

Course Title	RESEARCH METHODS AND APPLIED STATISTICS IN PHYSICAL EDUCATION AND SPORTS			
Course Code	SSRES201-1			
Course Type	MANDATORY			
Level	BSc (Level 1)			
Year / Semester	2nd / Fall			
Teacher's Name	Dr. Aggelos Rodafinos, Dr. Panagiotis Paoullis			
ECTS	6	Lectures / week	3	Laboratories / week -
Course Purpose	The aim of the course is to introduce students to the basic concepts, techniques, and tools used in research methodology and statistics, in order to familiarize them with the written scientific discourse and acquire the necessary knowledge and skills to be able to prepare a scientific work.			
Learning Outcomes	<p>Upon completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • They describe the types of research and choose the most appropriate type for the topic under investigation. • They use APA Style to author scientific research and papers. • They distinguish quantitative from qualitative research and the characteristics of each. • Know and apply the basic principles for designing and executing scientific research in physical education, sports, health, and recreation. • Know and apply the relevant ethical ethics that govern the field of research. • They pose research questions and answer them by conducting scientific research. • Conduct a review of local and international literature in various ways. • Prepare and use various data collection tools and protocols for the topic under investigation, such as questionnaire, interview, observation, measurement, and others. • Know basic concepts and methods of statistical analysis and perform descriptive statistical analysis of data. • Choose the appropriate methodology, the appropriate measurement tool and the appropriate sample and collect and analyze quantitative and qualitative data. • Critically evaluate the research literature and distinguish between valid and invalid arguments and information. 			

Prerequisites	No	Corequisites	No
Course Content	<ol style="list-style-type: none"> 1. Import. Critical thinking. Sources of knowledge. What is scientific research? The importance of research. 2. The types of research. Quantitative research, qualitative research, and triangulation. Ethical and ethical issues. The skills needed to conduct research. Stages of development of a research plan. 3. Fix a problem. How the literature is reviewed, and how purpose, research questions and hypotheses are determined. Determination of significance and originality of research. 4. Selection of participants (sample) and the appropriate data collection tool and protocol, such as questionnaire, interview, observation, measurement and more. 5. Collection of qualitative and quantitative data. Respect for personal data. Obtaining licenses. Conduct a mini-survey. 6. Analysis and interpretation of qualitative and quantitative data. 7. Statistical packages for evaluation of quantitative and qualitative research. Prepare and enter data in Excel and statistical packages such as SPSS. Data analysis and interpretation in SPSS. 8. Writing and evaluating a survey. 9. Critical evaluation of scientific articles/research. 10. The APA Scientific Research Writing Style. 11. Presentations of research/articles. Conditions for effective presentation. 		
Teaching Methodology	<p>The teaching methods of the course include Flipped classroom, lectures using PowerPoint carried out with the help of electronic presentations, individual/group activities, experiential workshops, microteaching, short video watching, class discussion, individual study, and literature research. Lecture notes, presentations and other research-related material are available for use by students through the e-learning platform.</p>		
Bibliography	<ol style="list-style-type: none"> 1. Thomas, J.R., Martin, P., Etnier, J., & Silverman, S.J. (2023). Research Methods in Physical Activity (8th ed.). Human Kinetics, Champaign, IL. 2. Creswell, J. W. (2016). Η έρευνα στην εκπαίδευση: Σχεδιασμός, διεξαγωγή και αξιολόγηση της ποσοτικής και ποιοτικής έρευνας (Επιμέλεια Χαράλαμπος Τσορμπατζούδης). Αθήνα: Ίων. 3. American Psychological Association (2019). Publication Manual of the American Psychological Association (7th ed.). Washington, DC: American Psychological Association. 		

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12. Green, J., Camilli, G., & Elmore, P. (Eds.). (2006). Handbook of Complementary Methods in Education Research. New Jersey: Lawrence Erlbaum Associates, Inc., Publishers.
13. Kazdin, A. E. (1995). Preparing and evaluating research reports. *Psychological Assessment*, 7(3), 228-237. doi:10.1037/1040-3590.7.3.228
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	<p>τη χρήση του SPSS. Αθήνα: Gutenberg.</p> <p>18. Rodafinos, A., Barkoukis, V., & Tsorbatzoudis, H. (2011). Greek version of the Students' Evaluations of Educational Quality Instrument. <i>Hellenic Journal of Psychology</i>, 8, 22-43.</p> <p>19. Wiersma, W., & Jurs, S. (2008). <i>Research methods in education: An introduction</i>. F.E. Peacock Publishers.</p>
<p>Assessment</p>	<p>The assessment of the course includes continuous evaluation and a final examination. The continuous evaluation consists of a written scientific report with a literature review (A1), purpose, research question, method, results, discussion and bibliography (1600 words). It also includes weekly assignments (practical applications) of small length (A2), depending on the day's topic. Finally, the continuous evaluation is completed with a quiz/test in statistics.</p> <ul style="list-style-type: none"> ● A1 (1600 words) - Review of the literature (30%): provides opportunities for students to apply their theoretical knowledge practically. The work is designed in a way that requires critical thinking, research, analysis, and synthesis of information and is aligned with the learning outcomes. Students are assessed on the quality of their work, the depth of understanding they demonstrate, and their ability to effectively explain their ideas. ● A2 (weekly work) (15%): ● A3 (quiz/test) in statistics (15%): Online quizzes or interactive assessments, or reflective writing can be used through the Moodle platform, to create quizzes with various question formats. These assessments can be self-paced or timed and direct feedback can be provided to students. <p>Final exam (50%): Comprehensive final exam to assess students' overall theoretical knowledge. These assessments cover a wider range of topics and learning outcomes from across the curriculum, to assess students' understanding and integration of knowledge in various areas.</p>
<p>Language</p>	<p>Greek / English</p>