



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:	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.		
Course objectives:	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.		
Learning outcomes:	Upon completion of this course, students will be able to: 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:	▪ Regular and active attendance: 10%, ▪ Midterm exam: 20%, ▪ Course project: 20%, ▪ Final exam: 50%.		
Literature			
Basic Literature:	Osmani, M. Methods of Statistics, 2015 Troni, H. Applied Statistics in Agriculture. 2001, Prishtina.		
Additional Literature:	Robert R. Pagano, Understanding Statistics, fourth edition 1994. Paul Newbold, William L. Carlson, Betty Throne Statistics for Business and Economics, Seventh Edition 2010. Jay Devore and Roxy Peck Statistics – The Exploration and Analysis of Data, 1986 Discover Statistics using SPSS Third Edition – FIELD-SAGE 2009 Clements Reimann, Peter Filzmoser, Robert Garrett, Rudolf Dutter - Statistical Data Analysis Explained – Applied Environmental Statistics with R 2008 Nuhiu, R. dhe Shala, A. Introduction to Statistics. 1995, Prishtina. Statsoft, Statistics Book online, http://www.statsoft.com		

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:		
▪ 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.		

