IS5311: JAVA PROGRAMMING FOR BUSINESS APPLICATIONS

Effective Term
Semester B 2024/25

Part I Course Overview

Course Title
JAVA Programming for Business Applications

Subject Code
IS - Information Systems
Course Number
5311

Academic Unit
Information Systems (IS)

College/School
College of Business (CB)

Course Duration
One Semester

Credit Units
3

Level
P5, P6 - Postgraduate Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract

The aim of this course is to introduce the students to essential business problem solving with programming concepts and skill, with emphasis on object-oriented programming for business information systems construction. On completion of this course, student should be able to: a) understand how to solve basic problems with Java; b) construct simple business application with Java classes/libraries.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Describe the foundations of business software construction.	10			
2	Design and develop appropriate control structures for business applications.	30	x	x	x
3	Design and develop appropriate modularity to be used in business software construction.	30	x	x	x
4	Design and develop appropriate simple data structure and algorithm for business software construction.	30			

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 real-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.

Learning and Teaching Activities (LTAs)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture	Students will learn the concepts and general knowledge of business information systems construction Furthermore, basic business software construction knowledge and skills, such as control structures, simple data structure, object-oriented programming are explained and illustrated. Examples are used to enable students' understanding on practices in business information system construction.	1, 2, 3, 4	

2	Laboratory	Students will spend time to reinforce and practice various business software construction techniques learnt in lectures through the following activities during laboratory sessions. Exercises: Hands-on activities using a programming tool Java as part of systems development exercises.	2, 3, 4	
3	Project	Students would have to complete a project requiring them to analyse a business problem and design solution, aimed at constructing a module to be used in the business information system construction.	2, 3, 4	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Continuous Assessment Participation in class and lab sessions in activities such as: - a number of take-home exercises - class tutorial and performance - online quizzes	1, 2, 3, 4	10	
2	Project Each student will design and develop a solution to analyse a given business problem by using appropriate techniques.	2, 3, 4	40	
3	Individual Lab Test The individual lab test is to assess students' overall competence level in the domain areas.	2, 3, 4	50	

Continuous Assessment (%)

100

Assessment Rubrics (AR)

Assessment Task

AT1: Continuous Assessment (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
Ability to accurately describe all key concepts, and effectively compare and discriminate among the key concepts;

Excellent
(A+, A, A-) High

Good
(B+, B, B-) Significant

Fair
(C+, C, C-) Moderate

Marginal
(D) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
AT1: Continuous Assessment (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
Ability to creatively, effectively, efficiently and accurately perform programming skills in the area of control structures for business information system development.

Excellent
(A+, A, A-) High

Good
(B+, B, B-) Significant

Fair
(C+, C, C-) Moderate

Marginal
(D) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
AT2: Project (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
Ability to creatively, effectively, efficiently and accurately perform programming skills in the area of control structures for solving a practical business problem and build a module to be used in information system construction. .

Excellent
(A+, A, A-) High

Good
(B+, B, B-) Significant

Fair
(C+, C, C-) Moderate

Marginal
(D) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
AT3: Individual Lab Test (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
Ability to creatively, effectively, efficiently and accurately perform programming skills in the area of control structures for business information system development.

Excellent
(A+, A, A-) High

Good
(B+, B, B-) Significant

Fair
(C+, C, C-) Moderate

Marginal
(D) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
AT1: Continuous Assessment (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
Ability to accurately describe all key concepts, and effectively compare and discriminate among the key concepts;

Excellent
(A+, A, A-) High

Good
(B+, B) Moderate

Marginal
(B-, C+, C) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task

AT1: Continuous Assessment (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to creatively, effectively, efficiently and accurately perform programming skills in the area of control structures for business information system development.

Excellent

(A+, A, A-) High

Good

(B+, B) Moderate

Marginal

(B-, C+, C) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT2: Project (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to creatively, effectively, efficiently and accurately perform programming skills in the area of control structures for solving a practical business problem and build a module to be used in information system construction.

Excellent

(A+, A, A-) High

Good

(B+, B) Moderate

Marginal

(B-, C+, C) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

AT3: Individual Lab Test (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to creatively, effectively, efficiently and accurately perform programming skills in the area of control structures for business information system development.

Excellent

(A+, A, A-) High

Good

(B+, B) Moderate

Marginal

(B-, C+, C) Basic

Failure

(F) Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

Flow Control structures, Object-oriented programming, Modularity, Data structure, Inheritance, Graphical User Interface, Business software construction.
Detailed Syllabus:
- Introduction business softwares
- Java basics
- Basic Data Types
- Program Flow Control
- Program Modularity
- Simple Business Software Application Examples

Reading List

Compulsory Readings

	Title
1	Starting Out with Java: From Control Structures through Objects: International Edition, 6/E, Tony Gaddis, ISBN-13: 978-0133957051

Additional Readings

	Title
1	Herbert Schildt, "Java: The Complete Reference", 11th Edition, McGraw-Hill Education, December 2018
2	Tony Gaddis, "Starting Out with C++, From Control Structures Through Objects" 9th edition, Pearson, February 2017.
3	David Schneider, "An Introduction to Programming Using Python", Person Education, 2 February 2015.