ISOM3320 Business Applications Development in Java

Fall 2024

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* Please use the email subject: **[ISOM3320] …**

Time and Venue

Wednesday and Friday, 4:30pm to 5:50pm, LSK1009

Course Materials:

1. The textbook is *Introduction to Java Programming and Data Structures (13/e)*. However, it is not required to own a textbook. The slides provided by the instructor are sufficient for this course.
2. All course materials and announcements will be posted on https://canvas.ust.hk/. You are advised to check it regularly throughout the course.
3. A laptop is required for this course. Students must bring their laptops when attending the lectures.

Overview

This course covers development of applications (programs) through Java programming language. Java is an extensively deployed programming language with market dominance. Major topics of this course include object-oriented development approaches, GUI building blocks, exception handling, and so on. Students will learn how to apply Java programming and develop applications so as to address practical needs.

Course Objectives

In this course, students will learn the fundamentals of computer programming including variables, flow control, methods and arrays. This course has a strong emphasis on object-oriented development approaches. By attending this course, students will learn how to develop applications with general programming techniques and object-oriented development approaches. Specifically,

- They will learn how to utilize general programming techniques.
- They will learn how to define classes and create objects.
- They will learn how to build up GUI with functionalities.

Topics such as multimedia and exceptions handling will be covered.

Intended Learning Outcomes

- Describe the flows of given programs.
- Predict the output of given programs.
- Write programs with object-oriented development approaches.
- Apply programming techniques to solve practical problems.

Assessments

Assessment Task	Contribution to Overall Course grade	Due date
Mid-term exam	25%	18/10/2024
Final exam	25%	TBD
Group project	25%	29/11/2024
In-class exercise 1 (General programming)	10%	29/09/2024
In-class exercise 2 (Object-oriented programming)	15%	27/10/2024

* Assessment marks for individual assessed tasks will be released within two weeks of the due date.

A. Mid-term exam (25%)

This is a paper-based exam (open note), which covers the topics taught before the exam date. Details of the exam will be provided later in the semester.

B. Final-term exam (25%)

This is a paper-based exam (open note), which mainly tests how well students understand the topics taught after the mid-term exam. However, some questions may also require a good understanding of the topics taught before the mid-term exam. Details of the exam will be provided later in the semester.

C. Group project (25%)

Students are expected to apply Java programming skills and develop a Java application by working with group members. A pre-assigned group is required. Details of the group project will be provided later in the semester.

Students will be asked to do a peer evaluation during the final exam. Students should make sure they make a fair contribution. We reserve the right to give less or even no credit to students who contribute significantly less or make no contributions.

D. General programming exercise (10%)

This is an in-class, individual exercise on the topics covered in the general programming section. Students should submit their answers no later than midnight of the second day after the in-class exercise day (for example, if the in-class exercise happens on Sep. 27, students should submit their answers before 23:59 p.m. of Sep. 29). Submissions up to 48 hours late will have their grade reduced by 50%; those received after 48 hours will receive ZERO marks. There is no make-up for this exercise.

E. Object-Oriented Programming Exercise (15%)

This is an in-class, individual exercise on the topics covered in the object-oriented programming section. Students should submit their answers no later than midnight of the second day after the in-class exercise day (for example, if the in-class exercise happens on Sep. 27, students should submit their answers before 23:59 p.m. of Sep. 29). Submissions up to 48 hours late will have their grade reduced by 50%; those received after 48 hours will receive ZERO marks. There is no make-up for this exercise.

Make-up policy

There will be no make-up exams except due to extraordinary circumstances beyond your control such as medical emergencies. Students have to submit appropriate documentation issued by a registered medical practitioner in order to be considered for a make-up exam.

Grade appeal

Assessment marks will be communicated via Canvas within two weeks of submission. All scores will be uploaded to Canvas when ready. It is always the student's responsibility to check the scores and make sure they are correct. Any appeal to score/grade has to be filed through email to both the instructor and the TA. No appeal to a particular score/grade shall be allowed 5 working days after its score/grade release day.

Academic honesty

Students are expected to adhere to the university's academic integrity policy. Students are expected to uphold HKUST's Academic Honor Code and to maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to Academic Integrity | HKUST – Academic Registry for the University's definition of plagiarism and ways to avoid cheating and plagiarism. For this course, particularly, written work that you hand in is assumed to be original unless your source material is documented appropriately. Using the ideas or words of another person, even a peer, or a web site, as if it were your own, is plagiarism.

Course AI Policy

Students are permitted to utilize generative artificial intelligence (AI) tools exclusively for enhancing programming tasks in group projects. Nonetheless, students are obligated to duly acknowledge and credit any employment of generative AI. Other assessments do not allow the use of the generative AI.

Class Schedule (Tentative)

	Week	Lecture (Wednesday and Friday)
General Programming	1	Sep 4: Introduction and Fundamentals Sep 6: Data and Expressions
	2	Sep 11, 13: Selections and Loops
	3	Sep 18: Public holiday Sep 20: Arrays and Text I/O
	4	Sep 25: Methods Sep 27: General Programming Exercise
Object-Oriented Programming	5	Oct 2, 4: Objects and Classes
	6	Oct 9: OOP Concepts Oct 11: Public holiday
	7	Oct 16: Abstract Classes and Interfaces Oct 18: Mid-term Exam
	8	Oct 23: Abstract Classes and Interfaces Oct 25: Object-Oriented Programming Exercise
Developing Applications Using Java	9	Oct 30: Exception Handling Nov 1: GUI
	10	Nov 6, 8: Event Handling
	11	Nov 13, 15: GUI Controls
	12	Nov 20, 22: Advanced Topics
	13	Nov 27: Group project demo Nov 29: Review

Schedule is tentative and subject to change. Please check the course website regularly for the updated schedule.