



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Object oriented programming [S1Elmob1>PO1]

Course

Field of study

Electromobility

Year/Semester

1/2

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture

15

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

0

Number of credit points

1,00

Coordinators

dr hab. inż. Leszek Kasprzyk prof. PP
leszek.kasprzyk@put.poznan.pl

Lecturers

Prerequisites

Basic knowledge of computer science and programming. Ability to think abstractly.

Course objective

Understanding the theoretical and practical issues of high-level programming with elements of object oriented programming, acquiring the ability to create applications in the environment of Microsoft Visual Studio (in C #)

Course-related learning outcomes

Knowledge:

Knows the principles of high-level programming. Has knowledge of object-oriented programming useful when creating technical applications.

Skills:

Is able to use programming tools using elements of object-oriented programming.

Social competences:

Can independently search for information in literature and the Internet, also in foreign languages.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

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Knowledge acquired during the lecture is verified during the final test consisting of 10-15 questions (closed and open). Passing threshold: 50% of points. Final issues, on the basis of which questions are prepared, will be sent to students by e-mail using the university e-mail system or through the eKursy system.

Programme content

Basic principles of object-oriented programming

Course topics

Theoretical presentation of the basic issues of object-oriented programming, Visual Studio C # Express Edition environment, issues of representation of physical reality in data structures, object type declarations, fields and methods, readonly fields, static and ordinary object variables, constructors and destructors, properties, overload methods, operator overloads, encapsulation, inheritance, polymorphism and its application, classes and abstract methods, collections, graphic elements, the basics of creating printouts.

Teaching methods

Lecture: multimedia presentation, illustrated with examples given on the board, initiating discussion during the lecture. Additional materials are placed in the eKursy system.

Bibliography

Basic

1. J. Matulewski, Visual C# 2005 Express Edition. Od podstaw, Wyd. Helion, 2006
2. D. Farbaniec, Microsoft Visual Studio 2012 : programowanie w C# Dawid Farbaniec., Wyd. Helion, 2013
3. S. C. Perry, C# i .NET, Wyd. Helion, 2006
4. Trey Nash, Accelerated C# 2010, Apress, 2010
5. R. Elmasri, S. B. Navathe, Wprowadzenie do systemów baz danych, Wyd. Halion, 2005

Additional

1. K. Kuczmarski, Kurs C++, Avocado Software, 2004
2. N.M. Josuttis, C++ Programowanie zorientowane obiektowo, Vademecum Profesjonalisty, Helion 2003
3. Internet

Breakdown of average student's workload

	Hours	ECTS
Total workload	28	1,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	13	0,50