ISOM3320 Business Applications Development in Java

Spring 2025

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

Time and Venue
Lecture: Wednesday and Friday, 4:30 pm to 5:50 pm, LSK1010
Lab: Friday, 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	Due date
Individual Assignment	10%	03/05/2025
Group Assignment 1 (General programming)	10%	03/26/2025
Group Assignment 2 (GUI design)	20%	TBD
General programming exam	20%	03/28/2025
Object-oriented Programming exam	20%	TBD
GUI design exam	20%	TBD

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

A. Individual Assignment (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. 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 the midterm, whereas the OOP exam and GUI exam test the knowledge of lectures after the midterm (Students still need the knowledge before midterm to understand the codes given in these exams). The OOP exam and GUI exam will be held during the exam week.

C. Group Assignments (15%*2)

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.

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)
1	Feb 5: Introduction and Fundamentals Feb 7: Primitive Data Types
2	Feb 12: Selection Feb 14: String
3	Feb 19: Loop Feb 21: Methods (part 1)
4	Feb 26: Methods (part 2) Feb 28: Array (Part 1)
5	Mar 5: Array (Part 2) Mar 7: Objects and classes (Reference Data Types, part 1)
6	Mar 12: Objects and classes (Reference Data Types, part 2) Mar 14: I/O
7	Mar 19: Inheritance and polymorphism (part 1) Mar 21: Inheritance and polymorphism (part 2)
8	Mar 26: Group Assignment 1 submission, No class Mar 28: General programming exam
9	Apr 2: Mid-term Break, No class Apr 4: Ching Ming Festival, No class
10	Apr 9: Abstract Classes and Interfaces (part 1) Apr 11: Abstract Classes and Interfaces (part 2)
11	Apr 16: Graphical User Interface (GUI, part 1) Apr 18: Good Friday Break, No class
12	Apr 23: Graphical User Interface (GUI, part 2) Apr 25: Graphical User Interface (GUI, part 3)
13	Apr 30: Event-driven Programming (part 1) May 2: Event-driven Programming (part 2)
14	May 7: Event-driven Programming (part 3) May 9: Advanced Topics

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