COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Environment		
ACADEMIC UNIT	Department of Environment		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	**131KEY**	**SEMESTER**	**6**
COURSE TITLE	Research Methods in Ecology		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	1	
Laboratory exercises/Field work	4	
Total credits		**6**

COURSE TYPE	Skills development
PREREQUISITE COURSES:	Introduction to Ecology Plant Biology Statistics Research Methods I
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://www.env.aegean.gr/all_courses/research-methods-in-ecology/

(2) LEARNING OUTCOMES

Learning outcomes
Students will be able to: (A) recognize an ecological research topic (B) choose the appropriate sampling or experiment design to address it (C) measure or estimate key vegetation parameters (D) develop the appropriate statistical method for analyzing the data (E) compile data from different sources and measurement scales (F) to draw up key findings and assess their implementation on ecological issues or problems
General Competences
Search for, analysis and synthesis of data and information, with the use of the necessary technology Decision-making Working independently Team work Respect for the natural environment

Working in an interdisciplinary environment

(3) SYLLABUS

The following topics will be covered in a combination of lectures and field and laboratory practicals:

1. Principles of experimental design – Sampling procedure and methods
2. Monitoring site characteristics
3. Sampling static organisms (plant populations)
4. Measuring species functional traits
5. Measuring community structure parameters (richness, diversity) and vegetation architecture (plant height, plant cover, LAI)
6. Estimating/Measuring ecosystem processes (community productivity, decomposition)
7. Analyzing and interpreting data – Report writing
8. Presenting of the project results

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face-to-face
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	Use of Moodle (Modular Object Oriented Developmental Learning Environment) platform
TEACHING METHODS	

Activity	***Semester workload***
Lectures	9
Lab practice	10
Field work	30
Study and analysis of bibliography	40
Project	70
Project presentation	3
Course total	***162***

STUDENT PERFORMANCE EVALUATION	Language of evaluation: Greek methods of evaluation: Project report writing and presentation: 100%

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

Karandeinos M. 2007. Quantitative ecological methods. University of Crete Press. Greece (in Greek)
Wheater CP, Bell JR, Cook PA. 2011. Practical Field Ecology: A Project Guide. Wiley.

- Related academic journals:

Functional Plant Biology, Annals of Botany, Journal of Experimental Botany, Plant Ecology, Journal of Plant Ecology, Journal of Vegetation Science