

COURSE DESCRIPTION CARD

NOTE: If the course includes lectures and classes, the Course Description Card applies to both types of instruction.

1. Course title:
Zaawansowana analiza danych
Advanced data analysis

2. Course code:
Number of ECTS credits: 4,0
Course completion mode: Z
Course commenced / Year 2023/24

3. Major: Finance and Accounting for Business

4. Department of major coordinator: Department of Banking and Financial Markets

5. Name of course instructor:
Lecture Dariusz Grabara, Ph.D.
Classes -
Lab classes Dariusz Grabara, Ph.D., Monika Eisenhardt, Ph.D.
Examiner Dariusz Grabara, Ph.D.

6. Department of course instructor: Department of Business Informatics and International Accounting

7. Number of contact hours with students:

Type of instruction	Full-time study	Part-time study
lectures	15	9
classes		
foreign language classes		
lab classes	15	12
seminars		
e-learning		
other		
Total hours	30	21
examination (hours)		

8. Course timeframe - no. of semesters: 1

Course commencement / Year 2

Course commencement / Semester 4

9. Level of tertiary education: Full-time second-cycle studies

10. Course status
 Compulsory for the major
 Compulsory for the specialization
 Elective

11. Course prerequisites
Compulsory: -
Recommended: -

12. Course objectives:

- Presentation of specialized knowledge related to the Excel spreadsheet for advanced economic and financial analyses.
- Developing skills related to the Excel spreadsheet for advanced and economic financial analysis
- Improving social competences related to the Excel spreadsheet for business purposes.

13. Teaching and learning methods:**A. Direct student-instructor contact:**

No.	Teaching methods	Description	Number of hours	
			Full-time study	Part-time study
1.	Computer laboratory	Work with MS Excel and database software. Online lectures require access to Google Meet, Internet, and computer with camera and microphone.	15	7
2.	Case studies	Case study and discussion using advanced analyses for business purposes. Online lectures require access to Google Meet, Internet, and computer with camera and microphone.	13	12
3.	Presentation	Project presentation – MS Excel. Online presentation requires access to Google Meet, Internet, and computer with camera and microphone.	2	2
Total			AS:30	AN:21

B. Self-study:

No.	Learning methods	Description	Number of hours	
			Full-time study	Part-time study
1.	Project preparation	Project (case study) - internet solutions for business and finance	20	28
2.	Self-study using computer	Work with literature and online practical solutions to complete a final project	25	22
3.	Analysis of notes and lessons	Analysis of notes taken during classes	15	17
4.	Cause-effect study using literature	Analysis of literature related to relevant issues	10	12
Total			BS:70	BN:79

Total AS+BS = 100
 Examination (E) = 0
 Total AS+BS+E= 100

Total AN+BN =100
 Examination (E) =0
 Total AN+BN+E = 100

14. Key words: business analysis, spreadsheets, business data, MS Excel, decision making

15. Course content:

1. Advanced use of Microsoft Excel:
Creating advanced functions (nested functions)
Use of data from various sources for analysis and reporting
Creating advanced analyses and reports related to business data
Management control panels in Excel
Using Solver to make decisions
2. Solving cases from business practice using advanced functions of MS Excel and its options
3. Introduction to VBA. Macros and VBA instructions for solving business tasks
4. Data exchange between Excel and other software for the purposes of business analysis

16. Course learning outcomes as related to the learning outcomes of the major and methods for assessing student attainment

Intended learning outcomes of the major / Symbols	Intended learning outcomes of the course	Methods for assessing student learning outcomes	Documentation
<u>Knowledge</u>			
FAB2_W01#	Students have knowledge of how to use advanced Excel functions for analysing and presenting data in business and finance	1. Final project 2. Midterm tests	1. Projects set, 2. School record
<u>Skills</u>			
FAB2_U03#	Students are able to analyse economic and financial data using the advanced capabilities of MS Excel, are able to draw conclusions about economic and financial issues and are able to use MS Excel for the business and financial institutions	1. Final project 2. Midterm test	1. Projects set, 2. School record
FAB2_U04#	Students can use MS Excel in a foreign language and describe practical economic issues in this language.	1. Final project 2. Midterm test	1. Projects set, 2. School record
<u>Social competences</u>			
FAB2_K01#	Students understand the need for continuous learning, are able to plan, implement and use ICT, especially using MS Excel for business practice	1. Final project	1. Projects set, 2. School record

17. Method for determining the final course grade:

No.	Methods for awarding credits and course completion requirements	Description	Percentage of the final course grade*
1.	Presentation	Project presentation in groups - lecture	50,00%
2.	Project	Implementation of the project - laboratory	50,00%

* If students are required to obtain both a class grade and an exam grade, the class grade constitutes at least 30% of the final course grade.

18. Reading list

Mandatory readings:

1. Microsoft: Excel 2013 Training. https://support.office.com/en-us/article/excel-2013-training-aaae974d-3f47-41d9-895e-97a71c2e8a4a?wt.mc_id=otc_exc

Suggested readings:

1. Winston W., Microsoft Excel 2010: Data Analysis and Business Modeling, 3rd Edition, Microsoft Press, 2012.
2. Chmielarz W., Selected Problems of Information Technology Development, Warsaw University, 2005
3. Grabara D., iPhone 11 premium mobile device offers on e-commerce auction platform in the context of Marketing Mix framework and COVID 19 pandemic, International Conference on Knowledge-Based and Intelligent Information and Engineering Systems [KES], Procedia Computer Science, 192, 2021, <https://doi.org/10.1016/j.procs.2021.08.177>

19. Language of instruction: English

20. Course instructors' recommendations:

Software: MS Office, MS Excel

Lecture hall: computer room

Classroom: computer room

Basic knowledge connected with Excel spreadsheet