

 <b>Lebanese American University</b>	<b>COE</b> 211	
School of Engineering	Computer Programming (Required)	4 credits
<b>Department of Electrical and Computer Engineering</b>	TTh from 09:30–10:45 AM	ENG 404
Course syllabus	Dr. Wissam F. Fawaz	Spring 2020

### 1. Course Description and Course Prerequisite

This is an introductory programming course with an emphasis on algorithm development, programming constructs, computer organization, data representation, debugging, and program testing. A wide range of numerical as well as non-numerical problems relating to engineering will be solved in Java as a means towards reinforcing the understanding of these concepts.

### 2. Course Objectives

Upon satisfactory completion of this course, the students will be able to:

- Understand the principles underlying Object Oriented programming.
- Use a programming language with broad acceptance outside the classroom.
- Develop programs that adhere to specific coding standards.
- Become familiar with the concept of debugging:
  - distinguish between logical and syntax errors
  - be able to identify and correct syntax errors in programs
  - find and correct logical programming errors using pencil and paper tracing
- Utilize an object oriented programming language to solve real life problems related to Engineering

### 3. Contribution of course to meeting the professional component

Professional Component	Credits
Mathematics and Basic Sciences	0
Engineering Topic	4
General Education	0

### 4. Relationship of course to student outcomes

**SO (1):** An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

### 5. Course Outline

Topics to be covered include:

- An introduction to Programming (Week 1)
- Data and Expressions (Weeks 2 & 3)
- Using Classes and Objects (Weeks 4 & 5)
- Writing Classes (Weeks 6 & 7)
- Conditionals and Loops (Weeks 8 – 10)
- Arrays (Weeks 11 & 12)
- Inheritance (Weeks 13 & 14)

### 6. Required tools / software / skills

Java Software Development Kit (JDK)

### 7. Textbook[s]

John Lewis and William Loftus, *JAVA Software Solutions: Foundations of Program Design*, 8th Edition, Pearson, 2015.

### 8. Additional References

B. Eckel, *Thinking in JAVA*, Fourth Edition, Prentice Hall, 2006.  
 Nell Dale, C. Weems and Mark Headington, *Programming and Problem Solving with JAVA*, Johns and Bartlett Publishers, 2003.

**9. Schedule of Exams & Grading Percentage**

Dates for exams I and II will be announced during the course of the semester. There will be one or two announced quizzes a month. Finally, note that the final exam is comprehensive.

Lab:	20%
Homeworks/Quizzes:	15%
Exam I:	20%
Exam II:	20%
Final:	25%

**10. Course Policies**

Cheating is considered to be a very serious breach of the cheating policy of the faculty and will not be tolerated. A student must make a concerted effort to show up for every exam as there will be no make up for missed exams.

**11. General Comments**

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Office: 103, Bassil Bldg, ext: 2414  
Office Hours: TTh from 11:00 am – 12:30 pm and W from 10:00 am – 12:00 pm  
Course webpage: [http://www.wissamfawaz.com/engineering\\_programming.htm](http://www.wissamfawaz.com/engineering_programming.htm)

**12. General Rules & Regulations**

- A student can miss no more than the equivalent of 2 weeks of instruction. Students who exceed the allowed number of absences must withdraw from the course; otherwise, the course grade will be recorded as "F".
- Plagiarism: students caught cheating on an exam receive a grade of zero on the exam in the first cheating attempt and a warning. Students caught cheating for the second time in the same course receive an F grade in the course and a second warning. A grade of zero on an exam resulting from cheating must be counted in the student's course grade. The zero cannot be dropped in computing the final grade in case the instructor has a policy of allowing students to drop their worst exam grade.
- Any student who receives 3 warnings will be suspended.
- **In order to improve the effectiveness of the educational process, all students are expected to submit their course evaluations by the last day of classes. Students who fail to complete the evaluation of ALL registered courses by the set deadline:**
  1. **will not be able to access their course grades from Banner or Portal until two weeks after the end of the final exams period; and**
  2. **will not be able to request transcripts.**

**The anonymity of the process and the students will be maintained at all times.**

**13. Person(s) who prepared this description and date of preparation**

Dr. Wissam Fawaz prepared this syllabus in January 2019.