Università degli Studi della Basilicata

Dipartimento di Matematica, Informatica ed Economia

COURSE: **Object-Oriented Programming II**	
ACADEMIC YEAR: **2019-2020**	
TYPE OF EDUCATIONAL ACTIVITY: **Characterizing**	
TEACHER: Donatello Santoro, Marcello Buoncristiano	
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Language: Italian	

ECTS: 12	n. of hours: 102	Campus: Potenza Dept.: DiMIE Program: Scienze e Tecnologie Informatiche	Semester: Annual

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

Students may achieve the following skills and ability:
Basic and Intermediate Level to pass the final exam
The minimum knowledge level to be acquired in order to pass the final exam regards both theory and practice concepts related to the following topics:
  - Integrated Development Environment (IDE) tools and build automation software
  - Programming techniques (i.e. date, collections, threads, DAO)
  - GUI programming and Model-View-Controller pattern
  - Having basic competences and the ability to apply the aforementioned concepts in Java
  - DBMS programming
  - REST API programming
  - Knowlede of a client-server architecture
  - a deeper knowledge of the course topics
  - good knowledge of the Android platform
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Advanced Level
Achieving the advanced level means that students have all the competences and the skills, in theory and in practice, to design and develop a comprehensive desktop and mobile application with advanced business logic.

PRE-REQUIREMENTS
The course requires the knowledge of the Java platform

SYLLABUS
o   Development Tools: Integrated Development Envirnment (IDE) tools, Build automation software, Logging, Java tools and .NET tools
o   Programming Techniques: Introduction, Collections, Inner classes, Persistence and DAO, Serialization and Cloning, Threads
o   GUI Programming: Introduction, Components, Events, Listeners, Java Swing, Windows Forms, The MVC Pattern
o   Mobile Programming: the Android and iOS platforms
o   Server Programming: Design and server development techniques for the construction of REST APIs
o   Client-Server programming: Client-server development techniques on the Android platform, Client-server development techniques on the iOS platform
o   XML Programming: Json,
o   DBMS Programming: Network principles, The HTTP protocol, DBMS Programming technologies and methologies

TEACHING METHODS

The "Object Oriented Programming II" course is an annual course of 12 credits (CFU). It is composed by two modules ("Elements of Object Programming II" during the first semester and "Complements of Object Programming II" during the second semester). The course will offer 102 teaching hours. In particular, there will be 84h theoretical lessons and 18 hour of laboratory tutorials.

EVALUATION METHODS
Students must take both a multiple choice test and a practical test on the computer; the latter test is provided according to the three learning levels described before (basic, intermediate, advanced).
In addition, students could take the inter-course tests (multiple choice tests) to be done at the end of each semester. Passing such inter-course tests will allow students to directly access to the practical test on the computer (within the September session), also having 2 extra bonus points

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL
Lecture notes available on the web site of the course

INTERACTION WITH STUDENTS
Consulting hours
Dott. Donatello Santoro: Tuesday 12:30 – 13:30 https://book.donatellosantoro.com/
Dott. Marcello Buoncristiano: Thursday 12:30 – 13:30 https://marcellobuoncristiano.youcanbook.me/

EXAMINATION SESSIONS (FORECAST)[1]

o   I intermediate test - 12 December 2019
o   II intermediate test - 4 February 2020
o   III intermediate test - 22 June 2020

o   I Session - 7-8 July 2020
o   II Session - 20-21 July 2020
o   III Session - 10-11 September 2020
o   IV Session - 17-18 December 2020
o   V Session - 8-9 Feburary 2021
o   VI Session - 10-11 May 2021

SEMINARS BY EXTERNAL EXPERTS   YES □   NO X

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[1] Subject to possible changes: check the web site of the Teacher or the Department/School for updates.