ISOM3320 Internet Applications Development

Spring 2026

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

Time and Venue

Lecture: Monday and Wednesday, 10:30 am to 11:50 am, 4504
Lab: Tuesdays 1:00 pm to 3:00 pm, LSKG005

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 developing 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 to apply Java programming and develop applications 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 exception 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
Individual Assignment 1	7%
Individual Assignment 2	10%
Group Assignment	20%
General programming exam	20%
Object-oriented Programming exam (constructor	20%
GUI design exam	20%
Course Participation	3%

A. Individual Assignment 1 and 2 (7%, 10%)

This is an individual exercise. Students should submit their answers no later than midnight of the deadline. 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 assignment.

B. Group Assignments (20%)

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. 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.

C. General programming exam, OOP exam, GUI exam (20% each)

These are paper-based exams (open note, no electronic is allowed except calculators). Details of the exam will be provided one week before the exam. The general programming exam tests the knowledge of lectures before methods (included), whereas the OOP exam and GUI exam test the knowledge of lectures after that (Students still need the knowledge before methods to understand the codes given in these exams). The OOP exam and GUI exam will be held during the exam week.

D. Course Participation (3%)

There will be two talk-to-instructor events and one talk-to-TA events where students provide feedback and discuss assignments with the instructor or the TA. Detailed arrangements will be announced later. Each event is graded by 1 point (participated) or 0 point (not participated).

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)

Date		Lecture	
February	2	Introduction and fundamentals	
	4	Variables: primitive types	
	9	Variables: reference types	
	11	Selections	
	16	Loops: concepts	
	18	No class	
	23	Loops: coding practice	Individual Assignment 1 Due
	25	Single-dimensional arrays	
March	2	Two-dimensional arrays	
	4	String	
	9	Methods: basics	
	11	Methods: overloading	
	16	Classes and objects: constructor	
	18	Wrapper classes and ArrayLists and I/O	Individual Assignment 2 Due
	23	Midterm Exam	
	25	Group project introduction	
	30	Inheritance	
April	1	polymorphism	
	6	No class	
	8	No class	
	13	GUI	
	15	GUI	
	20	Abstract class	
	22	Interface	
	25	Event-driven programming	
	27	Event-driven programming	
	29	Event-driven programming	Group Assignment Due
May	4	Advanced Java programming	
	6	Advanced Java programming	

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