

COURSE OUTLINE

1. GENERAL

SCHOOL	AGRICULTURAL AND FORESTRY SCIENCE		
DEPARTMENT	Department of Forestry and Management of the Environment and Natural Resources		
LEVEL OF STUDIES	LEVEL 7		
COURSE CODE	ΔΣΠΜΣΠΣΠΕΑΕ1	SEMESTER	1 st
COURSE TITLE	RESEARH METHODOLOGY		
TEACHING ACTIVITIES <i>in case the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to a course as a whole, then please note down the teaching hours per week and the corresponding ECTS Credits.</i>	TEACHING HOURS PER WEEK	ECTS CREDITS	
	2.3	7.5	
<i>Add lines if necessary. The teaching organization and methods used are described in the point 4.</i>			
COURSE TYPE <i>Background, General Knowledge, Scientific Area, Skill Development</i>	Scientific Area		
PREREQUISITES:	No		
TEACHING & EXAMINATION LANGUAGE:	Greek		
COURSE OFFERED TO ERASMUS STUDENTS:	No		
URL COURSE:	https://eclass.duth.gr/courses/1425298/		

2. LEARNING OUTCOMES

Learning Outcomes

Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.

The aim of the course is to familiarize students with the methods of collecting, organizing, presenting and analyzing statistical data and the techniques of searching and processing scientific literature and the organization and writing of research papers.

Upon successful completion of the course, the student:

- Has understood the basic concepts of statistics, the basic methods of collecting, organizing and presenting statistical data.
- Has knowledge of the analysis tools and techniques and uses them in conducting statistical calculations and analyses.
- Is able to distinguish deductive from inductive methods of analysis and choose the most suitable method for estimating parameters and drawing statistical conclusions.
- Uses the appropriate tools to search for scientific literature, selects the useful for the purpose of his work bibliographic papers and synthesizes scientific knowledge to serve the goals of his work.
- Combines his knowledge to synthesize the results of statistical analyses with literature review and to present a research topic in a structured work.

General Skills

Taking into account the general skills that the graduate must have acquired (as they are listed in the Diploma Supplement and are listed below), which of them is intended (for the course)?

*Search, analysis and synthesis of data and information,
using the necessary technologies
Adaptation to new situations*

*Project design and management
Equity and Inclusion
Respect for the natural environment*

<p>Decision making Autonomous work Teamwork Working in an international environment Working in an interdisciplinary environment Production of new research ideas</p>	<p>Sustainability Demonstration of social, professional and moral responsibility and sensitivity to gender issues Critical thinking Promoting free, creative and inductive thinking</p>
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Search, analysis and synthesis of data and information, using the necessary technologies
Autonomous work
Working in an interdisciplinary environment
Respect for the natural environment
Production of new research ideas
Promoting free, creative and inductive thinking

3. COURSE CONTENT

1. Introductory concepts of research methodology, basic concepts of statistics
2. Methods for collecting statistical data
3. Organization and presentation of statistical data
4. Methods of descriptive statistical analysis
5. Correlation - Regression
6. Parameter estimation
7. Hypothesis testing
8. Features and types of scientific research
9. Phases-stages of scientific research
10. Key parts of scientific work
11. Research wording and writing of a scientific paper
12. Structure of scientific work
13. Bibliographic referencing

1. LEARNING & TEACHING METHODS - EVALUATION

<p>TEACHING METHOD <i>Face to face, Distance learning, etc.</i></p>	Face to face	
<p>USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) <i>Use of ICT in Teaching, in Laboratory Education, in Communication with students</i></p>	Use of ICT in Teaching and Laboratory Education Electronic communication with students via e-mail or e-class	
<p>TEACHING ORGANIZATION <i>The way and methods of teaching are described in detail. Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.</i></p> <p><i>The student study hours for each learning activity are listed as well as the non-guided study hours so that the total workload at the semester level corresponds to the ECTS standards.</i></p>	Activity	Workload/semester
	Lectures	87.5
	Bibliographic research & analysis	25
	Paper/presentation preparation	75
	Total	187.5
<p>STUDENT EVALUATION <i>Description of the evaluation process</i></p> <p><i>Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Public Presentation, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others</i></p>	<p>Final written exam (in Greek) Multiple Choice Test Written Assignment</p>	

Explicitly defined assessment criteria and if and where are accessible to students are mentioned.

2. SUGGESTED BIBLIOGRAPHY

1. Halikias, M., Lalou, P., & Manolesou, A. (2015). Research methodology and introduction to Statistical Data Analysis with IBM SPSS STATISTICS [Laboratory Guide]. Kallipos, Open Academic Publications. <https://hdl.handle.net/11419/5075>.
2. Lagoumintzis, G., Vlachopoulos, G., & Koutsoyiannis, K. (2015). Research methodology in health sciences [Undergraduate textbook]. Callipos, Open Academic Publications. <https://hdl.handle.net/11419/5356>.
3. Data Science Textbook. <https://docs.tibco.com/data-science/textbook>.

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Spyros Galatsidas, Apostolos Kyriazopoulos,
Contact details:	sgalatsi@fmenr.duth.gr, apkyriaz@fmenr.duth.gr
Supervisors: (1)	NO
Evaluation methods: (2)	Written exam through the on-line learning platform e-class / Written Assignment / Exercises
Implementation Instructions: (3)	The course examination will take place with a written individual assignment / report that will be announced in the e-class. All task details and instructions will be contained in the active tools in the "Tasks" submenu.

(1) To be completed with YES or NO

(2) Note down the evaluation methods used by the teacher, e.g.

- *written assignment* or/and exercises
- written or oral examination with distance learning methods, provided that the integrity and reliability of the examination are ensured.

(3) In the **Implementation Instructions** section, the teacher notes down clear instructions to the students:

α) in case of **written assignment and / or exercises**: the deadline (e.g. the last week of the semester), the means of submitting them to the teacher, the grading system, the participation of the assignment in the final grade and every other detail that should be mentioned.

β) in case of **oral examination with distance learning methods**: the instructions for conducting the examination (e.g. in groups of X people), the way of pronouncing topics, the applications to be used, the necessary technical means for the implementation of the examination (microphone, camera, word processor, internet connection, communication platform), the way the hyperlink is sent, the duration of the exam, the grading system, the participation of the exam in the final grade, the ways in which the inviolability and reliability of the exam is ensured and every other detail that should be mentioned.

γ) in case of **written examination with distance learning methods**: the instructions for assigning the topics, the way of submitting the answers, the duration of the exam, the grading system, the participation of the exam in the final grade, the ways in which the integrity and reliability of the exam is ensured and every other detail that should be mentioned.

There should be an attached list with the Student Registration Numbers only of the beneficiaries to participate in the examination.