

FACULTY OF **ENGINEERING**

DEGREE COURSE: **INDUSTRIAL ENGINEERING BS**

**SUBJECT:** BASICS OF COMPUTER SCIENCE

**LECTURER:** DANIELA CASTELLUCCIA

E-mail: [daniela.castelluccia@uniecampus.it](mailto:daniela.castelluccia@uniecampus.it)

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## **OBJECTIVES**

The course aims at providing the basics of computer science and programming to students approaching the Bachelor degree in Industrial Engineering.

The course is composed of:

- 1) Principles: concepts, techniques and methods of programming in Matlab
- 2) Tools: software and examples in support of knowledge transfer and software development
- 3) Exercises: guided examples and exercises in support of application of concepts and techniques.

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## **CONTENTS**

- Evolution of computer science
- Information coding
- Basics of computer architecture
- Networking and Internet
- Principles of software programming
- Programming in Matlab

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## **LEARNING OUTCOMES**

At the end of the course, students will gain:

- knowledge of the basics of computer science
- knowledge of the basics of programming in Matlab
- ability of using computer technologies and programming in practice,
- ability of implementing algorithms for solving problems.

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## **ASSESSMENT**

Written exam: multiple choice and open questions

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## **RECOMMENDED TEXTBOOKS**

- The third session of each learning unit contains references for recommended readings concerning each lecture.
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