



BIRZEIT UNIVERSITY
COMPUTER AND PROGRAMMING (COMP1331)
Course Outline – Summer semester 2021/2022

Course information:

- a. Course Code: COMP1331
- b. Course Name: Computer and Programming
- c. Prerequisite: Comp1310/COMP132/COMP230
- d. Co-requisite: none

Course Description:

Programming in one of high level languages basically Java language; Basic structures of programming tools: language elements (variable names and data types), control statements, methods, arrays, strings, file processing, objects and classes, thinking in objects, and introduction to inheritance and polymorphism.

Course Goals:

During this course, the student will develop better problem solving techniques, programming and program design skills, Procedural Programming. You will learn the principles, knowledge and skills to utilize the object-oriented programming paradigm; using the Java programming language to design and write object-oriented programs to process text files.

Course Objectives:

- Demonstrate understanding of classes, constructors, objects, and instantiation.
- Access variables and modifier keywords.
- Develop methods using parameters and return values.
- Build control structures in an object-oriented environment.
- Convert data types using API methods and objects.
- Design object-oriented programs using scope, inheritance, and other design techniques.
- Create an object-oriented application using Java packages, APIs, and in conjunction with classes and objects.

Course Outcomes:

A. Knowledge and understanding

- 1 .To be familiar with the essential theories, concepts, and principles related to information technology and computer applications as appropriate to the program of study.
- 2 .To gain the knowledge and skills needed to be able to provide computer science solutions to information technology problems.

B. Intellectual/Cognitive skills

1. To be able to analyze problems related to computing and to provide solutions related to the design/construction of computing systems.
- C. *Subject specific and practical skills*
1. Apply appropriate processes and methodologies to specify, design, implement, verify, and maintain computer-based systems.

Teaching and learning methods:

- A. Lectures
 - B. Labs (IDE:  eclipse)
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Faculty:

Lecture #	Instructor Name	Office
1	Hafez Barghouthi	Masri 321

References:

- **Introduction to JAVA Programming, 12th edition**, Author Y.Daniel Liang, Publisher: Prentice Hall.
- **Laboratory Work Book (COMP1331)**

Grading Criteria:

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|------------------------------------|-----|
| • Midterm exam | 30% |
| • Multi-phase project + discussion | 15% |
| • Quizzes | 10% |
| • Final Practical Exam | 10% |
| • Final exam | 35% |

Topics Covered in this Course:

Topics	Chapter	# of lectures
Introduction to Java	1-6	3
Recursion	18	1
Objects and Classes	9	2
Arrays	7,8	2
Midterm Exam (30%)		
Strings	10	1
Introduction to Exception Handling and Text I/O	12	2
Object-Oriented Thinking	10	1
Total # of Lectures		12
Final Exam (35%)		

Lab Outline:

Lab #	Title	Quizzes
1	Elementary Java Programming	
2	Selections	
3	Loops	
4	Methods	Q1 (Lab1,2,3)
5	Recursion	
6	Objects and Classes 1	
7	Objects and Classes 2	Q2 (Lab4,5,6)
8	Single-Dimensional Arrays	
9	Multidimensional Arrays	
10	Strings	Q3 (Lab7,8,9)
11	Text I/O	
12	Class Relationships	Q4 (Lab10,11)
Practical Final Exam (10%) (Lab 1 to 12)		

Special Regulations:

- Late/wrong assignments will **NOT** be accepted for any reason.
- There will be **NO** makeup quizzes.
- Missing any exam without an **acceptable** excuse will result in a zero grade for that exam.
- **Attendance** is mandatory. University regulations will be strictly enforced.
- Academic **honesty**:
 - o Individual project must be each student's own work.
 - o Cheating will result in an official university disciplinary review.

Enjoy COMP1331!!!