

COURSE OUTLINE

1. GENERAL INFORMATION

SCHOOL	MARITIME AND INDUSTRIAL STUDIES		
DEPARTMENT	INDUSTRIAL MANAGEMENT AND TECHNOLOGY		
LEVEL OF STUDY	UNDERGRADUATE		
COURSE UNIT CODE	ΤΕΣΤΑ02-1	SEMESTER OF STUDY	3 rd
COURSE TITLE	STATISTICS		
INDEPENDENT TEACHING ACTIVITIES <i>in case in which credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
Lectures, Laboratory exercises			5.5
<i>Add rows if necessary. The organization of teaching and the teaching methods used are described in detail at section 4.</i>			
COURSE TYPE <i>general background, special background, specialized general knowledge, skills development</i>	General background		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATION/ASSESSMENT:	Greek		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	https://eclass.unipi.gr/courses/BDT239/		

2. LEARNING OUTCOMES

<p>LEARNING OUTCOMES <i>The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:</i></p> <p>APPENDIX A</p> <ul style="list-style-type: none"> • Description of the level of learning outcomes for each qualifications' cycle, according to the European Higher Education Area's Qualification Framework. • Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and APPENDIX B • Guidelines for writing Learning Outcomes
<p>The aim of the course is to introduce to the students the most important distributions of random variables and their parameters, the use of basic descriptive statistics and the use of statistical inference tools.</p> <p>Upon successful completion of the course, the students will be able to:</p> <ul style="list-style-type: none"> • Use probability distributions, descriptive statistics and statistical inference tools to draw conclusions about the properties of a population from the study of relevant samples • Use and process quantitative data • Use statistical tools in other courses of the curriculum.
<p>General Competences <i>Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aims</i></p> <p><i>Search for, analysis and synthesis of data and</i> <i>Project planning and management</i></p>

<i>information, by the use of technologies that are necessary according to the case</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Independent work</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Introduction of innovative research</i>	<i>Respect for difference and multiculturalism</i> <i>Environmental awareness</i> <i>Social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Critical consciousness, criticism and self-criticism</i> <i>Development of free, creative and inductive thinking</i>
<ul style="list-style-type: none"> • Search for, analysis and synthesis of data and information, by the use of technologies that are necessary according to the case • Independent work • Social, professional and ethical responsibility and sensitivity to gender issues 	

3. COURSE CONTENT

<p>The course includes the following topics:</p> <ul style="list-style-type: none"> • Probability distributions of random variables -Random variables probability distribution parameters • Special discrete distributions • Special continuous distributions • Probability distributions of multidimensional random variables • Moments of multidimensional random variables • Convergence of sequences of random variables • Descriptive statistics • Estimation • Confidence Intervals • Hypothesis Testing • Simple Linear Regression <p>Students also attend a laboratory training program in the Laboratory of Production Management Information Systems aiming at familiarizing them with Probability and Statistics exercises, and with the statistical processing of data. The software used is MS EXCEL or equivalent (Open Office, etc.).</p> <p>In addition, articles, audiovisual lecture material, web addresses, useful information and exercises are posted at e-class.</p>
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4. TEACHING METHODS - ASSESSMENT

<p>TEACHING MODE <i>Face-to-face, in-class lecturing, on distance teaching and distance learning etc.</i></p>	In-class lecturing / Laboratory teaching	
<p>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in Teaching, Laboratory Education, Communication with students</i></p>	<p>Teaching: Lectures with audiovisual media, support of the learning process through the e-class platform</p> <p>Laboratory Education: Use of open access software for laboratory exercises</p> <p>Communication with students: face-to-face at office hours, e-mail, e-class</p>	
<p>COURSE DESIGN <i>Description of teaching techniques, practices and methods:</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, clinical practice, Art Workshop, Interactive teaching, Educational visits, project, Essay writing, Artistic creativity, etc.</i></p>	<p>Activity / Method</p>	<p>Semester Workload</p>
	Lectures	52
	Laboratory	8
	Self-study of lab material	18
	Self-study of lecture material	57
Counselling	0.5	

<p><i>The study hours for each learning activity as well as the hours of non- directed study are given according to the principles of the ECTS</i></p>	Exams (written)	2
	Course Total	137.5
<p>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</p> <p><i>Detailed description of the evaluation procedures: Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice questionnaires, short- answer questions, open-ended questions, problem solving, written work, Essay/report, oral exam, public presentation, laboratory work, art interpretation, other.....etc</i></p> <p><i>Evaluation criteria are specifically defined and given as well as if and where they are reported and accessible to students.</i></p>	<p>Language of exams: Greek</p> <p>Assessment Methods: After the last lecture, the exam material is posted at e-class. The final course grade is formed by the written exams (100%) taken in the examination period of the winter semester and, in case of failure, in the September resits.</p> <p>The written examination includes problem solving / exercises. It is conducted using a formulas' sheet.</p> <p>The evaluation of students with special learning difficulties in writing and reading (as certified and qualified by a competent institution) is performed according to the relevant procedure decided by the Department Assembly.</p> <p>Notification of the Assessment Criteria: The evaluation criteria are made known during the first lecture and are clearly stated on the course website and e-class. The answers to the exam questions are posted at e-class after the exam date. Students have the opportunity to discuss their exam paper with the course instructor (at office hours) after the announcement of the course grades.</p>	

5. SUGGESTED BIBLIOGRAPHY

- Suggested Bibliography

1. Βασικές Αρχές Στατιστικής για Επιχειρήσεις-Έννοιες και Εφαρμογές, Μ.Λ. Berenson, D.M. Levine, Κ.Α. Szabat, 2018. BROKEN HILL PUBLISHERS LTD
2. Στατιστική για οικονομικά και διοίκηση επιχειρήσεων, G. Keller, 2010. ΕΚΔΟΣΕΙΣ ΕΠΙΚΕΝΤΡΟ Α.Ε.

-Lecture Notes