



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Computer Programming 1

### Course

Field of study

Engineering Management

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

1/2

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

### Number of hours

Lecture

15

Tutorials

Laboratory classes

30

Projects/seminars

Other (e.g. online)

### Number of credit points

3

### Lecturers

Responsible for the course/lecturer:

Zbigniew Włodarczak, Ph.D. Eng.

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Responsible for the course/lecturer:

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## Prerequisites

Basic knowledge of any programming language.

## Course objective

Strengthening basic programming skills based on the C # language.

## Course-related learning outcomes

### Knowledge

Knows methods and tools for data collection, processing and selection and distribution of information in the context of programming (P6S\_WG\_08)

Has basic knowledge of software life cycle (P6S\_WG\_15)

Knows the basic methods, techniques, tools and materials used to solve simple engineering tasks in the field of programming (P6S\_WG\_16)

Has basic knowledge necessary to understand the non-technical conditions of engineering activities; knows the basic principles of health and safety at work in programming (P6S\_WG\_18)

### Skills

Is able to plan and carry out programming experiments, including computer measurements and simulations, interpret obtained results and draw conclusions (P6S\_UW\_09)

Is able to bear responsibility for own work and jointly implemented tasks and is ready to comply with the rules of work in the programming team (P6S\_UO\_01)

### Social competences

Is able to see cause-and-effect relationships in achieving the set goals and rank the importance of alternative or competitive tasks in the context of programming (P6S\_KK\_02)

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The lecture grade is based on the percentage of the colloquium. Questions and tasks checking understanding of the issues. Passing threshold - 50%.

The grade from the laboratory is given as an average of the grades of individual tasks performed during classes. The assessment takes into account the correctness and completeness of the results obtained.

## Programme content

Object-oriented programming language, object properties, event handling procedures, use and creation of functions, control instructions and use of declarations, operators and selected data types.

## Teaching methods

Lectures: informative lecture, problem lecture, seminar lecture, case method.

Laboratories: laboratory (experiment) method, workshop method.

## Bibliography



Basic

Michaelis M., C# 7.0. Kompletny przewodnik dla praktyków. Wydanie VI, Helion 2019

Lis M., C#. Praktyczny kurs. Wydanie III, Helion 2016

Additional

Jamro M., Struktury danych i algorytmy w języku C#. Projektowanie efektywnych aplikacji, Helion 2019

**Breakdown of average student's workload**

|   | Hours | ECTS |
|---|-------|------|
| Total workload  | 75    | 3    |
| Classes requiring direct contact with the teacher   | 45    | 1,8  |
| Student's own work (literature studies, preparation for laboratory classes, preparation for tests) <sup>1</sup> | 30    | 1,2  |

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<sup>1</sup> delete or add other activities as appropriate