MULTIMEDIA UNIVERSITY®

COURSE INFORMATION

1.	**Name of Course**	Programming in Java
2.	**Course Code**	DPJ5018
3.	**Type of Course** (e.g. : Core, major, elective etc.)	Core/Major
4.	**Synopsis**	The students are learning Java programming in a more comprehensive way.
5.	**Version** (State the date of theSenate's approval - previous and the current approval date)	Current: June 2017 Previous: Senate 182 Dec 2015 New version: ADC Nov 2017 Senate 195 Jan 2018
6.	**Name(s) of Academic Staff**	Ainee Suriani Bahaman, Nurul Aini Nordan, Rashidah Ahmad, Muhammad Loqman Samat
7.	**Semester and Year Offered**	Semester 2 Year 2
8.	**Credit Value**	4
9.	**Pre-Requisite**	Object-Oriented Programming

10. **Objective of the course in the programme:**

To provide a good understanding of object-oriented concepts in Java, GUI programming (Application & Applet) and basic knowledge of exception handling.

11. **Justification for including the course in the programme:**

This course is to equip our students with one of the demanding skills that industry needs as Java is one of the top programming languages used. Additionally, in this mobile era, all Android applications are written in Java.

12. **Course Learning Outcomes (CLO)**

		Domain	Level
CLO1:	Apply object-oriented programming concepts in Java to solve problems.	Cognitive	3
CLO2:	Use a Java IDE (Integrated Development Environment) application to compose, compile and debug codes to produce executable programs.	Cognitive	3
CLO3:	Construct GUI applications and applets using Java GUI components.	Cognitive	3

13. **Mapping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and Assessment:**

Course Learning Outcomes (CLO) (Must tally with CLOs in item 12)	Programme Learning Outcomes (PLO)								Teaching Methods	Assessment Method
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8		
CLO1	✓								Lecture & Lab	Quiz, Midterm Test, Final Exam
CLO2						✓			Lab	Lab Exercises
CLO3						✓			Lecture & Lab	Assignment
Total	**1**					**2**			*Indicate the relevancy between the CLO and PLO by ticking "✓" the appropriate relevant box (This description must be read together with standards 2.1.2, 2.2.1, and 2.2.2 in Area 2 – pages 16 & 18 of COPPA 2.0)*	

14. **Transferable Skills:**

Practical skill, problem solving

15. **Distribution of Student Learning Time (SLT)**

Course Content Outline	**CLO	Teaching and Learning Activities – Guided Learning (F2F)* *L	*T	*P	*O	Guided Learning (NF2F)*	Independent Learning (NF2F)*	Total SLT
1 Introduction to Java Environments Characteristics of Java, Java Language Specification, API, JDK and IDE, A Simple Java Program, Creating, Compiling and Executing a Java program, Anatomy of the Java Program.	**CLO1 and CLO2**	3		2			4	9
2 Revision of fundamental programming in Java Primitive Data Types, Operations and Control Structures.	**CLO1 and CLO2**	3		2			4	9
3 Methods and Arrays Intro to Methods, Passing arguments to a method, Overloading methods, Scope of Local variables. Intro to Arrays, Processing Array Elements, Passing Arrays to Methods, Copying Arrays, Two-Dimensional Arrays, ArrayList class (opt).	**CLO1 and CLO2**	6		4			8	18
4 Object-Oriented: Classes and Objects Classes and Objects, Modifiers, Accessor & Mutator methods, Constructors, UML class diagram.	**CLO1 and CLO2**	6		4			8	18
5 Object-Oriented: Inheritance and Polymorphism Intro to Inheritance, calling superclass constructor, Overriding methods, Protected members, Constructor chaining, The Object class, Intro to Polymorphism	**CLO1 and CLO2**	6		4			8	18
6 Exceptions and Error Handling Exceptions Class, Exceptions Type, Exception Handling.	**CLO1 and CLO2**	3		2			4	9

	7	**Introduction to Graphical User Interface** Java Graphics API, GUI Swing components, Container class: Frame, Panel, Canvas. Layout managers.	**CLO1, CLO2 and CLO3**	3		2			4	9
	8	**Creating User Interfaces and Event-Driven Programming** Component Classes, Button, Label, Text Field, Text Area, Check Boxes, Lists, Combo boxes, Radio Buttons. Event handling model, Action events.	**CLO1, CLO2 and CLO3**	6		2			7	15
	9	**Graphics Programming** Drawing Geometric Figures: Line, Rectangle, Oval, Arc, Polygon and Polylines. Colour Class, Font Class.	**CLO1, CLO2 and CLO3**	3		2			4	9
	10	**Introduction to Applets** Applet Class, Converting Applications to Applets, Viewing Applets from the Applet Viewer Utility and Web Browser, Image and Audio (opt).	**CLO1, CLO2 and CLO3**	3		2			4	9
								Total SLT		**123**

SUMMATIVE ASSESSMENT

1. Continuous Assessment	**Percentage %**	**Total SLT**
Quizzes	15%	3
Lab Exercises	10%	5
Assignment	10%	8
Midterm Test	15%	3
Total SLT for Continuous Assessment		**19**

2. Final Assessment	**Percentage %**	**Total SLT**	
		F2F	**ILT**
Final Exam	50%	2	16
Total SLT for Final Assessment (F2F + NF2F)		**18**	
Grand Total	**100%**	**160**	

****Indicate the CLO based on the CLO's numbering in Item 12.**
***L= Lecture, *T= Tutorial, *P= Practical, *O= Others, F2F*= Face to Face, NF2F*= Non Face to Face**

16 . **Identify Special Requirement to Deliver the Course (e.g., software, nursery, computer lab, simulation room):**
JDK 8 and NetBeans IDE

17 . **Main References:**
Tony Gaddis, Starting Out with Java: From Control Structures through Objects, 6th Edition, Pearson, 2015.

18 . **Additional References:**
Y. Daniel Liang, Introduction to JAVA Programming (Comprehensive Version), 10th Edition, Prentice Hall, 2014.
Paul Deitel and Harvey Deitel, Java How To Program: Early Objects Version, 10th Edition, Prentice Hall, 2013.