COURSE DESCRIPTION CARD - SYLLABUS

Course name
Advanced functions od spreadsheet [S1Log2>ZFAK]

Course

Field of study
Logistics

Year/Semester
1/1

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

High school knowledge in the field of computer science and science. Basic computer and office skills. Ability to work in a laboratory group.

Course objective

Students should become proficient in using a spreadsheet in the field of engineering calculations with the use of various types of functions, including selected optimization issues. They should also be able to analyze data on the basis of created charts or reports.

Course-related learning outcomes

Knowledge:
1. Student should know the basic issues in the field of mathematics and statistics, which can be used in the creation of computational formulas in the study of the structure of economic and logistic phenomena [P6S_WG_04]
2. Student should know the basic management issues specific to logistics and supply chain management [P6S_WG_08]

Skills:
1. Student should be able to identify and formulate a design (engineering) task of a practical nature, characteristic for logistics [P6S_UO_01]
2. Student should be able to choose the right tools, spreadsheet functions and methods of solving the problem within logistics and supply chain management, and be able to use them effectively [P6S_UO_02]

Social competences:
1. Student should be aware of the importance of the application of a spreadsheet and knowledge of logistics and supply chain management in solving cognitive and practical problems [P6S_KK_02]
2. Student should be aware of initiating activities related to the formulation and transfer of information using a spreadsheet and cooperation in the society in the area of logistics [P6S_KO_02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Laboratory: Formative assessment consists of grades that students receive for carrying out practical tasks during two 1.5-hour tests during the laboratory on a computer in an MS Excel spreadsheet, checking the mastery of the skills acquired during the classes (entering formulas using appropriate functions, creating graphs and reports). The first test takes place in the middle of the semester and the second one at the last laboratory. A certain number of points are awarded for each task. Passing a given test with a positive grade requires obtaining at least 51% of the total number of points. Summary grade from the laboratory, which the student receives at the end of the semester, issued as the average of the partial grades obtained by the student for individual tests. The correctness and completeness of the results achieved are taken into account for the evaluation.

Programme content

Working with MS Excel spreadsheet: data formatting, formulas, functions, absolute addresses, creating and formatting charts, filtering and sorting data, reports, macros, conditional formatting.

Course topics

Working with MS Excel spreadsheet (moving, creating copies, renaming). Data formatting. Create formulas with mathematical and statistical functions using relative, absolute and mixed addresses. Formulas with conditional expressions in MS Excel. Financial functions in a spreadsheet. Text expressions. Expressions with date and time functions on a worksheet. Expressions with counting functions. Creating and formatting charts. Databases in a spreadsheet: autofilter, advanced filter, subtotal report, pivot table report. Expressions with search functions. Macros and conditional formatting in a spreadsheet.

Teaching methods

Laboratory: Methods of practical education, aimed at acquiring knowledge and applying specific skills in practical application, allowing students to assess the usefulness of the presented content and the developed skills in everyday life and professional career: 1. Programmed methods, consisting in working with a selected tool (MS Excel spreadsheet) allowing for efficient familiarization with the content of education, enabling students to obtain and learn new facts, quickly obtain a general view on a given issue, applied with the use of a computer and with the use of e-learning tools. 2. Practical methods, consisting in performing the tasks given by the teacher, enabling the development of the skills of effective action, implementation of theory into practice and gaining new experience in action (practical laboratory exercises). 3. A multimedia presentation illustrated with examples and showing how to perform tasks.

Bibliography

Basic:
1. Wrotek W., Excel 2019 PL. Kurs, Helion, Gliwice 2014 i 2019.
2. Walkenbach J., Excel 2010 PL. Najlepsze sztuczki i chwyty. Vademecum Walkenbacha, Helion, Gliwice, 2012.

Additional:

1. Walkenbach J., Alexander M., Analiza i prezentacja danych w Microsoft Excel. Vademecum Walkenbacha, Helion, Gliwice, 2014.

Breakdown of average student's workload

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