

Subject	Scientific Thinking, Research Methods and Statistics		
Type	Type	Semester	ECTS
	MANDATORY (M)	II	4
Lecturer	Dr.Sc. Abedin Bahtiri		
Goals and objectives	<p>The purpose of the course is to enable students to develop an understanding of the basic concepts of the research and research process. Students will be given the opportunity to understand, discuss and apply the basics of research methodology in their academic activities. This course aims to increase the efforts and knowledge of students at the developmental level in organizing and conducting scientific research, enhancing theoretical and practical involvement in current research. It will also clarify the various quantitative and qualitative approaches as well as the mixed methods in scientific research.</p>		
Learning outcomes	<p>Upon completion of this module, students shall be able to:</p> <ul style="list-style-type: none"> ✓ Understand Research Fundamentals: Explain the role of research in advancing knowledge and solving problems in sports sciences and management. ✓ Develop Research Questions: Formulate clear, focused, and researchable questions specific to issues in sport. ✓ Design Research Studies: Create appropriate research designs using qualitative, quantitative, or mixed methods. ✓ Collect and Analyze Data: Apply suitable techniques for data collection, analysis, and interpretation in sport-related research. ✓ Evaluate Ethical Practices: Recognize and address ethical considerations in sports research. ✓ Critically Review Literature: Analyze and synthesize existing research to identify gaps and inform new studies. ✓ Communicate Research Findings: Present research findings effectively through written reports and oral presentations. 		
Content	Java Topics		
	1 Syllabus Presentation		
	2	Introduction to Research in Sport	
	3	Types of research: Basic vs. applied, quantitative vs. qualitative	
	4	Research Design and Methodology	
	5	Experimental, descriptive, and case study approaches	
	6	Sampling techniques and considerations	
	7	Data Collection Techniques: Surveys, interviews, and focus groups	
	8 Mid-exam – 1		
	9	Using technology and software for data collection	
	10	Data Analysis and Interpretation: Basics of statistical analysis (e.g., descriptive, inferential)	
	11	Qualitative data coding and thematic analysis- Tools and software for data analysis (e.g., SPSS, NVivo)	
	12	Conducting systematic literature reviews	
	13	Citing sources and avoiding plagiarism	
	14	Presenting Research Findings	
15 Mid-exam – 2			
Teaching/learning methods	Activity	Weight (%)	
	Lectures	30	
	Laboratory	30	
	Research	20	
	Independent and group learning	20	
Methods of Evaluation	Methods of evaluation:	%	
	Participation	20	
	a) Medium-term exam-1	20	
	b) Medium term exam – 2	20	
	Course design (developing a training program for a certain group)	40	
Sources	Sources	Number	
	Lectures	1	
	Presentations	1	
	Web of Science	1	
	PubMed	1	

	Scopus		1
ECTS Workload	Activity	Weekly hours	Workload
	Lectures	2	24
	Lab	1	12
	Course project	n/a	20
	Independent work	n/a	44
Literature	<ul style="list-style-type: none"> • Daniel, Wayne W. and Cross, Chad L. Biostatistics: A Foundation for Analysis in the Thomas, J. R., Silverman, S., & Nelson, J. K. (2015). Research Methods in Physical Activity. Human Kinetics. • Smith, B., & Sparkes, A. C. (2016). Qualitative Research Methods in Sport, Exercise and Health: From Process to Product. Routledge. • Ian Jones&Chris Gratton, Research Methods for Sports Studies, Routledge, London; New York, 2004. • Peter O'Donoghue, Statistics for Sport and Exercise Studies: An Introduction 1st Edition, Routledge, London-Ney York, 2012. • Ali Sait Albayrak, Aliye Kayış, Abdullah Eroğlu, Ömer L. Antalyalı, Şeref Kalaycı, Nezihe Uçar, Engin Küçükşille, Hakan Demirgil, Belma Ak, Didar B. İşler, Meltem Karaatlı, Onur Sungur. Statistical Techniques with Many Variables with Application in SPSS. Editor: Şeref Kalayıcıö Perkthyes: Kujtim Hameli. From the 6th edition. 2017. 		
Ethical standards	This course follows the UBT College Code of Ethics, requiring all students to behave accordingly. Any instance of academic misconduct, including but not limited to fraud, plagiarism, or other forms of dishonesty, will lead to significant penalties like failure of specific assessment or the entire course, as well as further disciplinary measures in line with UBT College's academic integrity policies.		
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