

COURSE OUTLINE

1. GENERAL INFORMATION

FACULTY/SCHOOL	SCHOOL OF PLANT SCIENCE		
DEPARTMENT	CROP SCIENCE		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	203	Semester:	9th
COURSE TITLE	Agricultural Experimentation II		
INDEPENDENT TEACHING ACTIVITIES <i>in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits</i>	WEEKLY TEACHING HOURS	ECTS	
Lectures	3	3	
Laboratory Exercises	2	2	
<i>Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4</i>			
COURSE TYPE <i>Background knowledge, Scientific expertise, General Knowledge, Skills Development</i>	Scientific expertise Specialty		
PREREQUISITE COURSES:	Agricultural Experimentation		
LANGUAGE OF INSTRUCTION:	Greek (and English if required)		
LANGUAGE OF EXAMINATION/ASSESSMENT:			
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)			

2. LEARNING OUTCOMES

<p>Learning Outcomes 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:</p> <p>APPENDIX A</p> <ul style="list-style-type: none"> • Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework. • Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and <p>APPENDIX B</p> <ul style="list-style-type: none"> • Guidelines for writing Learning Outcomes
<p>The course provides advanced knowledge about field experimental design and analysis of data.</p>

General Competences

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 aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Individual/Independent work
Group/Team work
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research

Project planning and management
Respect for diversity and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical thinking
Development of free, creative and inductive thinking
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(Other.....citizenship, spiritual freedom, social awareness, altruism etc.)
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Information and data acquisition, analysis and synthesis, using appropriate technologies.

Adaptation to different cases

Decision making

Ability to work independently

Generating new research ideas

Promotion of free creative and inductive thinking

3. COURSE CONTENT

Brief overview of basic principles of agricultural experimentation.

Non parametric tests.

Experimental designs (Balanced and partially balanced incomplete block designs; Youden square; Lattice designs; Augmented design; Cyclic and Alpha designs).

Combined analysis.

Regression analysis (simple linear regression and correlation; multiple regression).

Introduction to specialized software for statistical analysis and data processing

4. TEACHING METHODS--ASSESSMENT

<p>MODES OF DELIVERY <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</i></p>	<p>Classroom and field lecturing</p>
<p>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in teaching, Laboratory Education, Communication with students</i></p>	<p>Use of online resources and electronic devices. Use of statistical analysis packages Social media Learning process support by access to e-class asynchronous distance learning platform.</p>

<p>COURSE DESIGN</p> <p><i>Description of teaching techniques, practices and methods:</i></p> <p><i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc.</i></p> <p><i>The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.</i></p>	Activity/ Method	Semester workload
	Lectures	39
	Laboratory practice	26
	Individual laboratory project (data processing and commenting)	
	Personal study	60
	Total of Course (25 hours of workload per ECTS)	125

<p>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</p> <p><i>Detailed description of the evaluation procedures:</i></p> <p><i>Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other.....etc.</i></p> <p><i>Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.</i></p>	<p>I. Final written exam in the theory of the course including a combination of 10 short-answer questions, open-ended questions and multiple choice questions.</p> <p>II. The written examination in the laboratory part of the course includes 5 short answer, open-ended, problem solving and documentation questions (the ability to apply the principles and mechanisms and the way of approaching and documenting the answer is evaluated).</p>
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5. SUGGESTED BIBLIOGRAPHY:

Kuehl, R. (2000). Design of experiments: statistical principles of research design and analysis (2nd ed.). Pacific Grove (Calif.): Duxbury press.

Montgomery, D. C. (2012). Design and analysis of experiments (8th ed.). Hoboken (N. J.): Wiley.

Peterson, R. G. (1994). Agricultural Field Experiments. Design and Analysis. New York: Marcel Dekker.

Related scientific journals: Crop Science, Molecular Breeding, Euphytica, Transgenic Research

6. TEACHERS:

<p>-Theory:</p> <p>Pinelopi Bebeli, Professor</p> <p>Vasileios Papisotiropoulos, Professor</p> <p>Eleni Tani, Assistant Professor</p> <p>Anastasios Katsileros, Teaching assistant</p> <p>-Laboratory:</p> <p>Pinelopi Bebeli, Professor</p> <p>Vasileios Papisotiropoulos, Professor</p> <p>Eleni Tani, Assistant Professor</p> <p>Anastasios Katsileros, Teaching assistant</p> <p>Gkoufa Maria, Teaching assistant</p>
