COURSE DESCRIPTION CARD - SYLLABUS

Course name

Information technology

Course

Field of study

Safety Engineering

Area of study (specialization)

Level of study

First-cycle studies

Form of study

part-time

Year/Semester

1/1

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

Number of hours

Lecture

8

Laboratory classes

10

Other (e.g. online)

Tutorials

Projects/seminars

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

Ph.D., Eng. Krzysztof Hankiewicz

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Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

Responsible for the course/lecturer:

Ph.D., Eng. Aleksander Jurga

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Prerequisites

The student has basic computer science knowledge of the high school curriculum

Student can operate basic computer programmes

Course objective

The aim of the course is to give basic information in the field of computer science and to prepare the student to use a computer at the level of the European Computer Driving Licence (ECDL)

Course-related learning outcomes

Knowledge

1. He knows the development trends and best practices in the field of security engineering. He knows the development trends and best practices in the field of security engineering [P6S_WK_03].

2. He knows the basic methods, techniques, tools and materials used in preparation for conducting scientific research and solving simple engineering tasks with the use of information technology, information protection and computer support [P6S_WK_04].

Skills

1. Can properly select sources and information derived from them, make an evaluation, critical analysis and synthesis of this information [P6S_UW_01].

2. Can use various techniques in order to communicate in a professional environment and in other environments [P6S_UW_02].

3. Can use analytical, simulation and experimental methods to formulate and solve engineering tasks, also with the use of information and communication methods and tools [P6S_UW_04].

Social competences

1. He can see the cause-and-effect relationships in the implementation of set goals and rank the importance of alternative or competitive tasks [P6S_KK_01].

2. Is aware of the understanding of non-technical aspects and effects of engineering activities, including its impact on the environment and the related responsibility for decisions made [P6S_KK_03].

3. He can initiate activities related to the formulation and transfer of information and cooperation in the society in the field of security engineering [P6S_KO_02].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

ormative assessment:

a) In the field of lectures: Scored written tests (closed questions) or on the eKursy platform at the end of individual thematic blocks of lectures. Passing threshold min. 50 points. Each lecture ends with control questions as help to solve tests.

b) In the field of laboratory classes: implementation of exercises, practical test on a komputer. Passing threshold min. 50 points.

Summary:

a) In the field of lectures: assessment based on the sum of accumulated test points.

b) In the field of laboratory classes: assessment based on the sum of accumulated points.

Programme content

Lectures:

Basic concepts: Information technology ... and IT. Data and information (functions, features). Information society (pros, cons),… information gap. Information security (cryptography, methods, digital signature). Components and structure of a computer network (typolgie). Internet (construction, types of services). Basic structure of a website (basic principles of its design). HTML and XML (fundamental differences and their comparative structure).

Laboratories:

Complex text formatting. A number of calculation tasks in a spreadsheet with particular emphasis on conditional functions and databases. Preparation of an HTML page with a technical report.

Teaching methods

Information lecture: multimedia presentation, illustrated with examples on the board.

Work with a book.

Demonstration method.

Laboratory method: multimedia presentation illustrated with examples given on a blackboard and performance of tasks given by the teacher - practical exercises.

Bibliography

Basic

1. Jurga A., Wybrane aspekty niwelacji luki informacyjnej oraz jej wpływ na użyteczność informacji. Case study. [w]: Woźniak M. (red.), Społeczeństwo informacyjne – technologie, informacja i wiedza w gospodarce. Zeszyty Naukowe nr 35. Nierówności społeczne a wzrost gospodarczy. Wyd. Uniwersytetu Rzeszowskiego, Rzeszów, 2013, s. 226-236.

2. Wróblewski P., Microsoft Office 2007 PL w biurze i nie tylko, Helion, Gliwice, 2007.

3. Krysiak.K., Sieci komputerowe : kompendium : kompletne omówienie zagadnień sieci komputerowych: typologie i nośniki, sieci bezprzewodowe, usługi sieciowe i protokoły, administrowanie siecią, bezpieczeństwo w sieciach, Helion, Gliwice, 2005.

4. Walkenbach J. Excel 2010 PL. Najlepsze sztuczki i chwyty. Vademecum Walkenbacha, Wyd. Helion , 2012

5. Tomaszewska A., Tworzenie stron WWW. Ilustrowany przewodnik. Wydanie II, Wyd. Helion.

Additional

1. Comer D.E., Sieci komputerowe i intersieci, Wydawnictwo Naukowo-Techniczne, Warszawa 2003

2. Karpiński M., Kurytnik I. P., Sieci komputerowe - bezpieczeństwo. Cz. 1, Metody i systemy kryptograficzne, Wyd. Akademii Techniczno-Humanistycznej, Bielsko-Biała, 2006.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2
Classes requiring direct contact with the teacher	20	1
Student's own work (literature studies, preparation for laboratory classes, preparation for tests)	30	1