COURSE DESCRIPTION CARD

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

1. Course title:
in Polish / in English BASIC PROGRAMMING FOR ACCOUNTANTS

2. Course code:
Number of ECTS credits: 3
Course completion mode:
Course commenced / Year 2022/2023

3. Major:

4. Department of major coordinator:

5. Name of course instructor: Lecture dr inż. Anna Karmańska
Classes… Lab classes …
Examiner dr inż. Anna Karmańska

6. Department of course instructor: Department of Computer Science 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		
seminars		
e-learning		
other		
Total hours	15	9
examination (hours)		

8. Course timeframe - no. of semesters: 1

Course commencement / Year …

Course commencement / Semester …

9. Level of tertiary education: …

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

11. Course prerequisites
Compulsory: FUNDAMENTALS OF ACCOUNTING, FINANCIAL ACCOUNTING
Recommended:

12. Course objectives:
1. Presenting knowledge of the basics of computer programming - familiarizing students with the basics of the Python language, variables, arithmetic operations, displaying and entering data, creating functions, conditional statements and loops.
2. Developing basic programming skills to support accounting processes in business entities.
3. Developing social competences in making decisions regarding the use of programming language in accounting.

13. Teaching and learning methods:

A. Direct student-instructor contact:

No.	Teaching methods	Description	Number of hours	
			Full-time study	Part-time study
1.	Active lecture using multimedia techniques		13	8
2.	other		2	1
3.				
…				
Total			AS:15	AN:9

B. Self-study:

No.	Learning methods	Description	Number of hours	
			Full-time study	Part-time study
1.	Analysis of lecture notes		40	46
2.	Independent work		20	20
3.				
…				
Total			BS:60	BN:66

Total AS+BS = 75
Examination (E) = 0
Total AS+BS+E= 75

Total AN+BN = 75
Examination (E) = 0
Total AN+BN+E = 75

14. Key words: . Python software language, data analysis

15. Course content:
1. Python software language
2. Anaconda and Jupyter work environment
3. Basic types of variables, arithmetic operations
4. Displaying and entering data
5. Creating functions
6. Conditional instructions, loops
7. Pandas library
8. Examples of using Python in accounting

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
Knowledge			
FiR1_W01#	Student has knowledge of the basics of programming. Student knows the basic procedures for building computer programs for use in accounting.	Design Assessment of basic programming skills. Observation of the student's work and his contribution (preparation) during classes	List of control questions - form Student's written work - colloquium (or project, if prepared by the student)
Skills			
FiR1_U02#	Student is able to properly use methods and tools appropriate for finance and accounting, including modern information and communication techniques covering the basics of programming	Design Assessment of basic programming skills. Observation of the student's work and his contribution (preparation) during classes	evaluation summary
Social competences			
FiR1_K01#	Student is ready to critically evaluate his own knowledge and received content in the field of finance and accounting.	Design Assessment of basic programming skills. Observation of the student's work and his contribution (preparation) during classes	evaluation summary

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.	Project		90%
2.	Activity		10%
3.			

* 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. Navlani A., Fandango A., Idris I., (2021) Python Data Analysis. Perform data collection, data processing, wrangling, visualization, and model building using Python - Third Edition, Packt Publishing

Suggested readings:

1. Karmańska, A. (2023). Coding Skills in the Automation of Accounting Processes. Folia Oeconomica Stetinensia, 23(1), 107–123. **https://doi.org/10.2478/foli-2023-0006**

2. Karmańska A. (2023). Auditor Choice Prediction using Machine Learning, Procedia Computer Science, 2023, vol. 225, s.1062-1072. DOI:10.1016/j.procs.2023.10.094
19. Language of instruction: English
20. Course instructors' recommendations: