

COURSE OUTLINE

1. GENERAL

SCHOOL	School of Environment and Agricultural Engineering		
ACADEMIC UNIT	Natural Resources & Agricultural Engineering		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	2255	SEMESTER	9
COURSE TITLE	Plant and Soil Analysis – Evaluation of data		
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 and practicals	3+2	5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background, Specialised general knowledge		
PREREQUISITE COURSES:	Soil Science -157 Soil Chemistry 1565 Soil Fertility 2435 Statistics 0105		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES (theory only)		
COURSE WEBSITE (URL)	https://oeclass.aua.gr/eclass/courses/2732/		

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><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i> 										
<p>The course is an introduction course in the analysis and evaluation of data from Plant and Soil Analyses.</p> <p>The subject of the course is to understand the nature of the data, their characteristics, the ways of obtaining them, their analysis, and the methods to draw conclusions. The aim of the course is to familiarize students with the execution of simple tests and experiments and the extraction of conclusions and their preparation for the preparation of dissertations on subjects of Soil Science (such as soil characteristics, fertilization, soil biology, soil contamination, soil improvement and restoration, agricultural production and soil inputs).</p>										
<p>General Competences <i>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?</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%; border: none;"><i>Project planning and management</i></td> </tr> <tr> <td style="border: none;"><i>Adapting to new situations</i></td> <td style="border: none;"><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td style="border: none;"><i>Decision-making</i></td> <td style="border: none;"><i>Respect for the natural environment</i></td> </tr> <tr> <td style="border: none;"><i>Working independently</i></td> <td style="border: none;"><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td style="border: none;"><i>Team work</i></td> <td style="border: none;"><i>Criticism and self-criticism</i></td> </tr> </table>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>	<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>	<i>Team work</i>	<i>Criticism and self-criticism</i>
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<i>Team work</i>	<i>Criticism and self-criticism</i>									

Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas

Production of free, creative and inductive thinking
.....
Others...
.....

Working independently
Team-work
Project planning and management
Decision making
Production of constructive and inductive thinking

3. SYLLABUS

Data types in Soil Science and plant & soil analyses
Features of data
Basic ways and methodologies of data analysis
Analyze data, interpret results and draw conclusions

1. TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	<p>In the lecture room and labs – complementary remote support</p>	
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<p>Specialized teaching/presentation software Support Learning process through e-class platform</p>	
<p style="text-align: center;">TEACHING METHODS</p> <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>	Activity	Semester workload
	Standard Lectures	36
	Practical Exercises that focus on implementation of methodologies	26
	Teamwork study or Small individual tasks for each student	20
Independent Study	43	
Total Course (25 hours of workload per credit unit)	125	
<p style="text-align: center;">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>Written final exam that includes Combinations of:</p> <ul style="list-style-type: none"> - Multiple choice questions - Scenario analysis - Solving problems related to quantitative data - Benchmarking, comparative evaluation of theory elements 	

2. ATTACHED BIBLIOGRAPHY

- Suggested bibliography:
- Weil, R.R. and Brady, N.C. (2017), The Nature and Properties of Soils. 15th Edition, Pearson, New York. (Background reading)
 - Notes

- *Related academic journals:*

European Journal of Soil Science – Wiley

Journal of Plant Nutrition – Taylor & Francis

Soil Biology and Biochemistry – Elsevier

Biology and Fertility of Soils – Elsevier