SE 450 – Object Oriented Software Development Asynchronous Section 201-210, Fall 2023

Fall 2023

# Instructor information

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| --- | --- | --- |
| Instructor | Email | Office location & hours |
| Shukri Abotteen | sabottee@depaul.edu | Zoom, 11am -12:30pm |

**Overview**

We will study object-oriented design and implementation. Among the topics of the course are:

* Principles of object-oriented programming languages.
* Principles of object-oriented design.
* UML class, object, and sequence diagrams.
* Design Patterns.
* Source control.
* Testing methodologies.

Java and UML will be used for source code examples, the project, and the exams.

This syllabus is subject to change.

Course Management System: D2L

**Objectives**

* By the end of this course you should:
* Have a deeper understanding of OO concepts and how to use them
* Have greatly improved design instincts
* Write better code
* Be proficient with:
* Incremental/iterative development and refactoring
* Design patterns
* UML class diagrams
* Git
* Debugging with an IDE
* Testing

# Course materials

## Optional materials

## Java Resrouces

## [Java2SE API](http://docs.oracle.com/javase/8/docs/api/index.html)

## [Java Tutorial](http://download.oracle.com/javase/tutorial/)

## Books

## Head First Design Patterns

## by Eric Freeman, Elisabeth Freeman, Kathy Sierra, Bert Bates (O'Reilly, 1995)

## ADD intro to DP.

## Online companion to the book: <http://www.oreilly.com/catalog/hfdesignpat/>

## Design Patterns Explained: A New Perspective on Object-Oriented Design

## by Alan Shalloway, James R. Trott (Addison-Wesley, 2004)

## None of these books are required. Your book will be used as a reference for this class and beyond. If you want to use an alternate resource as a reference, you are welcome to do so.

# Course schedule

| Week | Topics | Activities |
| --- | --- | --- |
| Week 1 | Course intro  Java Review  Student intros | Discussion board  Record an intro video  Assignment 1 |
| Week 2 | OOP Review | Discussion board  Submit assignment 1  Quiz 1 |
| Week 3 | UML Diagrams | Discussion board  Assignment 2  Quiz 2 |
| Week 4 | SOLID Principles | Discussion board  Submit assignment 2  Quiz 3 |
| Week 5 | Intro to Design Patterns  -Singleton | Discussion board  Assignment 3  Quiz 4 |
| Week 6 | More on design patterns  -Factories | Discussion board  Submit assignment 3  Quiz 5 |
| Week 7 | More on design patterns  -decorator  -Builder  -composite | Discussion board  Assignment 4  Quiz 6 |
| Week 8 | Version Controlling | Discussion board  Submit Assignment 4  Quiz 7 |
| Week 9 | Software Testing and quality Assurance | Discussion board  Project Start  Quiz 8 |
| Week 10 | Review and course wrap up | Discussion board  Project check point  Quiz 9 |
| Week 11 | Project Presentation | Project Presentation  Quiz 10 |

# Grades

| Category | Weight |
| --- | --- |
| Quizzes | 40% |
| Discussion | 30% |
| Assignments | 20% |
| Final Project | 10% |

# Additional information and resources

**Changes to Syllabus**

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be

thoroughly addressed during class, posted under Announcements in D2L and sent via email.

**COVID-19 Health and Safety Precautions**

The health and safety of everyone at DePaul depend on the cooperation of all who come to campus. By taking care of yourself, you protect the entire community. DePaul’s COVID-19 response plans are based on the latest guidance from the Centers for Disease Control and Prevention, the Chicago Department of Public Health and the university’s medical advisor from AMITA Health.

Mandatory protocols must be followed by DePaul students, faculty and staff at all times on both campuses https://resources.depaul.edu/coronavirus/guidance/health-safety-practices/Pages/default.aspx.

**Respect for Diversity and Inclusion at DePaul University as aligned with our Vincentian Values**

At DePaul, our mission calls us to explore “what must be done” in order to respect the inherent dignity and identity of each human person. We value diversity because it is part of our history, our traditions and our future. We see diversity as an asset and a strength that adds to the richness of classroom learning. In my course, I strive to include diverse authors, perspectives and teaching pedagogies. I also encourage open dialogue and spaces for students to express their unique identities and perspectives. I am open to having difficult conversations and I will strive to create an inclusive classroom that values all perspectives. If at any time, the classroom experience does not live up to this expectation, please feel free to contact me via email or during office hours.

**Online Course Evaluations**

Evaluations are a way for students to provide valuable feedback regarding their instructor and the

course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching.

The evaluations are anonymous; the instructor and administration do not track who entered what

responses. A program is used to check if the student completed the evaluations, but the evaluation is

completely separate from the student’s identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the

evaluation. Please see https://resources.depaul.edu/teaching-commons/teaching/Pages/online-

teaching-evaluations.aspx for additional information.

**Academic Integrity and Plagiarism**

This course will be subject to the university's academic integrity policy. All students are expected to

abide by the University's Academic Integrity Policy which prohibits cheating and other misconduct in

student coursework. Publicly sharing or posting online any prior or current materials from this course

(including exam questions or answers), is considered to be providing unauthorized assistance prohibited by the policy. Both students who share/post and students who access or use such materials are considered to be cheating under the Policy and will be subject to sanctions for violations of Academic

Integrity.

More information can be found at https://resources.depaul.edu/teaching-

commons/teaching/academic-integrity/Pages/default.aspx.

Posting work on online sites, such as Hero

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unauthorized assistance prohibited by the policy. Both students who share/post and students who access or use such materials are considered to be cheating under the Policy and will be subject to sanctions for violations of Academic Integrity.

**Academic Policies**

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment withdrawal, grading and incompletes can be found at:

<http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx>

**Incomplete Grades**

An incomplete grade is a special, temporary grade that may be assigned by an instructor when

unforeseeable circumstances prevent a student from completing course requirements by the end of the term and when otherwise the student had a record of satisfactory progress in the course. All incomplete requests must be approved by the instructor of the course and a CDM Associate Dean. Only exceptions cases will receive such approval. Information about the Incomplete Grades policy can be found at <http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx>

**Preferred Name & Gender Pronouns**

Professional courtesy and sensitivity are especially important with respect to individuals and topics

dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the quarter so that I may make appropriate changes to my records. Please also note that students may choose to identify within the University community with a preferred first name that differs from their legal name and may also update their gender. The preferred first name will appear in University related systems and documents except where the use of the legal name is necessitated or required by University business or legal need. For more information and instructions on how to do so, please see the Student Preferred Name and Gender Policy at <http://policies.depaul.edu/policy/policy.aspx?pid=332>

**Students with Disabilities**

Students seeking disability-related accommodations are required to register with DePaul’s Center for

Students with Disabilities (CSD) enabling them to access accommodations and support services to assist

with their success. There are two office locations:

• Loop Campus (312) 362-8002

• Lincoln Park Campus (773) 325-1677

• Email: csd@depaul.edu

Students who register with the Center for Students with Disabilities are also invited to contact Dr.

Gregory Moorhead, Director of the Center, privately to discuss how he may assist in facilitating the

accommodations to be used in a course. This is best done early in the term. The conversation will

remain confidential to the extent possible.

Please see https://offices.depaul.edu/student-affairs/about/departments/Pages/csd.aspx for Services and Contact Information.