COURSE DESCRIPTION CARD - SYLLABUS

Course name
Information Engineering [S1Eltech1>Inf3]

Course

Field of study
Electrical Engineering

Year/Semester
2/3

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
0

Laboratory classes
15

Other (e.g. online)
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

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Lecturers

Prerequisites

The student starting this subject should have basic knowledge of computer science, as well as algorithmization and programming in high-level languages.

Course objective

Acquiring practical skills in creating a database in an MS Access environment. Learning visual-object programming in the .NET environment (MS Visual C #).

Course-related learning outcomes

Knowledge:
1. knows the definitions and description of the required elements of the database system for a given project topic,
2. knows the general principles of programming in MS Visual C # environment.

Skills:
1. has the ability to design and build simple database systems,
3. has the ability to develop a simple computer program in a high-level language and is able to choose a

set of required program elements (controls) for the implementation of simple engineering projects (input interface, calculations, output interface).

Social competences:
1. can justify the need for IT tools to increase the efficiency of the work of an electrical engineer and improve the economic importance of the enterprise.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

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Laboratory classes: awarding practical knowledge acquired during previous and current laboratory exercises, developing a simple database system, practical checking of programming skills in C #; individual elements evaluated according to the point system with different weight, 50% of the maximum number of points required to pass.

Programme content

Laboratory classes: practical use of database design principles - MS Access environment (creating tables, associations, using SQL queries), programming basics on the .NET platform (MS Visual C #), programming basics in C ++ (syntax, implementation of simple algorithms), basics of object-oriented programming, practical implementation of applications in C #.

Teaching methods

Laboratory classes: demonstrations, independent programming (computational) and database tasks.

Bibliography

Basic
1. Garcia-Molina H., Ullmann J.D., WidomJ. , Systemy baz danych, Helion 2011.
2. Sosinsky B. , Sieci komputerowe Biblia, Helion 2011.
3. Lis M.: SQL. Ćwiczenia praktyczne, Helion, Gliwice 2011.
4. Boduch A.:Wstęp do programowania w języku C#, Helion, Gliwice 2006.
Additional
1. Elmasri R., Navathe S. B.: Wprowadzenie do systemów baz danych, Helion, Gliwice 2005.
2. PerryS. C.: C# i .NET. Core, Helion, Gliwice 2006.
3. Dobrzycki A., Kasprzyk L., Skórcz K., Tomczewski A., Optimization of the number and the distribution of high-frequency signal sources in radio networks, Przegląd Elektrotechniczny - 2015, R. 91, nr 6, s. 92-95.

Breakdown of average student's workload

	Hours	ECTS
Total workload	30	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)	15	0,50