

FACULTY OF **ENGINEERING**

DEGREE COURSE: **COMPUTER AND CONTROL ENGINEERING**

MASTER DEGREE: **COMPUTER AND CONTROL ENGINEERING**

**SUBJECT:** PROGRAMMING LANGUAGES

**LECTURER:** LUIGI SARTI

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## **OBJECTIVES**

To develop competencies and skills in the design and programming of complex software applications. The course focuses on advanced development techniques of applications based on object-oriented paradigms, client-server architectures, and concurrent approaches.

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## **CONTENTS**

Object-oriented programming; programming in Java, from introductory to advanced level. Client-side: development of multithread code, graphical user interfaces, database connections. Server-side: Servlet, Java-Beans, JSP. Introduction to the UML formalism.

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## **LEARNING OUTCOMES**

At the end of the course, learners will have developed knowledge and operative skills in:

- using the Java programming language,
  - adopting the UML software design formalism,
  - interfacing Java code and a SQL database,
  - implementing direct manipulation user interfaces,
  - exploiting a variety of programming tools and environments (e.g., the Eclipse IDE).
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## **ASSESSMENT**

Written exam: multiple-choice tests and open-ended questions

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## **RECOMMENDED TEXTBOOKS**

Eckel, B. - Thinking in Java, 4th Edition, Prentice-Hall. ISBN: 0-13-187248-6

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