



**BIRZEIT UNIVERSITY**

**Advanced Programming (COMP231)**

Course Outline – 2<sup>nd</sup> Semester 2015/2016

**Welcome to COMP231, one of the most motivating programming courses offered at Computer Science Department**

In this course, you will learn some of the concepts, fundamental syntax, and thought processes behind true object-oriented programming (OOP). Upon completion of this course, you'll be able to:

- 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 interfaces, in conjunction with classes and objects.

**In this course, we reinforces concepts with practical exercises in weekly lab sessions and with challenging and engaging programming assignments.**

### Faculty:

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<u>Section #</u>	<u>Instructor Name</u>	<u>Office</u>
1	Dr. <b>Mamoun</b> Nawahdah *	Masri318
2	Mr. <b>Samer</b> Al Zain	Masri322
3	Dr. <b>Nariman</b> Ammar	Masri314

\* Course Cordinator

### Text Book:

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- **Introduction To JAVA Programming, 10<sup>th</sup> edition**, Author Y.Daniel Liang, Publisher: Prentice Hall.
- **Laboratory Work Book (COMP231) (updated one 2016)**

### Grading Criteria:

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|----------------------------------|------------|
| • Midterm exam                   | 30%        |
| • 4 Assignments + <b>Project</b> | <b>15%</b> |
| • 4 Quizzes                      | 10%        |
| • Final Practical Exam           | 10%        |
| • Final exam                     | 35%        |

## Topics Covered in this Course:

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Topics	Chapter	# of lectures
Introduction to Java	1-8	6
Objects and Classes	9	3
Strings	4.4, 10.10, 10.11	2
Thinking in Objects	10	2
Inheritance and Polymorphism	11	3
<b>Midterm Exam (30%)</b>		
Abstract Classes and Interfaces	13	3
Exception Handling and Text I/O	12	3
JavaFX Basics	14	3
JavaFX UI Controls	16	3
Event-Driven Programming	15	3
<b>Final Exam (35%)</b>		

## Lab Outline:

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Lab #	Title	Quizzes
1	Program structure in Java	
2	Structure Programming - Revision	
3	Methods	
4	Arrays and Object Use	<b>Q1</b>
5	Object-Oriented Programming	
6	String I	
7	String II	<b>Q2</b>
8	Inheritance and Polymorphism	
9	Abstract classes and Interfaces	
10	Text I/O	<b>Q3</b>
11	GUI	
12	Event-Driven Programming	<b>Q4</b>
<b>Practical Final Exam (10%)</b>		

## Special Regulations:

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- 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 HW assignments/project must be each student's own work.
  - o Cheating will result in an official university disciplinary review.

**Enjoy COMP231!!!**