



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Information technology in management [S1IBiJ1>lwZ]

### Course

Field of study

Safety and Quality Engineering

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

0

Laboratory classes

30

Other

0

Tutorials

0

Projects/seminars

0

### Number of credit points

2,00

### Coordinators

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### Lecturers

### Prerequisites

1. Knowledge: Knowledge from the high school level. 2. Skills: The student is able to run programs and perform activities with files and directories, use a web browser and e-mail. 3. Social competences: Is able to participate in laboratory activities.

### Course objective

Introducing students to the basic concepts of using an application in a network environment and sharing data and exchanging information between departments of an organization. Developing the ability to create and save simple databases. To acquaint students with the ergonomic features of the software. Initial knowledge of IT issues important for studies in the field of safety engineering.

### Course-related learning outcomes

Knowledge:

1. Describes the process of searching, collecting, and analyzing data, including online sources, recognizing fundamental dilemmas related to information security in the context of contemporary civilization and its development trends [K1\_W10].
2. Defines and characterizes Database Management Systems (DBMS) and their application in enterprises



for managing security and quality, demonstrating advanced knowledge of information technology and information protection [K1\_W11].

3. Explains the importance of copyright protection, information security, and intellectual property protection in the context of data management in a market economy [K1\_W12].

#### Skills:

1. Analyzes and synthesizes information from various sources, including the internet, to assess the usability quality and ergonomic features of software and websites, applying critical data evaluation [K1\_U01].

2. Uses tools and techniques of professional communication, including database management and software evaluation, for effective communication in a professional environment [K1\_U02].

3. Implements analytical, simulation, and experimental methods for creating, managing databases, and evaluating data security, utilizing modern information and communication technologies [K1\_U04].

4. Identifies the need for knowledge supplementation based on changes in requirements, standards, regulations, and technological progress in the field of computer science and management, planning one's educational path [K1\_U12].

#### Social competences:

1. Develops awareness of the importance of continuous improvement in information security and data quality, recognizing their impact on solving engineering problems [K1\_K02].

2. Demonstrates professionalism and adheres to professional ethics principles in the context of computer science in management, promoting respect for diversity and a culture of safety and quality [K1\_K06].

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

#### Formative assessment:

implementation of exercise tasks, practical tests on the computer.

#### Summative assessment:

assessment based on the sum of accumulated points. Passing threshold 50% of the maximum possible number of points to be earned.

### Programme content

The course program covers the basics of database management in an enterprise and the basics of ergonomic assessment of software, websites and mobile applications.

### Course topics

Laboratory classes are conducted in two-hour blocks. The course program covers the following topics: relational data model, elements of SQL language, normalization of logical database schemas, design of logical schemas of relational databases, logical organization of data and basic physical structures of data, as well as principles of assessing the usability of software, websites and mobile applications with taking into account the capabilities and needs of users.

### Teaching methods

Laboratory method: presentation illustrated with examples and carrying out the tasks given by the teacher - practical exercises.

### Bibliography

#### Basic:

1. Adamczewski P., Zintegrowane systemy informatyczne w praktyce, ZNI MIKOM, 2014

2. Beynon-Davies P., Systemy baz danych, WNT, 2000

3. Hankiewicz K., Jakość użytkowa jako cecha determinująca sprawność dokonywania elektronicznych operacji biznesowych, Zeszyty Naukowe Uniwersytetu Szczecińskiego. Ekonomiczne Problemy Usług - 2013, nr 104 (762), p. 199-206

4. Sikorski M., Interakcja człowiek - komputer, Wydawnictwo PJWSTK, 2010.



Additional:

1. Banaszak Z., Kłos S., Mleczko J., Zintegrowane systemy zarządzania, PWE, 2016
2. Januszewski A., Funkcjonalność informatycznych systemów zarządzania, Wydawnictwo Naukowe PWN, 2021
3. Karczewski J., Systemy informatyczne w zarządzaniu bezpieczeństwem i higieną pracy, ODDK, 2000.

#### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	0,50