#### Card of course

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| 1. Subject name
 | Descriptive statistics |

1. Location of the subject in the system of studies

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| --- | --- |
| 1.1. Programme | Management |
| 1.2. Mode of study | Full time studies / Part time studies |
| 1.3. Level of degree | 1 degree |
| 1.4. Profile | Practical |

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| 1.5. Speciality |  |
| 1.6. Lecturer responsible for the subject | Paweł Wlaź |

2. general characteristics of course

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| 2.1. Connection with a subject group | Directional/practical |
| 2.2. Total credits (ECTS) | 4 |
| 2.3. Language of instruction | English |
| 2.4. Semesters in which the subject is carried out | 1 |
| 2.5. Criterion for selection of listeners | - |

1. Learning outcomes and method of conducting classes
	1. Aim of the subject

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| --- | --- |
| Lp. | Aim of the subject |
|
| C1 | Acquisition of knowledge regarding the essence of a statistical survey |
| C2 | Acquiring knowledge about the types of scales used in statistical research |
| C3 | Acquiring the ability to graphically illustrate the described statistical sets |
| C4 | Acquiring the ability to describe data using appropriate measures and coefficients  |

3.2. Learning outcomes, divided into KNOWLEDGE, SKILLS AND COMPETENCIES, with reference to learning outcomes for an area (s) and a field of study

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| --- | --- | --- |
| Lp. | Description of learning outcomes | Reference to the learning outcomes |
| After completing the subject, student in the range of **KNOWLEDGE**,can |
| W1 | the student has knowledge of the importance of statistics as a science and its connections with other fields of knowledge | Z1\_W03 |
| W2 | the student has knowledge of descriptive statistics, allowing the analysis of phenomena related to other scientific disciplines | Z1\_W03 |
| W3 | the student knows the appropriate computational techniques supporting the methods of descriptive statistics and understands their limitations  | Z1\_W03 |
| After completing the subject, student in the range of **SKILLS**, can |
| U1 | the student is able to formulate the aim, subject and scope of the statistical research | Z1\_U04 |
| U2 | the student is able to present the results of a statistical survey | Z1\_U04 |
| U3 | the student is able to perform quantitative analyzes and on this basis to formulate qualitative conclusions regarding the studied phenomenon  | Z1\_U04 |
| After completing the subject, student in the field of **SOCIAL COMPETENCES**, can |
| K1 | understand the limitations of their own knowledge and the need for further education | Z1\_K06 |

* 1. 3.3. Type of classes and number of hours – Full time studies (ST), Part time studies (NST)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mode of study | Lecture | Exercises | project | workshops | Lab | Seminar | lectureship | Additional Online ……….(form) | Others | **ECTS** |
| **ST** | **8** | **7** |  |  |  |  |  |  |  | **4** |

3.4. Curriculum content (separately for each type of classes: (Lecture, Discussions, project workshops, Lab, Seminar, lectureship)

TYPE OF CLASSES: lectures

|  |  |  |
| --- | --- | --- |
| Lp. | Content of classes | Form of teaching |
| full time studies | Part time studies |
| CLASSES | PLATFORM | CLASSES | PLATFORM |
| 1. | Objectives of statistics, statistical group, scales used in statistics | X |  |  |  |
| 2. | Graphic illustration of the statistical population | X |  |  |  |
| 3. | Measures of position, dispersion, symmetry | X |  |  |  |
| 4. | Correlation and linear dependence in statistics  | X |  |  |  |

TYPE OF CLASSES: exercises

|  |  |  |
| --- | --- | --- |
| Lp. | Content of classes | Form of teaching |
| full time studies | Part time studies |
| CLASSES | PLATFORM | CLASSES | PLATFORM |
| 1. | Recognition of types of statistical populations, graphic illustrations | X |  |  |  |
| 2. | Calculation of position measures | X |  |  |  |
| 3. | Calculating and interpreting scattering measures and symmetry measures | X |  |  |  |
| 4. | Creation of simple line models for two-dimensional data  | X |  |  |  |

3.5 Methods of evaluation of learning outcomes (in relation to particular effects)

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| --- | --- |
| Learning outcome | Form of evaluation |
| Oral exam | Written exam | Project | Test | Homework | PaperReport | Discussion | Others |
| W1 |  |  |  | X |  |  |  |  |
| W2 |  |  |  | X |  |  |  |  |
| W3 |  |  |  | X |  |  |  |  |
| U1 |  |  |  | X |  |  |  |  |
| U2 |  |  |  | X |  |  |  |  |
| U3 |  |  |  | X |  |  |  |  |
| K1 |  |  |  | X |  |  |  |  |

3.6. Criteria for assessing the achieved learning outcomes

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| --- | --- | --- | --- |
| Learning outcome | Student receiving a grade 3 is able to: | Student receiving a grade 4 is able to: | Student receiving a grade 5 is able to: |
| W1 | knowledge of the importance of statistics and its relationship to other domains of knowledge concerns only the most basic aspects | the student has knowledge of the importance of statistics as a science and its connections with other areas of knowledge to a limited extent, | the student has knowledge of the importance of statistics as a science and its relationship with other fields of knowledge to the full extent |
| W2 | the student has knowledge of descriptive statistics, allowing the analysis of phenomena related to other scientific disciplines in relation to the simplest applications | the student has knowledge of descriptive statistics, allowing the analysis of phenomena concerning other scientific disciplines to a limited extent | the student has knowledge of descriptive statistics, allowing the analysis of phenomena related to other scientific disciplines |
| W3 | the student knows the appropriate computational techniques, supporting the methods of descriptive statistics only in the most basic cases | the student knows the appropriate computational techniques, supporting the methods of descriptive statistics to a limited extent  | the student knows the appropriate computational techniques, supporting the methods of descriptive statistics in the full range discussed in the class  |
| U1 | the student is able to formulate the goal, the subject of statistical research, but only in the simplest cases | the student is able to formulate the goal, the subject of statistical research, but to a limited extent | the student is able to formulate the goal, the first subject of statistical research |
| U2 | the student is able to present the results of a statistical survey in the simplest cases | the student is able to present the results of a statistical survey to a limited extent | the student is able to present the results of a statistical survey |
| U3 | the student is able to perform quantitative analyzes and on this basis to formulate qualitative conclusions regarding the studied phenomenon—to the extent limited to the simplest cases  | the student is able to perform quantitative analyzes and on this basis to formulate qualitative conclusions regarding the studied phenomenon—to a limited extent  | the student is able to perform quantitative analyzes and on this basis to formulate qualitative conclusions regarding the studied phenomenon  |
| K1 | He is present at the class and rarely asks questions | In addition, he is active in class, asks for verification of his own ideas of solutions, broadens his knowledge, sometimes reaching for literature | He is very active in classes, and in the case of his own solutions, he discusses their correctness and quality, broadens his knowledge by reading specialist literature  |

3.7. Literature

**Basics**

1. J.R. Movellan. *Introduction to Probability Theory and Statistics* [available online]
2. F.M. Dekking, C. Kraaikamp, H.P. Lopuhaa, L.E. Meester. *A Modern Introduction to Probability and Statistics* [available online]

**Supplementary**

1. D.M. Lane at al. *Online Statistics Education: An Interactive Multimedia Course of Study* [available online]
2. Robert Johnson. *Elementary statistics*

4. Student’s workload – balance of credits (ECTS)

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| --- | --- |
| **Activity** | **Student workload** |
| **Full time studies** | **Part time studies** |
| **CONTACT HOURS (activities that require direct participation of an academic teacher)** | **15** |  |
| Participation in classes | 15 |  |
| Consultations (min. 10% of hours provided for any form of classes) | 2 |  |
| **STUDENT'S OWN WORK** | **85** |  |
| Independent study on the subject of lectures and completion of homework | 25 |  |
| Self-preparation for other classes than lecture (project etc.) | 20 |  |
| Preparation for evaluation | 20 |  |
| Preparation for evaluation and passing an exam | 20 |  |
| **TOTAL STUDENT WORKLOAD** | **100** |  |
| **Credits (ECTS) for a subject** | **4** |  |

|  |  |
| --- | --- |
| Date of last change | 30.09.2021 |
| Zmiany wprowadził | *Paweł Wlaź* |
| Zmiany zatwierdził |  |