City University of Hong Kong
Course Syllabus

offered by Department of Information Systems
with effect from Semester A 2020 / 2021

Part I Course Overview

Course Title:	Java Programming for Business
Course Code:	IS3230
Course Duration:	One Semester
Credit Units:	3
Level:	B3
Proposed Area: *(for GE courses only)*	☐ Arts and Humanities ☐ Study of Societies, Social and Business Organisations ☐ Science and Technology
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: *(Course Code and Title)*	Nil
Precursors: *(Course Code and Title)*	Nil
Equivalent Courses: *(Course Code and Title)*	Nil
Exclusive Courses: *(Course Code and Title)*	Nil

Part II Course Details

1. Abstract

This course aims to introduce essential concepts in the design and implementation of solutions and applications for today's business environment using modern programming languages. Students will develop skills in the construction and implementation of business solutions and applications. They will apply the best practices of computing and programming for information systems from a business perspective.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs[#]	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Able to creatively develop business information systems for organizations by using the techniques of analysis, design and problem solving.	15%	✓	✓	
2.	Able to innovatively develop information systems using programming methods.	25%	✓	✓	✓
3.	Write windows-based and web-based applications using Java.	20%		✓	✓
4.	Apply the techniques of testing, documentation and implementation to information systems development projects.	20%		✓	✓
5.	Apply programming techniques to retrieve information from local and remote databases.	20%		✓	
** If weighting is assigned to CILOs, they should add up to 100%.*		100%			

[#] Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes (PILOs) in Section A of Annex.

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.

A3: Accomplishments
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)

(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.					Hours/week (if applicable)
		1	**2**	**3**	**4**	**5**	
TLA1: Lecture	Concepts and general knowledge of information systems construction techniques and problem solving with information systems are explained.	✓	✓	✓	✓	✓	Lecture: 1 Hour/Week
TLA2: Laboratory Exercise	Hands-on computer exercises of major aspects of information systems are constructed by applying what has been learned in lecture. Major assignment involves teamwork by a group of students in same laboratory group to construct a major portion of a small business information system.			✓	✓	✓	Laboratory: 2 Hours/Week
TLA3: Tutorial	Concepts, techniques, and good practices of information systems construction are discussed.	✓	✓	✓	✓	✓	
TLA4: Class Discussion and Presentation	Perform online quizzes in lecture, tutorial/laboratory to get immediate feedback from students. This is followed by discussion of the quizzes afterwards to reinforce the learning of the materials tested. Presentation of laboratory results and assignment.	✓	✓	✓	✓	✓	

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.					Weighting*	Remarks[#]
	1	2	3	4	5		
Continuous Assessment: 50%							
AT1: Participation and Laboratory Exercises Each laboratory has in-class exercises to assess students' hands-on programming skills of the topics covered.		✓	✓	✓	✓	15%	
AT2: Team Project or Individual Assignment The project, including programme codes, results, written report and presentation, is required to assess the technical analysis and implementation skill sets of the students.	✓	✓	✓	✓	✓	25%	
AT3: Quizzes The quizzes serve the purpose of continuous assessment of students' understanding of the key domain areas and as an indicator of how well the students have performed.	✓	✓	✓	✓	✓	10%	
Examination: 50% (duration: one 2-hour exam)							
AT4: Final Examination Students will be assessed via the examination on their understanding of concepts learned in class, textbooks, reading materials, and their ability to apply subject-related knowledge.	✓	✓	✓	✓	✓	50%	
** The weightings should add up to 100%.*						100%	

[#] Remark: Students must pass BOTH coursework and examination in order to get an overall pass in this course.

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task (AT)	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
AT1: Participation and Laboratory Exercises	Ability to accurately perform standard design and programming methods expected of contemporary information system development; select and apply appropriate programming methods to solve business problems in all areas	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to creatively, effectively and efficiently utilize the selected programming language in writing window-based, standalone applications	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to effectively and efficiently utilize all implementation techniques to perform efficient, testing, documentation and implementation	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to creatively and effectively develop applications that access local and remote databases efficiently	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT2: Team Project or Individual Assignment	Ability to accurately apply all analysis, design and problem solving techniques in developing information systems	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to accurately perform standard design and programming methods expected of contemporary information system development; select and apply appropriate programming methods to solve business problems in all areas	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to creatively, effectively and efficiently utilize the selected programming language in writing window-based, standalone applications	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to effectively and efficiently utilize all implementation techniques to perform efficient, testing, documentation and implementation	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to creatively and effectively develop applications that access local and remote databases efficiently	High	Significant	Moderate	Basic	Not even reaching marginal levels

AT3: Quizzes	Ability to accurately apply all analysis, design and problem solving techniques in developing information systems	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to accurately perform standard design and programming methods expected of contemporary information system development; select and apply appropriate programming methods to solve business problems in all areas	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to creatively, effectively and efficiently utilize the selected programming language in writing window-based, standalone applications	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to effectively and efficiently utilize all implementation techniques to perform efficient, testing, documentation and implementation	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to creatively and effectively develop applications that access local and remote databases efficiently	High	Significant	Moderate	Basic	Not even reaching marginal levels
AT4: Final Examination	Ability to accurately apply all analysis, design and problem solving techniques in developing information systems	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to accurately perform standard design and programming methods expected of contemporary information system development; select and apply appropriate programming methods to solve business problems in all areas	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Ability to creatively, effectively and efficiently utilize the selected programming language in writing window-based, standalone applications	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to effectively and efficiently utilize all implementation techniques to perform efficient, testing, documentation and implementation	High	Significant	Moderate	Basic	Not even reaching marginal levels
	Capability to creatively and effectively develop applications that access local and remote databases efficiently	High	Significant	Moderate	Basic	Not even reaching marginal levels

Part III Other Information

1. Keyword Syllabus

(An indication of the key topics of the course.)

Programming concepts; Data types, decision making, repetition, method, objects and classes concepts in programming; Information system development; System architecture; Programming objects, Windows applications; Programming testing and documentation; Database access.

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Tony Gaddis, Starting Out with Java: From Control Structures through Objects, 7th Edition, Pearson, 2018.
2.	Course materials prepared by instructors.

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

1.	Julia Case Bradley, Programming in VB, 2010, McGraw Hill.
2.	Herbert Schildt, Java: The Complete Reference, 11th Edition, McGraw-Hill Education, December 2018.
3.	Tony Gaddis, Starting Out with C++, From Control Structures Through Objects, 9th edition, Pearson, February 2017.