Course Title	Advanced Research Methodology				
Course Code	PHE700				
Course Type	Compulsory				
Level	Doctoral (3rd cycle)				
Year / Semester	1st Year/1st Semester				
Teacher's Name	TBA				
ECTS	10	Lectures / week	3/14	Laboratories / week	NA
Course Purpose and Objectives	The purpose of this course is to provide an overview of research methods with an emphasis on their applicability to public health. The main objective of the course is to provide students with a deep understanding of the qualitative, quantitative and mixed methods that can be adopted when conducting public health research. The key focus of the course is on principles and skills associated with core qualitative methods, including participant observation and in-depth qualitative interviewing. In addition, students will be introduced to fundamental methods involved in quantitative research, such as observational and interventional methods, typically used in public health research. Specific public health research methods, such as public health surveillance, methods of outbreak investigation, health policy research and geographical information systems are also explored. Students will also gain skills in the design of conceptually cogent and methodologically rigorous research proposals, critically analyze research articles, as well as develop expertise in the ethical conduct of research. Course objectives will be achieved with a combination of lectures and seminars, independent research, and the review and discussion of journal articles highlighting various aspects of the design and interpretation of quantitative and qualitative studies.				
Learning Outcomes	Upon successful completion of this course students should be able to: • Analyze the value of research methods of qualitative, quantitative and mixed methods approaches within the context of public health research • Explain when a qualitative, quantitative or mixed methods approach is appropriate for answering specific research questions in public health • Demonstrate an understanding of the principles for designing qualitative, quantitative or mixed method studies • Analyze the essential steps of designing a research protocol • Evaluate the available methods of data collection in quantitative, qualitative studies and mixed method studies • Form a research question with testable hypotheses and design a study to evaluate that research question				

	• Examine the ethical aspects when conducting a research study • Interpret findings in quantitative, qualitative or mixed method studies • Evaluate the quality of findings from qualitative, quantitative or mixed method research • Create and/or weigh survey questions or assessment tools • Analyze the concepts of reliability, validity in both research and clinical practice, thus avoiding systematic errors • Evaluate the validity of screening and diagnostic tests • Explore the appropriate sampling methods used in public health research • Evaluate problems related to the internal and external validity of a research and provide ways to solve those problems • Examine the relevant institutional/national guidelines to obtain research ethics approval • Select available data on both published and unpublished studies for a specific and pre-determined research question • Analyze principles, objectives, and elements of public health surveillance • Explore the approaches to investigations of disease outbreak • Examine the methods of conducting a systematic review and the ways to analyze the results of such studies • Demonstrate an ability to thoughtfully apply the concepts in order to design a cohesive research proposal as an assessment project		
Prerequisites	N/A	Required	N/A
Course Content	At the end of the course students will be able to have the necessary skills and concepts needed to plan, conduct, and analyze data from a research project with emphasis on public health research. The course describes the concepts and forms of scientific research, ethics as well as scientific ways of solving problems in public health. Skills including performing literature searches, questionnaire development, scale construction, data cleaning and management, data manipulation and analysis will be taught. The concepts of the research problem, research cases and protocols as well as pilot research will be explained and clarified. The various sampling methods and the concepts of reliability and validity will be also taught, along with the various threats that can affect the internal and external validity of a research study and how to deal with them. Students will be taught the various methods of data collection as well as data handling according to the variables and scales. Finally, methods of systematic review and meta-analysis, the hierarchy of scientific documentation and the critique of the quality of published articles will be discussed.		
Teaching Methodology	Face to face		

Bibliography	Higgins JPT, Green S. Cochrane Handbook for Systematic Reviews of Interventions, 2019 Larry Christensen, R. Burke Johnson, Lisa A. Turner, Research Methods, Design, and Analysis, 13th Edition, 2020 Padgett DK. Qualitative and Mixed Methods in Public Health, 2010 Saks M Allsop J. Researching Health Qualitative, Quantitative and Mixed Methods, 3rd Edition, 2019 Picardi CA, Masick KD. Research Methods Designing and Conducting Research with a Real-World Focus, 2014 Marder P. Michael, Research Methods for Science. Cambridge University, 2011
Assessment	Assignments 60% Exams/Presentations 30% Class Participation and Attendance 10% 100%
Language	Greek/English