

STATISTICS & SOFTWARE IN BEHAVIOURAL SCIENCES

(1) GENERAL

SCHOOL	HEALTH SCIENCES		
ACADEMIC UNIT	SPEECH LANGUAGE THERAPY		
LEVEL OF STUDIES	UNNDERGRADUATE PROGRAMME (LEVEL 6)		
COURSE CODE	slt – 26	SEMESTER	2
COURSE TITLE	STATISTICS & SOFTWARE IN BEHAVIOURAL SCIENCES		
INDEPENDENT TEACHING ACTIVITIES <i>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</i>		WEEKLY TEACHING HOURS	CREDITS
Lectures		2	5
Applied Practice		1	
Laboratory Practice		1	
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	General Knowledge		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	https://moodle.ioa.teiep.gr/course/view.php?id=188		

(2) LEARNING OUTCOMES

<p>Learning outcomes <i>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.</i></p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> • 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
<p>The purpose of the course is:</p> <p>To provide students with basic knowledge that will allow them to apply classical statistical methods for solving/analyzing problems regarding behavioral sciences and specifically speech, language and communication. To develop student skills using software (SPSS) for data analysis such as language and speech signals parameters and interpretation of their results.</p> <p>Upon successful completion of the course, students will be able to:</p> <ul style="list-style-type: none"> ➤ Collect, organize and present summary data (Levels 1, 2: Knowledge, Understanding) ➤ Use basic methods of statistical inference (Levels 1, 2, 3, 4: Knowledge, Understanding, Applying, Analyzing) ➤ Analyze data and make appropriate conclusions (Levels 1, 2, 4: Knowledge, Understanding, Analyzing)

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?

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| Search for, analysis and synthesis of data and information, with the use of the necessary technology | Project planning and management |
| Adapting to new situations | Respect for difference and multiculturalism |
| Decision-making | Respect for the natural environment |
| Working independently | Showing social, professional and ethical responsibility and sensitivity to gender issues |
| Team work | Criticism and self-criticism |
| Working in an international environment | Production of free, creative and inductive thinking..... |
| Working in an interdisciplinary environment | Others..... |
| Production of new research ideas | |

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| <ul style="list-style-type: none"> • Search, analyze and synthesize data and information, using the necessary technologies • Working in an interdisciplinary environment • Decision making • Promoting free, creative and inductive reasoning | <ul style="list-style-type: none"> • Production of new research ideas • Autonomous work at the level of supervision and management of an experiment and team work and ensuring harmonic cooperation with all the scientific and labor hierarchy |
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(3) SYLLABUS

1. Introductory concepts
2. Descriptive Statistics - Qualitative variables
3. Descriptive Statistics - Quantitative variables
4. Probability distributions
5. Sampling distributions
6. Estimation theory
7. Confidence intervals
8. Hypothesis testing - Errors
9. Test of variable independence
10. Variable correlation test
11. Parametric - Non-parametric statistical methods
12. Simple Linear Regression
13. Statistical analysis of data using software

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Lectures: Face to face in a classroom Laboratory Exercises & Field Exercises: Teaching Room and Computer Labs	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of audio-visual equipment (powerpoint) Support the learning process through the Moodle online platform.	
TEACHING METHODS	Activity	Semester workload
	Lectures	26

<p><i>The manner and methods of teaching are described in detail.</i></p> <p><i>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.</i></p> <p><i>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</i></p>	Fieldwork	13
	Laboratory practice	13
	Group projects	20
	Individual projects	10
	Independent study/evaluation	43
	Course total	125
<p>STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><i>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</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>I. Written final exams for theory (100%) comprising:</p> <p>Critical thinking questions demonstrating that the student has understood the concepts</p> <p>Questions that require information synthesis by the student.</p> <p>II. Final exams for the laboratory (100%) comprising:</p> <p>Solving Problems and exercises using statistical software packages</p> <p>The final exams will be offered in Greek</p>	

(5) ATTACHED BIBLIOGRAPHY

<p>- <i>Suggested bibliography:</i></p> <ul style="list-style-type: none"> • Murray, R. S., & Larry, J. S. (2016). <i>Στατιστική</i>. Θεσσαλονίκη: Τζιόλα. • Ζαχαροπούλου, Χ. (2018). <i>Στατιστική (Τόμ. 7)</i>. Θεσσαλονίκη: Εκδόσεις Σοφία. • Ιωαννίδης, Δ. Α. (2011). <i>Στατιστική μεθοδολογία</i>. Θεσσαλονίκη: Εκδόσεις Ζήτη Πελαγία & Σια Ι.Κ.Ε. <p>- <i>Related academic journals:</i></p> <ul style="list-style-type: none"> • Open Journal of Statistics https://www.scirp.org/journal/ojs/ • The American Statistician https://www.tandfonline.com/toc/utas20/current • Journal of Applied Statistics https://www.tandfonline.com/toc/cjas20/current • Journal of Statistical Software https://www.jstatsoft.org/index
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