

COURSE OUTLINE

1. GENERAL

SCHOOL	AGRICULTURAL AND FORESTRY SCIENCES		
DEPARTMENT	AGRICULTURAL DEVELOPMENT		
LEVEL OF STUDIES	7		
COURSE CODE	B0034	SEMESTER	5th
COURSE TITLE	AGRICULTURAL EXPERIMENTATION		
TEACHING ACTIVITIES	TEACHING HOURS PER WEEK	ECTS CREDITS	
<i>If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.</i>			
Lectures and exercises	3+2	5	
<i>Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.</i>			
COURSE TYPE <i>Background, General Knowledge, Scientific Area, Skill Development</i>	General Background		
PREREQUISITES:			
TEACHING & EXAMINATION LANGUAGE:	Greek		
COURSE OFFERED TO ERASMUS STUDENTS:	No		
COURSE URL:	https://eclass.duth.gr/courses/OPE01238/ https://eclass.duth.gr/courses/GEO123/		

2. LEARNING OUTCOMES

Learning Outcomes <i>Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.</i>																
Upon successful completion of the course, students will be able to: <ul style="list-style-type: none"> design and install agricultural experiments know and understand the options and possibilities of statistical data analysis acquire skills in the use of statistical tools understand and interpret the results of statistical analysis 																
General Skills <i>Name the desirable general skills upon successful completion of the module</i>																
<table border="0"> <tr> <td><i>Search, analysis and synthesis of data and information, ICT Use</i></td> <td><i>Project design and management</i></td> </tr> <tr> <td><i>Adaptation to new situations</i></td> <td><i>Equity and Inclusion</i></td> </tr> <tr> <td><i>Decision making</i></td> <td><i>Respect for the natural environment</i></td> </tr> <tr> <td><i>Autonomous work</i></td> <td><i>Sustainability</i></td> </tr> <tr> <td><i>Teamwork</i></td> <td><i>Demonstration of social, professional and moral responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td><i>Working in an international environment</i></td> <td><i>Critical thinking</i></td> </tr> <tr> <td><i>Working in an interdisciplinary environment</i></td> <td><i>Promoting free, creative and inductive reasoning</i></td> </tr> <tr> <td><i>Production of new research ideas</i></td> <td></td> </tr> </table>	<i>Search, analysis and synthesis of data and information, ICT Use</i>	<i>Project design and management</i>	<i>Adaptation to new situations</i>	<i>Equity and Inclusion</i>	<i>Decision making</i>	<i>Respect for the natural environment</i>	<i>Autonomous work</i>	<i>Sustainability</i>	<i>Teamwork</i>	<i>Demonstration of social, professional and moral responsibility and sensitivity to gender issues</i>	<i>Working in an international environment</i>	<i>Critical thinking</i>	<i>Working in an interdisciplinary environment</i>	<i>Promoting free, creative and inductive reasoning</i>	<i>Production of new research ideas</i>	
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<ul style="list-style-type: none"> Independent Work Search, analysis and synthesis of data and information, using the necessary technologies Promoting free, creative and inductive reasoning 																

3. COURSE CONTENT

1. Derived distributions, the X-squared distribution, the t-distribution, the F distribution
2. Distribution of statistical sample and central trend and dispersion measures
3. Valuation (Point estimation, Estimation of confidence intervals)
4. Statistical hypotheses testing
5. Regression - Calculation of a dependent factor by an independent
6. Correlation – Estimation of the degree of correlation of factors.
7. Comparison of individual factors
8. Basic experimental designs – Analysis of variance (ANOVA)
9. The completely randomized design (CRD)
10. The randomized complete block design (RCBD)
11. The Latin square design
12. Statistically significant differences
13. Comparison of combined factors

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD <i>Face to face, Distance learning, etc.</i>	Lectures in the classroom	
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) <i>Use of ICT in Teaching, in Laboratory Education, in Communication with students</i>	<ul style="list-style-type: none"> • Use of information technologies (power point, video) • On-line databases • Communication via e-mail and the e-class online platform 	
TEACHING ORGANIZATION <i>The ways 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> <i>The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.</i>	Activity	Workload/semester
	Lectures	39
	Tutorial Exercises	26
	Independent Study	60
	Total Course (25 hours of workload per credit unit)	125
STUDENT EVALUATION <i>Description of the evaluation process</i> <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, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others</i> <i>Please indicate all relevant information about the course assessment and how students are informed</i>	The evaluation of students is done through written examinations at the end of the semester.	

5. SUGGESTED BIBLIOGRAPHY

Selected Textbooks in the Eudoxus system

- Φασούλας, Α. (2008). "Στοιχεία Πειραματικής Στατιστικής". Θεσσαλονίκη: Εκδόσεις Γαρταγάνη
- Βιβλίο [41955825]: ΣΤΑΤΙΣΤΙΚΗ ΙΙ, Θεωρία και Εφαρμογές στην Αγροτική Οικονομία. "Κουτρομανίδης Θ." "Ζαφειρίου Ε." "Μαλέσιος Χ."

Additional bibliographic resources will be available to students during the course

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Spyridon Koutroubas Eleni Zafeiriou
Contact details:	skoutrou@agro.duth.gr ezafeir@agro.duth.gr
Supervisors: (1)	YES
Evaluation methods: (2)	<ul style="list-style-type: none"> • <i>written assignment or/and exercises</i> • <i>written or oral examination with distance learning methods, provided that the integrity and reliability of the examination are ensured.</i>
Implementation Instructions: (3)	<p>The examination of the course will be conducted through e-class and Skype for Business and will be simultaneous for all students.</p> <p>Students should log in to the e-class using their institutional account and go to the course page (a prerequisite to have registered for the course) and the "EXERCISES" section, where they will be given the exam form which they will fill in electronically.</p> <p>At the same time, students should log in to Skype for Business, following the link posted in the announcements of the course on the e-classplatform.</p> <p>Each student will have to answer 12 multiple-choice questions, each of the questions being scored 0.4 and there will be a negative score for the wrong answers (not for the blank ones) equal to half of the correct answer.</p> <p>The duration of the examinations (part B) will be 20 minutes.</p> <p><u>Beneficiaries of participation in examinations</u></p> <ul style="list-style-type: none"> ■ On the page of the course in the e-class and in the section "DOCUMENTS" before the examination period, a list will be posted with the AEM of the beneficiaries to participate in the examination. This list will be updated by the day of the beginning of the examination period. ■ In order for the student to participate in the examinations, he/she must read and accept the terms of his/her participation in the examination process. This is done through the https://studentspage.duth.gr and from the menu "Service", by going to the option "Participation in the next examination period". ■ In addition, he/she must have registered for the course on the e-classpage.

- (1) Please write 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:
 - a) in case of **written assignment and / or exercises**: the deadline (e.g. the last week of the semester), the means of submission, the grading system, the grade percentage of the assignment in the final grade and **any other necessary information**.
 - b) 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 administration of the questions to be answered, the distance learning platforms to be used, the technical means for the implementation of the examination (microphone, camera, word processor, internet connection, communication platform), the hyperlinks for the examination, the duration of the exam, the grading system, the percentage of the oral exam in the final grade, the ways in which the inviolability and reliability of the exam are ensured and any other necessary information.
 - c) in case of **written examination with distance learning methods**: the way of administration of the questions to be answered, the way of submitting the answers, the duration of the exam, the grading system, the percentage of the written exam of the exam in the final grade, the ways in which the integrity and reliability of the exam are ensured and any other necessary information.There should be an attached list with the Student Registration Numbers only of students eligible to participate in the examination.