the exam. Unless for extreme circumstances and at the discretion of the instructor, students who miss an exam will not be able to make-up the exam.

The final exam will be comprehensive. You must score 60% or better on the final exam to pass this course. You must take the final exam during the time shown in the schedule for the lecture section that you normally attend. If you have a scheduling conflict (e.g., if you are taking a final at EPCC) or if you are scheduled for three final exams in one day, see your instructor in advance for accommodations.

Exams may make use of test proctoring software such as, Respondus Lockdown Browser and Respondus Monitor inside of Blackboard to promote academic integrity. You are encouraged to learn more about how to use these programs prior to the first exam. You may be required to provide a photo ID (i.e., Miner Gold card, Driver’s License, etc.) for your exam. You may also

be required to have an assigned seat during the exam. Students should avoid leaving the classroom during exams – you may be requested to submit your exam prior to leaving.

Quizzes:

The purpose of each quiz is to ensure that you are staying current with the class content weekly reading and to verify that you have acquired the skills developed in class. Quizzes will usually be paper-based, or online quizzes on Blackboard, or other platform(s) as mentioned in the class. There will be **no make-up** for missed quizzes.

Technology Requirements:

Some course content is delivered via the Internet through the Blackboard learning management system (LMS), supplemented by Microsoft Teams, Zoom, or the like. Ensure your UTEP MINERS account is working and that you have access to the Internet. You may use any of the primary Web browsers—Edge, Google Chrome, Firefox, Safari, etc. When having technical difficulties, try switching to another browser.

You will need to have access to a computer/laptop. You will need to download or update the following software: Microsoft Office, Adobe Acrobat Reader, Windows Media Player, QuickTime, and Java. Check that your computer hardware and software are up-to-date and able to access all parts of the course.

If you do not have word-processing software, you can download Word and other Microsoft Office programs (including Excel, PowerPoint, Outlook and more) for free via UTEP's Microsoft Office Portal. Click the following link for more information about Microsoft Office 365 and follow the instructions.

IMPORTANT: If you encounter technical difficulties beyond your scope of troubleshooting, please contact the UTEP Help Desk as they are trained specifically in assisting with technological needs of students. Please do not contact me for this type of assistance. The Help Desk is much better equipped than I am to assist you!

You are not authorized to use any online services that are not licensed by UTEP, including, but not limited to Discord, Twitch, WhatsApp, or GroupMe. You should not use these services for communication, collaboration, or the like in any way with respect to this course. You are only permitted to use Microsoft Teams, Microsoft Office (Licensed through your Miners account), and Blackboard.

Students are permitted to use iPad/Tablets to handwrite notes. Students are not permitted to use their iPad/Tablet to browse the internet or use any other applications that are not related to the course. Students who use unauthorized applications during class time will be no longer be permitted to use the iPad/Tablet for note taking. Students should take notes by hand and not by typing. Students should avoid the use of laptops or cell phones during class unless indicated by the instructor.

Course Communication:

Here are the ways we can keep the communication channels open:

- Office Hours: I will have office hours for your questions and comments about the course. My office hours are in-person; however, you can request a virtual meeting and I will send you a Teams/Zoom link. Please see the days and times at the top of this syllabus. You can reach out to anyone on the instructional team for questions and comments.
- Email: UTEP e-mail is the best way to contact me. I will make every attempt to respond to your e-mail within 24 hours of receipt. Please note that response may be delayed for e-mail sent during the weekend and holidays. When e-mailing me, be sure to e-mail from your UTEP e-mail account and please put the course number in the subject line. In the body of your e-mail, clearly state your question. At the end of your e-mail, be sure to put your first and last name, and your university identification number.
- Announcements: Announcements will be made in class and most of them will be posted on Blackboard as well. In case a student misses a class, the student is responsible to obtain any missed announcements. Check the Blackboard announcements frequently for any updates, deadlines, or other important messages.

Incomplete Policy:

Incomplete grades may be requested only in exceptional circumstances after you have completed at least half of the course requirements. Talk to me immediately if you believe an incomplete is warranted. If granted, we will establish a contract of work to be completed with deadlines.

Excused Absences and/or Drop Policy:

I will not drop you from the course. However, if you feel that you are unable to complete the course successfully, please let me know and then contact the Registrar's Office to initiate the drop process. If you do not, you are at risk of receiving an "F" for the course.

Accommodations Policy:

The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Students who become pregnant may also request reasonable accommodations, in accordance with state and federal laws and regulations and University policy. Reasonable accommodations will be made unless it is determined that doing so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the UTEP Center for Accommodations and Support Services (CASS). Contact the Center for Accommodations and Support Services at 915-747-5148, email them at cass@utep.edu, or apply for accommodations online via the CASS portal. Students are required to discuss their accommodations with the instructor for a proper plan to be made.

Course Resources

Technology Resources:

- Help Desk: Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.

Academic Resources:

- UTEP Library: Access a wide range of resources including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- University Writing Center (UWC): Submit papers here for assistance with writing style and formatting, ask a tutor for help and explore other writing resources.
- Math Tutoring Center (MaRCS): Ask a tutor for help and explore other available math resources.
- History Tutoring Center (HTC): Receive assistance with writing history papers, get help from a tutor and explore other history resources.
- RefWorks: A bibliographic citation tool; check out the RefWorks tutorial and Fact Sheet and Quick-Start Guide.
- The Miner Learning Center: Join peer-led study sessions in person or online to review content and discover study strategies in core curriculum courses.
- UTEP Edge: UTEP's cross-campus framework for student success and empowerment – develops students' assets through high-impact experiences made possible by the expertise and dedication of faculty, staff, alumni, and community partners.

Individual Resources:

- Student Success Help Desk (SSHD): Students experiencing challenges or obstacles to academic success including registration, financial, food, housing, and transposition resources my submit a ticket request assistance to studentsuccess@utep.edu
- Military Student Success Center: Assists personnel in any branch of service to reach their educational goals.
- Center for Accommodations and Support Services: Assists students with ADA-related accommodations for coursework, housing, and internships.
- Counseling and Psychological Services: Provides a variety of counseling services including individual, couples, and group sessions as well as career and disability assessments.
- UTEP Food Pantry: Non-perishable food items are available to students who are currently enrolled in classes. Bring a Miner Gold Card to Memorial Gym, Room 105, Monday through Friday, 10 a.m. to 2 p.m.

Standards of Conduct, Academic Dishonesty, and Other Information

Scholastic Integrity:

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as one's own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at

El Paso must be reported to the Office of Student Conduct and Conflict Resolution (OSCCR) for possible disciplinary action. To learn more, please visit HOOP: Student Conduct and Discipline.

Copyright Statement for Course Materials:

All materials used in this course are protected by copyright law. The course materials are only for the use of students currently enrolled in this course and only for the purpose of this course. It is not permitted to share, reproduce, or alter any assignment for any purpose. Students are not permitted from sharing code, uploading assignments online in any form, or viewing/receiving/modifying code written from anyone else. Assignments are part of an academic course at The University of Texas at El Paso and a grade will be assigned for the work produced individually by the student.

Class Recordings:

Course lectures may be recorded by the instructor/department. Students are not permitted to record the course (i.e., video, audio, etc.) without expressed permission from the instructor.

The use of recordings will enable you to have access to class lectures, group discussions, and so on in the event you miss a synchronous or in-person class meeting due to illness or other extenuating circumstance. Our use of such technology is governed by the Federal Educational Rights and Privacy Act (FERPA) and UTEP's acceptable-use policy. A recording of class sessions will be kept and stored by UTEP, in accordance with FERPA and UTEP policies. Your instructor will not share the recordings of your class activities outside of course participants, which include your fellow students, teaching assistants, or graduate assistants, and any guest faculty or community-based learning partners with whom we may engage during a class session. **You may not share recordings outside of this course.** Doing so may result in disciplinary action.

Illness Precautions:

Please stay at home if you have symptoms of a communicable illness. If you are feeling unwell, please let me and the instructional team as soon as possible, so that we can work on appropriate accommodation.

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let the instructor know as soon as possible, so that appropriate accommodations can be made. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID 19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area. For more information about the current rates, testing, and vaccinations, please visit epstrong.org.

Netiquette:

Always consider audience. Remember that members of the class and the instructor will be reading any postings. Respect and courtesy must be always provided to classmates and to instructor. No harassment or inappropriate postings will be tolerated. When reacting to someone else's message, address the ideas, not the person. Post only what anyone would comfortably state in a F2F situation. Blackboard is not a public internet venue; all postings to it should be considered private and confidential. Whatever is posted on in these online spaces is intended for classmates and professor only. Please do not copy documents and paste them to a publicly accessible website, blog, or other space. If students wish to do so, they have the ethical obligation to first request the permission of the writer(s).

Plagiarism Detection:

All coursework and assignments are subject to be submitted to plagiarism detection software including, but not limited to SafeAssign. SafeAssign is used review assignment submissions for originality and will help you learn how to properly attribute sources rather than paraphrase.

Guidance on Artificial Intelligence:

AI prohibited

Use of AI technologies or automated tools, particularly generative AI such as ChatGPT or DALL-E, is ***not allowed*** for assignments in this class. Each student is expected to use critical and creative thinking skills to complete tasks and not rely on computer-generated ideas. Any direct use of AI-generated materials submitted as your own work will be treated as plagiarism and reported to the Office of Student Conduct and Conflict Resolution (OSCCR).

AI allowed only with prior permission from instructor

Use of AI technologies or automated tools, particularly generative AI such as ChatGPT or DALL-E, is ***only allowed with approval from the instructor BEFORE being used***. Without permission, you will be expected to think creatively and critically to complete assignments without assistance from these tools.

If given permission to use any of these tools, students must properly cite and give full credit to the program used upon submission of every relevant assignment. For example, text generated using ChatGPT must be cited:

Chat-GPT(version). Date of query (year/month/day). "Text of your query." Generated using OpenAI. https://chat.openai.com/

A short paragraph describing how the tool(s) was/were used for the assignment must be included.

AI is allowed with proper acknowledgement.

Use of AI technologies or automated tools, particularly generative AI such as ChatGPT or DALL-E, is ***only allowed with proper attribution given for its use***.

Students must properly cite and give full credit to the program used upon submission of every relevant assignment. For example, text generated using ChatGPT must be cited:

Chat-GPT(version). Date of query (year/month/day). "Text of your query." Generated using OpenAI. https://chat.openai.com/

A short paragraph describing how the tool(s) was/were used for the assignment must be included.

Using AI for brainstorming

Some AI technologies or automated tools, particularly generative AI such as ChatGPT or DALL-E, can be beneficial during the early brainstorming stages of an activity, and you are welcome to explore them for that purpose. However, keep in mind that AI-generated ideas are not your own and may hinder your ability to think critically and creatively about a problem. It is also important to remember that these technologies often "hallucinate" or produce materials and information that are inaccurate or incomplete—even providing false citations for use.

That said, you are not allowed to submit any AI-generated work in this course as your own. If you use any information or materials created by AI technology, you are required to cite it like you would any other source. Consider how this will affect your credibility as a writer and scholar before doing so. Any direct use of AI-generated materials submitted as your own work will be treated as plagiarism and reported to the Office of Student Conduct and Conflict Resolution (OSCCR).

Free use of AI without acknowledgement

Use of AI technologies or automated tools, including generative AI such as ChatGPT or DALL-E, is permitted in this class. Students must include a short paragraph, with each relevant assignment, explaining how the tool was used.

The use of generative AI tools such as Chat GPT is permitted in this course for the following activities, which must be noted or cited:

- Reinforce understanding of concepts discussed in the course.

However, you may not use AI tools to complete any of the assessment items used to compute the grade for the course.

Students must cite any borrowed content sources to comply with all applicable citation guidelines, copyright law, and avoid plagiarism. Instances that violate these guidelines will be referred to the Office of Student Conduct and Conflict Resolution.

Standards of Conduct:

You are expected to conduct yourself in a professional and courteous manner, as prescribed by the UTEP Standards of Conduct.

A fundamental principle for any educational institution, academic integrity is highly valued and seriously regarded at The University of Texas at El Paso. More specifically, students are expected to maintain absolute integrity and a high standard of individual honor in scholastic work undertaken at the University. At a minimum, you should complete any assignments, exams, and other scholastic endeavors with the utmost honesty, which requires you to:

- Acknowledge the contributions of other sources to your scholastic efforts.
- Complete your assignments independently unless expressly authorized to seek or obtain assistance in preparing them.
- Follow instructions for assignments and exams, and observe the standards of your academic discipline; and
- Avoid engaging in any form of academic dishonesty on behalf of yourself or another student.

Graded work, e.g., homework and tests, is to be completed independently and should be unmistakably your own work (or, in the case of group work, your team's work), although you may discuss your project with other students in a general way. You may not represent as your own work material that is transcribed or copied from another person, book, or any other source, e.g., a web page.

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable to another person.

- **Cheating**
  - Copying from the test paper of another student
  - Communicating with another student during a test
  - Giving or seeking aid from another student during a test
  - Possession and/or use of unauthorized materials during tests without authorization (i.e., Crib notes, class notes, books, etc.)
  - Substituting for another person to take a test
  - Falsifying research data, reports, and academic work offered for credit
- **Plagiarism**
  - Using someone's work in your assignments without the proper citations
  - Submitting the same paper or assignment from a different course, without the direct permission of instructors
- **Collusion**
  - Unauthorized collaboration with another person in preparing academic assignments

Collaboration:
Collaboration among students is strongly encouraged.
It is acceptable to:
- Talk with other students about approaches and ideas.
- Get ideas and extra information from the internet, books, etc.

However, it is not acceptable to:
- Share code with another student (if a piece of code is submitted by two or more students, both students are guilty of cheating, regardless of who wrote the original code).
- Use code acquired from an outside source (the internet, a friend, etc.)
- Look at another student's code
- Debug another student's code

Software to detect plagiarized programs are used; appropriate disciplinary actions will be taken as necessary. A full description of the University Standards of Conduct and Academic Dishonesty can be found in the Handbook of Operating Procedures. Professors are required to -- and will -- report academic dishonesty and any other violation of the Standards of Conduct to the Dean of Students and OSCCR.

Tentative Schedule

Please note that this schedule is subject to change at any time without advance notice. You should not assume that the exams scheduled below are finalized.

Week	**Topic**
1	Introduction
1	Abstraction of Class Design
2	Classes, Objects, Operations (Methods), Attributes
2	Class Design (Modularity, encapsulation-information hiding, abstraction, polymorphism)
2	Code Reviews
2	JavaDoc (API Documentation)
2	Introduction to UML
3	UML Class Diagrams
3	Abstract Classes
3	Inheritance
3	Polymorphism
3	Code for aggregation, composition, association, inheritance relationships
4	Review UML Class Diagram/Practice
4	OO Paradigm vs Procedural
4	Design Pattern Intro/Design Pattern (Factory Design Pattern)
5	UML Use Case Diagrams & Scenarios
5	Testing/Test Suites/Unit Testing
6	Design Pattern (Template Design Pattern)
6	Interfaces
6	Refactoring
7	Review for EXAM 1, EXAM 1
8	State Machines
8	SOLID
9	Design Patterns (MVC)
9	Exceptions

10	GUI Intro
10	Concurrent Programming
11	Socket Programming
12	Collections/Generics
12	Packages
13	Review for EXAM 2, EXAM 2
14, 15	Final Presentation
16	Final Exam