COURSE DESCRIPTIONS

Faculty	Science and Information Technology				
Department	Computer Science			NQF level	6
Course Title	Advance Programming	Code	501335	Prerequisite	--------
Credit Hours	3	Theory	3	Practical	0
Course Leader	M. Mohammad Al-issa	email		mohammadal-issa@jadara.edu.jo	
Lecturers	M. Mohammad Al-issa	emails		mohammadal-issa@jadara.edu.jo	
Lecture time	11.00-12.15 Sun :Wed	Classroom		Distance learning	
Semester	Summer	Production		Updated	2020-2021
Awards	Bachelor Degree			Attendance	Fulltime

Short Description

Java's unique architecture enables programmers to develop a single application that can run across multiple platforms seamlessly and reliably. In this hands-on course, students gain extensive experience with Java and its object-oriented features. Students learn to create robust console and GUI applications and store and retrieve data from relational databases.

Course Objectives

Students will learn how to

- Write, compile and execute Java programs
- Build robust applications using Java's object-oriented features
- Create robust applications using Java class libraries
- Develop platform-independent GUIs
- Read and write data using Java streams
- Retrieve data from a relational database with JDBC

Learning Outcomes

A. Knowledge - Theoretical Understanding

The student upon completion this course will be able to:

a1: An ability to acquire adequate knowledge to identify main components of computer system "hardware and software". (K1)

a2: Create a software application using the Java programming language. (K2)

B. Knowledge - Practical Application

The student upon completion this course will be able to

a3: Debug a software application written in the Java programming language. (K3)

C. Skills - Generic Problem Solving and Analytical Skills

b1: Use control structures to solve problem, error detection and correction. (S1)

D. Skills - Communication, ICT, and Numeracy
b2: Apply development of Application and problem-solving using GUI. (S2)
E. Competence: Autonomy, Responsibility, and Context
Teaching and Learning Methods
Distance Learning
Assessment Methods
By quizzes, home works and exams

Course Contents					
Week	**Hours**	**CLOs**	**Topics**	**Teaching & Learning Methods**	**Assessment Methods**
1,2,3	8	a1	Introduction to Java basics Loops, and arrays in Java language	Distance learning	home works
4,5,6	8	a1, a2	methods, Object Classes	Distance learning	quiz
6,7	6	a3, b1	OOP(Inheritance, Polymorphism, Encapsulation)	Distance learning	Mid Term
8,9,10	9	a1, b1, b2	Graphical User Interface	Distance learning	
11,12	9	a1, b2	NetBeans GUI Applications	Distance learning	Final Exam

Infrastructure	
Textbook	**Introduction to Java Programming, Y,Daniel Liang, 9th Edition**
References	**ISBN 978-0133761313**
Required reading	
Electronic materials	**Available on :** **http://elearning.jadara.edu.jo/CourseContent/index/11823/**
Other	**Any other book related to JAVA Programming**

Course Assessment Plan								
Assessment Method	**Grade**	**CLOs**						
		a1	**a2**	**a3**	**b1**	**b2**	**b3**	**c1**
Midterm	30 %	15%	8%	7%	0%	0%	0%	0%
Second (if applicable)	0%	0%	0%	0%	0%	0%	0%	0%
Final Exam	50%	5%	5%	10%	15 %	15 %	0 %	0 %
Coursework	20%	4%	4%	4%	4%	4%	0%	0%

Coursework assessment methods	Assignments	5%	0%	0%	5%	0%	0%	0%	0%
	Case study	0%	0%	0%	0%	0%	0%	0%	0%
	Discussion and interaction	5%	5%						
	Group work activities	0%	0%	0%	0%	0%	0%	0%	0%
	Lab tests and assignments	0%	0% online						
	Presentations (==simulation==)	5%	5%						
	Quizzes	5%	0%	0%	0%	0%	5%	0%	0%
Total		100 %	24%	17%	21%	19%	19%	0%	0%

Plagiarism
Plagiarism is claiming that someone else's work is your own. The department has a strict policy regarding plagiarism and, if plagiarism is indeed discovered, this policy will be applied. Note that punishments apply also to anyone assisting another to commit plagiarism (for example by knowingly allowing someone to copy your code). Plagiarism is different from group work in which a number of individuals share ideas on how to carry out the coursework. You are strongly encouraged to work in small groups, and you will certainly not be penalized for doing so. This means that you may work together on the program. What is important is that you have a full understanding of all aspects of the completed program. In order to allow proper assessment that this is indeed the case, you must adhere strictly to the course work requirements as outlined above and detailed in the coursework problem description. These requirements are in place to encourage individual understanding, facilitate individual assessment, and deter plagiarism.