

IS3230: JAVA PROGRAMMING FOR BUSINESS

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Java Programming for Business

Subject Code

IS - Information Systems

Course Number

3230

Academic Unit

Information Systems (IS)

College/School

College of Business (CB)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

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.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Generate business information systems for organizations creatively by using the techniques of analysis, design and problem solving.	15	x	x	
2	Generate innovative information systems using programming methods.	25	x	x	x
3	Generate windows-based and web-based applications using Java.	20		x	x
4	Apply the techniques of testing, documentation and implementation to information systems development projects.	20		x	x
5	Apply programming techniques to retrieve information from local and remote databases.	20		x	

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	LTA1: Lecture	Students will learn concepts and general knowledge of information systems construction techniques and problem solving with information systems.	1, 2, 3, 4, 5
			Seminar: 3 Hours/Week

2	LTA2: Laboratory Exercise	Students will participate hands-on computer exercises of major aspects of information systems 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.	3, 4, 5	Seminar: 3 Hours/Week
3	LTA3: Tutorial	Students will learn concepts, techniques, and good practices of information systems construction.	1, 2, 3, 4, 5	Seminar: 3 Hours/Week
4	LTA4: Class Discussion and Presentation	Students will 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.	1, 2, 3, 4, 5	Seminar: 3 Hours/Week

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("- for nil entry)	Allow Use of GenAI?
1	AT1: Participation and Laboratory Exercises Each laboratory has in-class exercises to assess students' hands-on programming skills of the topics covered.	2, 3, 4, 5	15	-	Yes

2	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.	1, 2, 3, 4, 5	25	-	No
3	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.	1, 2, 3, 4, 5	10	-	No

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Assessment Rubrics (AR)**Assessment Task**

AT1: Participation and Laboratory Exercises

Criterion

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

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: Participation and Laboratory Exercises

Criterion

Ability to creatively, effectively and efficiently utilize the selected programming language in writing window-based, standalone applications

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: Participation and Laboratory Exercises

Criterion

Capability to effectively and efficiently utilize all implementation techniques to perform efficient, testing, documentation and implementation

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: Participation and Laboratory Exercises

Criterion

Capability to creatively and effectively develop applications that access local and remote databases efficiently

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:Team Project or Individual Assignment

Criterion

Ability to accurately apply all analysis, design and problem solving techniques in developing information systems

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:Team Project or Individual Assignment

Criterion

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

Excellent (A+, A, A-)

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Failure (F)

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Assessment Task

AT2:Team Project or Individual Assignment

Criterion

Ability to creatively, effectively and efficiently utilize the selected programming language in writing window-based, standalone applications

Excellent (A+, A, A-)

High

Good (B+, B, B-)

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Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

AT2:Team Project or Individual Assignment

Criterion

Capability to effectively and efficiently utilize all implementation techniques to perform efficient, testing, documentation and implementation

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: Team Project or Individual Assignment

Criterion

Capability to creatively and effectively develop applications that access local and remote databases efficiently

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: Quizzes

Criterion

Ability to accurately apply all analysis, design and problem solving techniques in developing information systems

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: Quizzes

Criterion

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

Excellent (A+, A, A-)

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Significant

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Moderate

Marginal (D)

Basic

Failure (F)

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Assessment Task

AT3: Quizzes

Criterion

Ability to creatively, effectively and efficiently utilize the selected programming language in writing window-based, standalone applications

Excellent (A+, A, A-)

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Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

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Failure (F)

Not even reaching marginal levels

Assessment Task

AT3: Quizzes

Criterion

Capability to effectively and efficiently utilize all implementation techniques to perform efficient, testing, documentation and implementation

Excellent (A+, A, A-)

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Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not even reaching marginal levels

Assessment Task

AT3: Quizzes

Criterion

Capability to creatively and effectively develop applications that access local and remote databases efficiently

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

AT4:Final Examination

Criterion

Ability to accurately apply all analysis, design and problem solving techniques in developing information systems

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

AT4:Final Examination

Criterion

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

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

AT4:Final Examination

Criterion

Ability to creatively, effectively and efficiently utilize the selected programming language in writing window-based, standalone applications

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

AT4:Final Examination

Criterion

Capability to effectively and efficiently utilize all implementation techniques to perform efficient, testing, documentation and implementation

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

AT4:Final Examination

Criterion

Capability to creatively and effectively develop applications that access local and remote databases efficiently

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

Part III Other Information

Keyword Syllabus

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.

Reading List

Compulsory Readings

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

Additional Readings

	Title
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.