**CARD OF COURSE**

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| 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 | Bachelor degree |
| 1.4. Profile | Practical |

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

2. General characteristic of the subject

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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 | I |
| 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 |

* 1. 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  (symbols) | Form of teaching  (mark with a „X”) | | | | | |
| ST | | NST | | NST PUW | |
| Classes at the University | Classes  on a platform | Classes at the University | Classes  on a platform | Classes at the University | Classes  on a platform |
| After completing the subject, student in the range of **KNOWLEDGE**,know and understand | | | | | | | | |
| W1 | the student has knowledge of the importance of statistics as a science and its connections with other fields of knowledge |  |  | X |  |  |  |  |
| W2 | the student has knowledge of descriptive statistics, allowing the analysis of phenomena related to other scientific disciplines |  | X |  |  |  |  |
| W3 | the student knows the appropriate computational techniques supporting the methods of descriptive statistics and understands their limitations |  | X |  |  |  |  |
| 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 | X |  |  |  |  |  |
| U2 | the student is able to present the results of a statistical survey | X |  |  |  |  |  |
| U3 | the student is able to perform quantitative analyzes and on this basis to formulate qualitative conclusions regarding the studied phenomenon | X |  |  |  |  |  |
| After completing the subject, student in the field of **SOCIAL COMPETENCES**, is able to | | | | | | | | |
| K1 | understand the limitations of their own knowledge and the need for further education | Z1\_K06 | X | X |  |  |  |  |

3.3. Type of classes and number of hours - full time studies (ST), part time studies (NST)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mode  of study | Lecture | Exercises | Project | Workshops | Lab | Seminar | Lectorate | Using distance learning methods and techniques in the form of lecture | Others | **ECTS** |
| **ST** |  | 15 |  |  |  |  |  | 15 |  | 4 |
| **NST** |  |  |  |  |  |  |  |  |  | 4 |
| **NST PUW** |  |  |  |  |  |  |  |  |  | 4 |

3.4. Curriculum content (separately for each type of classes). Mark (X) how the content will be implemented (classes at the university or classes on the platform conducted using distance learning methods and techniques)

TYPE OF CLASSES: LECTURE

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Lp. | Content of classes | Form of teaching  (mark with a „X”) | | | | | |
| ST | | NST | | NST PUW | |
| **Classes at the University** | **Classes  on a platform** | **Classes at the University** | **Classes  on a platform** | **Classes at the University** | **Classes  on a 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  (mark with a „X”) | | | | | |
| ST | | NST | | NST PUW | |
| **Classes at the University** | **Classes  on a platform** | **Classes at the University** | **Classes  on a platform** | **Classes at the University** | **Classes  on a 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 (describe the methods of teaching and verification of learning outcomes):

Methods of teaching: Lectures with presentations including theory and ways to solve problems; during exercises – solving problems connected with statistics

Methods of verification of learning outcomes: activity during exrcises, tests written during exercises, final test

3.6. Criteria for assessing the achieved learning outcomes

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| --- | --- | --- | --- |
| Learning outcome | For a grade of 3 student knows and understands/can/is able to: | For a grade of 4 student knows and understands/can/is able to: | For a grade of 5 student knows and understands/can/is able to: |
| W | 60-75% of the knowledge indicated in the learning outcomes | 76-91% of the knowledge indicated in the learning outcomes | 91-100% of the knowledge indicated in the learning outcomes |
| U | 60-75% of the skills indicated in the learning outcomes | 76-91% of the skills indicated in the learning outcomes | 91-100% of the skills indicated in the learning outcomes |
| K | 60-75% of the skills indicated in the learning outcomes | 76-91% of the skills indicated in the learning outcomes | 91-100% of the skills indicated in the learning outcomes |

3.7. Literature

**Basic**

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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| --- | --- | --- | --- |
| **Student’s activity** | **Student’s workload** | | |
| **ST** | **NST** | **NST PUW** |
| **CONTACT HOURS (activities that require direct participation of an academic teacher)** | **30** |  |  |
| Classes provided by the study plan | 30 |  |  |
| Consultation (min. 10% of hours provided for any form of classes) | 3 |  |  |
| **STUDENT’S OWN WORK** | **70** |  |  |
| Preparation for class, preparation of project work/presentations/etc | 35 |  |  |
| Preparation for passing the classes | 35 |  |  |
| **TOTAL STUDENT WORKLOAD** | **100** |  |  |
| **Credits (ECTS) for a subject** | **4** |  |  |

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| --- | --- |
| Date of last change | 26.10.2022 r. |
| Changes introduced | Paweł Wlaź |
| Changes approved |  |