Module (Course Syllabus) Catalogue

2023-2024

College/ Institute	Erbil Technical Engineering College	
Department	Technical Information System Engineering	
Module Name	Introduction Object Oriented Programming	
Module Code	IOP301	
Degree	Technical Diploma ☐ Bachler ■	
Semester	First ■	
ECTS (Credits)	7	
Module type	Prerequisite ☐ Core ■ Assist. ☐	
Weekly hours	5	Total Workload=(189) hrs
Weekly hours (Theory)	(2) hr Class	(67) Total hrs Workload
Weekly hours (Practical)	(3) hr Class	(122) Total hrs Workload
Number of Weeks	12	
Lecturer (Theory)	Dana Farhad Abdulqadir	
E-Mail	dana.farhad@epu.edu.iq	
Lecturer (Practical)	Barzan Shekh Youns	
E-Mail	barzan.jalal@epu.edu.iq	
Websites	https://moodle.epu.edu.iq/	

Course Book

<table>
<tr><td>Course Description</td><td colspan="5">The course is generally aimed at making the student familiar with the general concepts common to Object Oriented Programming paradigms and presents the fundamental notions and techniques used in Object oriented programming. It starts with universal basics, relying on object concepts and gradually extending to advanced issues.</td></tr>
<tr><td>Course objectives</td><td colspan="5">This course introduces fundamental concepts in Object Oriented Programming and reviews important concepts in Programming Language; it also attempts to develop good programming skills and habits, the course has a heavy programming component, to be completed using Java Programming Language.</td></tr>
<tr><td>Student's obligation</td><td colspan="5">Student's obligation in the IOOP course is:
• Attendance in all lectures.
• Two or more quizzes in each course.
• Exam in Mid Term and end of course.</td></tr>
<tr><td>Required Learning Materials</td><td colspan="5">• Using data show, white board and PowerPoint, Testing in department’s Laboratory.
• Publish all lectures and notes in Moodle account.</td></tr>
<tr><td rowspan="10">Evaluation</td><td colspan="2">Task</td><td>Weight (Marks)</td><td>No.</td><td>Relevant Learning Outcome</td></tr>
<tr><td colspan="2"></td><td></td><td></td><td></td></tr>
<tr><td rowspan="4">Assignments</td><td>Homework</td><td>%4</td><td>2</td><td>Solve problems of OOP.</td></tr>
<tr><td>Class Activity</td><td>%2</td><td>-</td><td>Be active during class.</td></tr>
<tr><td>Report</td><td>%10</td><td>1</td><td>How to write about OOP programming.</td></tr>
<tr><td>Project</td><td>%10</td><td>1</td><td>Create small project using OOP concept.</td></tr>
<tr><td colspan="2">Lab Report & Activity</td><td>%5</td><td>3</td><td>Solve oop using tools and code.</td></tr>
<tr><td colspan="2">Quiz</td><td>%4</td><td>2</td><td></td></tr>
<tr><td colspan="2">Midterm Exam</td><td>%10</td><td>1</td><td></td></tr>
</table>

	Lab Midterm Exam	%15	1	
	Final Exam	%20	1	
	Lab Final Exam	%20	1	
	Total	%100	1	
Specific learning outcome:	On successful completion of this module, students should be able to gain knowledge of Object-Oriented programming concepts and the following: • Understand the fundamentals of programming in java. • Understand Object-Oriented Programming concepts and techniques. • Be able to design and implement Object-Oriented software to solve complex problems. • Be able to write good program documentation.			
Course References:	• Paul Deitel , Harvey Deitel - Java How To Program, 10th Edition (Early Objects). • C. Thomas Wu, An Introduction to Object-Oriented Programming with Java, Fifth Edition			

Course Topics (Theory) and (Practical)	**Week**	**Learning Outcome**
Introduction to java applications input/output and operators - **26-9-2023**	1	How to input/output value in console by scanner
Control statements – **3,10-10-2023**	2,3	The if, while, do while and FOR statement is used to execute one or more statements repeatedly
Introduction to Classes, objects, methods and strings **17,24-10-2023**	4,5	Introduction to the variable, method and object of class.
Methods a deeper look - **31-10-2023**	6	A deep look to the type of methods
MIDTERM EXAM 4-11-2023		
Arrays and Array Lists **14,21-11-2023**	7,8	How to use the methods inside the array list package.
Classes and objects a deeper look - **28-11-2023**	9	A deep look to class and object, how to call parameters of the object.
Inheritance **5,12,19-12-2023**	10,11,12	The related between super and sub class, override of methods.
FINAL EXAM 04-01-2024		

Questions Example Design

Q1. output:

Q / what is the output of the following code?

```
Class Adder
{
Static int add (int a, int b) {return a+b};
static double add (double a, double b) {return a+b};
}
Class TestOverloading2 {
Public static void main (String [] args)
{
System.out.println(Adder.add(11,11));
System.out.println(Adder.add(12.3,12.6));
}}
```

Solution:

22

24.9

Extra notes:

External Evaluator

I confirm that the syllabus given the attached course book is sufficient and covers the required areas needed for the students.

Signature

Assist Lecturer Mohammad Qasim

15-9-2023