



## Course Syllabus

Faculty : Computing & Information Technology

Department : Computer Science (CS)

Program : Computer Science (CS)

I. General information about the course instructor :							
Name	Mohammed Aqlan	Office Hours(3 Hours Weekly )					
Location & phone number	Computer Science (CS)	Sat	Sun	Mon	Tue	Wed	Thu
Email	m.aklan@ust.edu.ye				√		

II. General information about the course:						
1.	Course Title :	Object Oriented Programming				
2.	Course Code and Number :	CIT10				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	0	2	0	3
4.	Study Level and Semester:	2th year , 2nd semester				
5.	Pre-requisites (if any):	CIT06 - Computer Programming				
6.	Co-requisites (if any):	-				
7.	Program in which the course is offered:	Computing & Information Technology				
8.	Teaching Language:	English				
9.	Instruction location:	Credit hours				

### I. Course Description

This course presents a conceptual and practical introduction object oriented programming, exemplified by Java. As well as providing a grounding in the use of Java, the course will cover general principles of programming in imperative and object oriented frameworks. The course should enable you to develop programs that support experimentation, simulation and exploration in other parts of the Informatics curriculum (e.g. the capacity to implement, test and observe a particular algorithm).

المراجع

أوليد الحويبي

الموصف

أ.محمد الشيباني

## II. Course Aims:

This course aims to:

1. Provides a conceptual foundation of object-oriented programming.
2. Describe the key components of object-oriented programming with a diagrammatic notation using UML.
3. Covers the basics of Java programming and the process of editing, compiling, and running a program.
4. Teaches the creating programmer-defined classes and its relationships.
5. Discusses how to use inheritance and polymorphism effectively in program design.
6. Covers GUI and event-driven programming.

## III. Course Intended Learning Outcomes (CILOs) :

- a1.Explain the components of object-oriented programming  
a2.Identify the components, creating and running of Java programs
- b1.Differentiate components of object-oriented programming
- b2.Draw program diagrams using UML
- c1.Write programs by applying polymorphism in program design  
c2.Write Java programs  
c3.Write GUI application programs using Java

## IV. Course Contents

### Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Object-Oriented Programming	Concepts of Object-Oriented Programming Objects and Classes Basics Method	1	2
2	Introduction to Java	Java Application Java Applet Java API Packages Java Compiler	1	2
3	Numeric Data Input/output Operation & Exception Handling	Identifier Variable and Constant Numeric Data Types Arithmetic Expression Write and read bytes Write and read text data Write and read values of primitive data type Write and read objects	1	2

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4	Loop Structure	Needs for Loop WHILE Loop FOR Loop Nested Loop Relationships of Classes	1	3
5	Decisions Structure	Conditions Statement Equivalent and Relational Operator Logic Operator Operators Priorities Logic Value Assignment IF, IF nested and Multiple Decisions Statement	1	3
6	Mid Term Exam		1	2
7	Building Class	Class Definition Method Definition Instantiable Classes and Constructors Visibility Modifiers: public and private. Local Variable Value Assignment Passing Parameter Math Class Method Method Overloading	2	4
8	Inheritance and Polymorphism	Introduction to Inheritance and polymorphism Class Definition with Inheritance Using Class with Polymorphism Inheritance and Member Accessibility Super classes and Method Abstract	2	6
9	Graphical User Interface (GUI)	Component, Container and Layout Use of button, text slides, text slides, text field, text area, choice button, single/multiple selection list Frame and layout Use of Menu	2	6
10	Graphical User Interface (GUI) (Continue)	Event Handing Applet	1	3
<b>Total number of weeks and hours</b>			<b>13</b>	<b>33</b>

### Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	No. of Weeks	Contact Hours
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1.	Programs using java standard classes	1	2
2.	Write arithmetic expressions in programs java	1	2
3.	Programs with programmer-define class	2	4
4.	Programs with implement selection, repetition control, exceptions and Assertions	1	2
5.	Programs with array, sorting, searching, file input and output	1	2
6.	Programs that are extensible and modifiable by applying polymorphism in program design	2	4
7.	Programs with reusable classes based on inheritance and abstract classes and abstract methods	2	4
<b>Total number of weeks and hours</b>		<b>10</b>	<b>28</b>

## V. Teaching Strategies

- Lectures.
- Problem solving.
- Dialogue and discussion.
- Assignment.

## VI. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Design the class and object diagrams for some problems	2,3	5
2	Create objects from the Java classes	4,5	5
3	Create programmer-defined classes and use them	6,7	5
4	Develop a program that to solve complex problems using OOP	8,9	5

## VII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments	2	20	20%
2	Quiz 1	4	5	5%
3	Midterm Exam	7	20	20%
4	Quiz 2	10	5	5%
5	Final Exam	16	50	50%
<b>Total</b>			100	100%

## VIII. Learning Resources

### 1. Textbooks:

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معتصم  
2023/2024

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<ul style="list-style-type: none"> <li>• Thomas Wu, (2008), An Introduction to Object-Oriented Programming With Java, 5<sup>th</sup>, McGraw-Hil</li> </ul>
<b>2. Essential References:</b> <ul style="list-style-type: none"> <li>• Horstmann, (2006), Big Java, 2nd, Johd Wiley &amp; Sons Inc</li> <li>• Liang,(2003), Introduction to Java Programming, 4th, Prentice Hall</li> <li>• Malik &amp; D.S &amp; Nair, (2003), Java Programming: From Problem analysis To Program Design, 4th , Thomson Learning</li> </ul>
<b>3. Electronic Materials and Web Sites:</b> <ul style="list-style-type: none"> <li>• <a href="http://highered.mcgraw-hill.com/sites/0073523305/student_view0/">http://highered.mcgraw-hill.com/sites/0073523305/student_view0/</a></li> <li>• <a href="http://www.tutorialspoint.com/java/">http://www.tutorialspoint.com/java/</a></li> <li>• <a href="http://www.oracle.com/technetwork/java/index.html">http://www.oracle.com/technetwork/java/index.html</a></li> <li>• <a href="http://docs.oracle.com/javase/7/docs/api/">http://docs.oracle.com/javase/7/docs/api/</a></li> </ul>

IX. Course Policies (To be determined by Faculty Deanship)	
1.	<b>Class Attendance :</b> <ul style="list-style-type: none"> <li>• Students are required to attend all class lectures, tutorials and labs.</li> <li>• Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).</li> </ul>
2.	<b>Tardy :</b> <ul style="list-style-type: none"> <li>• Attendance will be taken every lecture at the first 10 minutes and any student come after that will be considered absent.</li> </ul>
3.	<b>Exam Attendance/Punctuality :</b> <ul style="list-style-type: none"> <li>• Student should be in the examination hall before 15 minutes from the beginning of the exam.</li> <li>• Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent.</li> <li>• Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.</li> </ul>
4.	<b>Assignments &amp; Projects :</b> <ul style="list-style-type: none"> <li>• All assignments must be done on their time. Late assignments will not be accepted.</li> <li>• Projects are assumed to be submitted on or before the dead-lines.</li> </ul>
5.	<b>Cheating :</b> <ul style="list-style-type: none"> <li>• Cheating is strictly prohibited behavior.</li> <li>• University regulations will be pursued and enforced on any cheating student.</li> </ul>
6.	<b>Plagiarism :</b> <ul style="list-style-type: none"> <li>• Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.”</li> <li>• University regulations will be pursued and enforced on any plagiarism attempt.</li> </ul>
7.	<b>Other policies :</b> <ul style="list-style-type: none"> <li>• Students in class, Lab. are required to turn off all cell phones, iPods, ....</li> </ul>

جامعة الزيتونة  
 إدارة ضمان الجودة والاعتماد  
 معتمدا  
 2017

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