

FACULTY OF **ENGINEERING**

DEGREE COURSE: **COMPUTER AND CONTROL ENGINEERING
BS**

SUBJECT: BASICS OF COMPUTER SCIENCE

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OBJECTIVES

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

The course is composed of:

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

CONTENTS

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

LEARNING OUTCOMES

Building of Knowledge:

- basics of computer science
- basics of programming in C and C++

Building of Capability:

- ability of using computer technologies and programming in practice,
 - ability of implementing algorithms for solving problems,
 - ability of detecting and solving bugs in software by means of development tools.
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ASSESSMENT

Written exam: multiple choice and open questions

RECOMMENDED TEXTBOOKS

- The C Programming Language, 2nd Edition, *Brian W. Kernighan*, *Dennis M. Ritchie*
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