TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programm specification.

1. Teaching Institution	Al-Nahrain University / Collegae of Sciences
2. University Department/Centre	Department of Computer Science
3. Course title/code	Object Oriented Programming (OOP)
4. Modes of Attendance offered	Full time
5. Semester/Year	2022-2023/ first semester
6. Number of hours tuition (total)	70 H
7. Date of production/revision of this specification	16/ 10/ 2022
8. Aims of the Course	
Give all principles of Object Oriented Programming	
Train to use OOP principles to solve Real problems	
Provides students high programming skills	
Enable students to make design on paper	
Enable student to trace the run operation	

9. Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Cognitive goals . A1. Differences of OOP from Structured Programming A2.why OOP and its advantages A3.relate OOP principles with its examples of A4. A5. A6 .

B. The skills goals special to the course. B1.High programming skills B2.high programming design and tracing B3.

Teaching and Learning Methods

Pre Info required Oral Lectures Presentation Lectures Train on White Board Explain Lab Ass. Oral and on white board Train at Lab Home Work to a specific group Providing the HW solution for all

Assessment methods

Pre info quiz Weekly Lab ass. Mark 5 Quiz per course Two mids HW Special marks adding to course mark for active students

C. Affective and value goals C1.love programming world C2. Join with other programmers C3.Ohnisty C4.

Week	Title	Sub-Tiles	Lab
1	Pre Info Quiz Classes and Objects	• Designing a Class • Creating Objects from Classes • Access Modifiers: Public and Private	Pre. Info. Quiz
2	Package	• More on Classes • Using Objects as Pointers • Using Packages. • Access Modifiers: Package Access •	A Project for Car-description
3	Constructors	• Constructors • Overloading Constructors • Using this Keyword	Re-Design your Project using packages
4	Composition	• Composition	Re-writing your project using constructors
5	Mid1		Re-design your project using composition
6	finalize, static, and final	• Garbage Collection • Static Variables (Class Variables) • Static Methods (Class Methods) • Static Import • Final Instance Variables	(Heavy Quiz in Lab)
7	Enumerations	• Using Enumerations • Enumerations and Classes	Design a project about students which includes counters
8	Apply many projects as teams		Design project about subjects data using enumerations
9	Inheritance and Protected Access	• Introduction • Protected Access • Examples • Calling Superclass Constructors Overriding Methods	Programming many projects
10	Mid2	•	Apply inheritance on Car Example
11	Polymorphism	• Introduction • Operator instanceof and downcasting • Polymorphism Example	Apply inheritance on Employee example
12	Abstract classes and methods	• Abstract Classes and Methods	Apply polym. On Car example

		Final classes and methods	• Abstract Classes and Methods • Final Classes and Methods	
	13	Interfaces	• Definition • Interface Example	Apply abstract on shape example
	14	Work as teems, applying suggested examples		
	15	Final Lab. Exam		

11. Infrastructure	
1. Books Required reading:	Textbook: Java Concepts, Cay Horstmann, San Jose State University.
2. Main references (sources)	توفير محاضرات ورقية مطبوعة بمستوى عالي وتغطي المادة بالكامل مع التدريبات
A- Recommended books and references (scientific journals, reports…).	الانترنيت مفتوح للمتابعة والاطلاع
B-Electronic references, Internet sites…	الانترنيت مفتوح للمتابعة والاطلاع

12. The development of the curriculum plan
Produce projects I/O form files