



METHODOLOGY OF SCIENTIFIC RESEARCH

Basic data of the subject	
Academic Unit:	Faculty of Life and Environmental Sciences
Course title:	Methodology of scientific research
Study program:	Agribusiness Management
Level:	Master (MSc)
Course status:	Obligatory (O)
Study year:	1 year / 1 semester
Number of hours per week:	3 + 2
Credit value – ECTS:	6 ECTS
Time / location:	To be announced
Lecturer:	Prof. Asoc. Dr. Bekim Gashi
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Course description:	<p>The subject of this course includes methods, techniques, instruments, and processes of performing scientific research in the field of agribusiness. This course provides students with the body of theoretical knowledge and practical skills of scientific work. The course consists of two parts. The first part covers general introduction to methodology of scientific research, including the topics on the principles of science and scientific research and basic Concepts and principles of scientific creative work. The second part focuses on the logic of implementing the scientific work, elaboration of the model of research, methods of research, and techniques of scientific research work.</p>
Course objectives:	<p>The primary objective of this course is to develop student's research orientation and to acquaint them with fundamentals of research methods. Specifically, the course aims at introducing them with the concepts and principles used in research and to business research methods and their approach. It includes discussions on sampling techniques, research designs and techniques of analysis.</p>
Learning outcomes:	<p>Upon completion of this course, students will be able to:</p> <ul style="list-style-type: none">▪ Understand the nature of scientific research and methodology,▪ Develop an understanding of various research designs and techniques,▪ Develop hypotheses, testing; acceptance, rejection and reformulation,▪ Apply appropriate quantitative techniques to the analysis of experimental and investigational data,▪ Apply methodological approaches to obtaining data; the role of observation, experimentation and deduction in agribusiness, Design and draft various forms of materials, documents, works of scientific and professional character.▪ Develop an understanding of the ethical dimensions of conducting applied research▪ Understand the role of scientific methods in the development and advancement of agribusiness and associated industries.



Contribution on student load (must correspond with learning outcomes)			
Activity	Hours	Days/week	Total
Lectures	3	13	39
Exercise theoretical/laboratory	2	13	26
Practice work	3	1	3
Contact with lecturer/consultations	1	15	15
Field exercises	/	/	/
Mid-terms, seminars	4	1	4
Homework	1	13	13
Individual time spent studying (at the library or home)	1	15	15
Final preparation for the exam	2	13	26
Time spent in evaluation (tests, quiz, final exam)	3	1	3
Projects, presentations, etc.	3	2	6
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: 5%,▪ Homework: 15%▪ Midterm exam: 20%,▪ Course project (research paper): 20%,▪ Final exam: 40%.		
Literature			
Basic Literature:	Creswell, J.W. and Creswell, D.J. (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Sage Publications. Flick, U. (2020). Introducing Research Methodology: Thinking Your Way Through Your Research Project. Sage Publications. Matthews, R., & Ross, E. (2010). Research methods: A practical guide for the social sciences. Pearson Education Ltd.		
Additional Literature:	Bryman, A. & Bell, E. (2019). Business Research Methods. Oxford University Press. Flick, U. (2018). An Introduction in Qualitative Research. Sage Publications.		

	<p>Holmes, D., Moody, P. and Dine, D. (2016). Research Methods for the Biosciences. Oxford University Press, New York.</p> <p>Battersby, M. (2010). Is that a Fact? Broadview Press, Peterborough.</p> <p>Matthews, J.R. and Matthews, R.W. (1996). Successful Scientific Writing – A Step-by-Step Guide for the Biological and Medical Sciences. Cambridge University Press, New York.</p> <p>Lee, J.A. (2000). The Scientific Endeavour – A Primer on Scientific Principles and Practice. Addison Wesley Longman, San Francisco.</p> <p>Ruxton, G.D. and Colegrave, N. (2011). Experimental Design for the Life Sciences (Third Edition). Oxford University Press, New York.</p>
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Designed study plan:		
Week	Lectures	Exercises
First week:	Introduction to the methodology of scientific research	Discussion and distribution of the semestral project topics.
Second week:	Selection of a research design (Three types of designs, Three components involved in a design, Research designs as worldviews, strategies, and methods, Criteria for selecting a research design)	Assignments, quizzes and case studies related to the topic of the first week lecture.
Third week:	Review of the literature (The research topic, The literature review)	Assignments, quizzes and case studies related to the topic of the second week lecture.
Fourth week:	The use of theory (Quantitative theory use, Qualitative theory use, Mixed methods theory use)	Assignments, quizzes and case studies related to the topic of the third week lecture.
Fifth week:	Writing strategies and ethical considerations (Writing the proposal, Writing ideas, Ethical issues to anticipate)	Assignments, quizzes and case studies related to the topic of the forth week lecture.
Sixth week:	Designing research: Introduction (The importance of introductions, Qualitative, quantitative, and mixed methods introductions, A model for an introduction)	Assignments, quizzes and case studies related to the topic of the fifth week lecture.

Seventh week:	The purpose statement (Significance and meaning of a purpose statement)	Assignments, quizzes and case studies related to the topic of the sixth week lecture.
Eighth week:	Mid-term exam	Assignments, quizzes and case studies related to the topic of the seventh week lecture.
Ninth week:	Designing research: Research questions and hypotheses (Qualitative research questions, Quantitative research questions and hypotheses, Mixed methods research questions and hypotheses)	Assignments, quizzes and case studies related to the topic of the eighth week lecture.
Tenth week:	Designing research: Quantitative methods (Defining surveys and experiments, Components of a survey method plan, Components of an experimental method plan)	Assignments, quizzes and case studies related to the topic of the ninth week lecture.
Eleventh week:	Qualitative procedures (The characteristics of qualitative research, Strategies of inquiry, The researcher's role, Data collection procedures, Data recording procedures)	Assignments, quizzes and case studies related to the topic of the tenth week lecture.
Twelfth week:	Data analysis and interpretation (Data analysis and interpretation, Reliability, validity, and generalizability, The qualitative write-up)	Assignments, quizzes and case studies related to the topic of the eleventh week lecture.
Thirteenth week:	Mixed methods procedures (Components of mixed methods procedures, The nature of mixed methods research, Types of mixed methods strategies and visual models, Data collection procedures, Data analysis and validation procedures, Report presentation structure, Examples of mixed methods procedures)	Assignments, quizzes and case studies related to the topic of the twelfth week lecture.
Fourteenth week:	Ethics in scientific research (Importance of research ethics, Ethical principles, Other ethical and legal considerations, Ethical considerations)	Assignments, quizzes and case studies related to the topic of the thirteenth week lecture.



	in online research)	
Fifteenth week:	Presentation of research papers	Presentation of the course 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.		