**COURSE OUTLINE**

1. **GENERAL**

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| **SCHOOL** | SCHOOL OF ECONOMICS AND MANAGEMENT SCIENCE | | | | |
| **ACADEMIC UNIT** | DEPARTMENT OF ECONOMICS | | | | |
| **LEVEL OF STUDIES** | BSc | | | | |
| **COURSE CODE** | **OIK203** | **SEMESTER** | | **1st** | |
| **COURSE TITLE** | Statistics I | | | | |
| **INDEPENDENT TEACHING ACTIVITIES** *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits* | | | **WEEKLY TEACHING HOURS** | | **CREDITS** |
| Credits are awarded collectively for the course as a whole | | | 4 | | 7.5 |
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| *Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).* | | |  | |  |
| **COURSE TYPE**  *general background,  special background, specialised general knowledge, skills development* | *general background* | | | | |
| **PREREQUISITE COURSES:** | ΝΟ | | | | |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | GREEK | | | | |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | NO | | | | |
| **COURSE WEBSITE (URL)** | https://ecourse.uoi.gr/course/view.php?id=2792 | | | | |

1. **LEARNING OUTCOMES**

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| **Learning outcomes** | |
| *The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.*  *Consult Appendix A*   * *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area* * *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B* * *Guidelines for writing Learning Outcomes* | |
| Upon completion of the course, students will be able to:   * Understand the fundamental concepts of statistics and probability. * Recognize the importance of statistics in the field of economics and its application to real-world problems. * Collect, organize, and analyze data effectively. * Use descriptive statistical measures, such as measures of central tendency and variability, to interpret data * Understand and apply probability distributions of both discrete and continuous random variables to practical problems. * Become familiar with estimation theory and perform point estimation. * Calculate confidence intervals for population parameters. | |
| **General Competences** | |
| *Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?* | |
| *Search for, analysis and synthesis of data and information, with the use of the necessary technology*  *Adapting to new situations*  *Decision-making*  *Working independently*  *Team work*  *Working in an international environment*  *Working in an interdisciplinary environment*  *Production of new research ideas* | *Project planning and management*  *Respect for difference and multiculturalism*  *Respect for the natural environment*  *Showing social, professional and ethical responsibility and sensitivity to gender issues*  *Criticism and self-criticism*  *Production of free, creative and inductive thinking*  *……*  *Others…*  *…….* |
| Search for, analysis and synthesis of data and information, with the use of the necessary technology  Production of free, creative and inductive thinking  Working independently  Respect for the natural environment  Criticism and self-criticism  Decision-making | |

1. **SYLLABUS**

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| • Basic Concepts: Population, Sample, Parameter, Variable, Function, Confidence  • Sampling techniques  • Descriptive statistical measures: Measures of central tendency, Measures of variability, Measures of skewness, Measures of kurtosis  • Types of variables  • Probability theory  • Discrete probability distributions  • Continuous probability distributions  • Sampling distributions – Central Limit Theorem (CLT)  • Estimation theory – Confidence intervals |

1. **TEACHING and LEARNING METHODS - EVALUATION**

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| **DELIVERY** *Face-to-face, Distance learning, etc.* | *Face-to-face* |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY** *Use of ICT in teaching, laboratory education, communication with students* | **The course material is uploaded on the e-course platform, which is also used for communication with students. Grades are recorded in ClassWeb. During the course, students are encouraged to use statistical software (e.g., MS Excel, SPSS) for data analysis** |
| **TEACHING METHODS**  *The manner and methods of teaching are described in detail.*  *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.*  *The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS* | |  |  | | --- | --- | | ***Activity*** | ***Semester workload*** | | Lectures | 52 | | Supervised Study | 49 | | Non-supervised study | 49 | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | | Course total | ***150*** | |
| **STUDENT PERFORMANCE EVALUATION**  *Description of the evaluation procedure*  *Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other*  *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.* | Written final examination in Greek  Optional midterm examination (Progress test) |

1. **ATTACHED BIBLIOGRAPHY**

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| *- Suggested bibliography:*  *Βασικές Αρχές Στατιστικής για Επιχειρήσεις-Έννοιες και Εφαρμογές, Berenson L. Mark, Levine M. David, Szabat A. Kathryn*  *Αρχές Στατιστικής, Triola Mario F.*  *Στατιστική για τη διοίκηση και τα οικονομικά, Newbold Paul, Carlson William L., Thorne Betty M. (Συγγρ.) - Σκίντζη Βασιλική, Λορεντζιάδης Παναγιώτης, Πλακανδάρας Βασίλειος Γ., Τσιούμας Ευάγγελος*  *- Related academic journals:*  Journal of Business & Economic Statistics  Computational Statistics & Data Analysis  Statistical Methods and Applications |