



APPLIED STATISTICS

Basic data of the subject			
Academic Unit:	Faculty of Life and Environmental Sciences		
Course title:	Applied statistics		
Study program:	Agribusiness		
Level of study:	Bachelor (BSc)		
Course status:	Elective (E)		
Study year:	3 year / 5 semester		
Number of hours per week:	2 + 2		
Credit value – ECTS:	6 ECTS		
Time/location:	To be announced		
Lecturer:	Prof. Ass. Dr. Anera Musliu		
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Course description:	<p>This course is designed to equip students with practical skills in applying statistical methods to real-world scenarios. Emphasis will be on the practical application of statistical techniques in various fields, including business, social sciences, and natural sciences. Students will gain hands-on experience in data analysis, interpretation, and decision-making using statistical tools.</p>		
Course objectives:	<p>The main goal of this course is to enable students to understand the role and importance of general statistics; especially the role and importance of agriculture statistics (know the basic principles, methods of statistics models and apply them in various agricultural analyses.</p>		
Learning outcomes:	<p>Upon completion of this course, students will be able to:</p> <ul style="list-style-type: none"> ▪ Apply statistical methods to analyze and interpret real-world data. ▪ Understand the relevance of statistics in diverse fields, including business, social sciences, and natural sciences. ▪ Develop practical skills in using statistical software for data analysis. ▪ Apply hypothesis testing and regression analysis in practical situations. ▪ Gain proficiency in presenting and communicating statistical findings. ▪ Foster critical thinking through the application of statistical methods to solve practical problems. 		
Contribution on student load (must correspond with learning outcomes)			
Activity	Hours	Days/week	Total
Lectures	2	13	26
Exercise theoretical/laboratory	2	13	26
Practice work	/	/	/



Contact with lecturer/consultations	1	15	15
Field exercises	/	/	/
Mid-terms, seminars	2	1	2
Homework	1	14	14
Individual time spent studying (at the library or home)	2	15	30
Final preparation for the exam	2	10	20
Time spent in evaluation (tests, quiz, final exam)	1	13	13
Projects, presentations, etc.	2	2	4
Total			150 hours (6 ECTS)
Teaching methods:	Lectures, exercises, discussions, consultations, course projects, homework, midterm exam, final exam.		
Evaluation methods:	<ul style="list-style-type: none"> ▪ Regular and active attendance: 10%, ▪ Midterm exam: 20%, ▪ Course project: 20%, ▪ Final exam: 50%. 		
Literature			
Basic Literature:	<p>Osmani, M. Methods of Statistics, 2015</p> <p>Troni, H. Applied Statistics in Agriculture. 2001, Prishtina.</p>		
Additional Literature:	<p>Robert R. Pagano, Understanding Statistics, fourth edition 1994.</p> <p>Paul Newbold, William L. Carlson, Betty Throne Statistics for Business and Economics, Seventh Edition 2010.</p> <p>Jay Devore and Roxy Peck Statistics – The Exploration and Analysis of Data, 1986</p> <p>Discover Statistics using SPSS Third Edition – FIELD-SAGE 2009</p> <p>Clements Reimann, Peter Filzmoser, Robert Garrett, Rudolf Dutter - Statistical Data Analysis Explained – Applied Environmental Statistics with R 2008</p> <p>Nuhiu, R. dhe Shala, A. Introduction to Statistics. 1995, Prishtina.</p> <p>Statsoft, Statistics Book online, http://www.statsoft.com</p>		

Designed study plan:		
Week	Lectures	Exercises
First week:	Introduction to Applied Statistics Overview of applied statistics in various disciplines	Distribution of the semestral project topics.



Second week:	Role of statistics in decision-making	Quizzes and case studies related to the topic of the first week lecture.
Third week:	Descriptive Statistics and Exploratory Data Analysis	Quizzes and case studies related to the topic of the second week lecture.
Fourth week:	Measures of central tendency and variability Graphical representation of data	Quizzes and case studies related to the topic of the third week lecture
Fifth week:	Probability Distributions and Sampling Probability concepts and distributions	Quizzes and case studies related to the topic of the fourth week lecture.
Sixth week:	Sampling techniques and their applications	Quizzes and case studies related to the topic of the fifth week lecture.
Seventh week:	Testing and Confidence Intervals Formulating hypotheses and conducting hypothesis tests Construction of confidence intervals	Quizzes and case studies related to the topic of the sixth week lecture.
Eighth week:	Midterm exam	Quizzes and case studies related to the topic of the seventh week lecture.
Ninth week:	Regression Analysis Simple and multiple regression models Interpretation of regression results and prediction	Quizzes and case studies related to the topic of the eighth week lecture.
Tenth week:	Analysis of Variance (ANOVA) One-way and two-way ANOVA	Quizzes and case studies related to the topic of the ninth week lecture.
Eleventh week:	Post-hoc tests and practical applications	Quizzes and case studies related to the topic of the tenth week lecture.
Twelfth week:	Analysis of Variance (ANOVA) One-way and two-way ANOVA Post-hoc tests and practical applications	Quizzes and case studies related to the topic of the eleventh week lecture.
Thirteenth week:	Statistical Software Applications	Quizzes and case studies related to the topic of the twelfth week lecture.
Fourteenth week:	Hands-on experience with statistical software (e.g., R, Python, or SPSS)	Quizzes and case studies related to the topic of the thirteenth week lecture.
Fifteenth week:	Application of software tools in data analysis	Presentation of coursework projects.
Academic policies and rules of conduct:		
<ul style="list-style-type: none"> ▪ Student should be aware of and respect the institution and Code of ethics. ▪ Student should respect the schedule of lectures, exercises and be attentive. ▪ It is mandatory possess and present student ID card in the mid-terms and exam, ▪ During compilation of course projects, student must adhere the instructions given by the professor. ▪ During the exam is forbidden the use of mobile phones. 		

