

Course Title	Research Methodology in Public Health				
Course Code	MPH-590				
Course Type	Elective				
Level	2 <sup>nd</sup> Cycle				
Year / Semester	2 / 3				
Teacher's Name	Course Lead: Dr Elena Critselis Course Contributors: Dr Costas Constantinou Dr Christiana Demetriou Dr Annalisa Quattrocchi Dr Neophytos Stylianos				
ECTS	10	Lectures	15	Interactive learning activities	19
Course Purpose and Objectives	<p>The main objectives of the course are to:</p> <ul style="list-style-type: none"> <li>Assess the needs for conducting a research study in the context of Public Health and generate relevant and testable research questions</li> <li>Systematically search for evidence in the literature using the appropriate search engines and databases (e.g. PubMed Health, Cochrane Library) and critically evaluate the existing literature, identifying gaps in knowledge on topics relevant to Public Health.</li> <li>Conduct quantitative (epidemiological) research, by choosing the most appropriate study design (observational or interventional), applying a suitable sampling method, performing accurate variable assessment, applying the right data analysis technique and generating and presenting results appropriately, as well as deriving relevant conclusions.</li> <li>Design qualitative research studies, involving participant observations, individual interviews, and focus groups and effectively analyse qualitative data using appropriate software for answering a research question in the context of Public Health.</li> <li>Write up a complete research proposal and prepare a grant application for funding in national and international funding bodies.</li> </ul>				
Learning Outcomes	<p>After completion of the course students are expected to be able to:</p> <ol style="list-style-type: none"> <li>Identify and examine issues compromising public health and assess the needs for conducting a research study to address these.</li> <li>Generate relevant and testable research questions in the context of Public Health.</li> <li>Systematically search for evidence using the appropriate search engines and databases (e.g. PubMed Health, Cochrane Library).</li> <li>Critically evaluate the existing literature and identify and examine gaps in knowledge on topics relevant to Public Health.</li> <li>Choose the most appropriate study design for answering specific research questions relevant to Public Health.</li> </ol>				

	<ol style="list-style-type: none"> <li>6. Design quantitative observational research studies for answering a research question in the context of Public Health.</li> <li>7. Design quantitative interventional research studies for answering a research question in the context of Public Health.</li> <li>8. Estimate sample size requirements by performing study power analysis.</li> <li>9. Choose the most appropriate sampling method for a given research scenario relevant to Public Health</li> <li>10. Perform accurate variable assessment for a given research scenario relevant to Public Health</li> <li>11. Choose the right data analysis technique for a given research scenario relevant to Public Health.</li> <li>12. Perform statistical analysis and generate appropriate results for a given research scenario relevant to Public Health.</li> <li>13. Present study results appropriately for a given research scenario relevant to Public Health.</li> <li>14. Derive conclusions based on study findings.</li> <li>15. Apply the major methodologies involved in qualitative research, relevant to social and behavioural sciences in the context of Public Health.</li> <li>16. Design qualitative research studies involving participant observations for answering a research question in the context of Public Health.</li> <li>17. Design qualitative research studies involving individual interviews for answering a research question in the context of Public Health.</li> <li>18. Design qualitative research studies involving focus groups for answering a research question in the context of Public Health.</li> <li>19. Perform qualitative data analysis using appropriate software to generate results for a given research scenario relevant to Public Health.</li> <li>20. Write up a complete research proposal and prepare a grant application for funding in national and international funding bodies.</li> <li>21. Write-up a scientific article presenting original study findings relevant to Public Health.</li> <li>22. Perform an oral presentation on original study findings relevant to Public Health.</li> <li>23. Communicate study results and conclusions to the media and lay audiences.</li> </ol>		
Prerequisites	MPH-511, MPH- 512.	Required	None
Course Content	<ol style="list-style-type: none"> <li>1. Assessing needs for conducting a research study relevant to Public Health</li> <li>2. Generating research questions and systematically searching and critically evaluating the existing literature</li> <li>3. Designing the appropriate quantitative study for answering a research question I: observational research</li> </ol>		

	<ol style="list-style-type: none"> <li>4. Designing the appropriate quantitative study for answering a research question II: interventional research</li> <li>5. Estimating sample size requirements (power analysis)</li> <li>6. Quantitative study conduct I: Choosing the most appropriate sampling method</li> <li>7. Quantitative study conduct II: Performing accurate variable assessment</li> <li>8. Quantitative Study conduct III: Choosing the right statistical technique and performing analysis</li> <li>9. Quantitative study conduct IV: Results presentation and deriving conclusions in quantitative research</li> <li>10. Writing up a research proposal and applying for funding</li> <li>11. Design and analysis in qualitative research</li> <li>12. Communication of results and conclusions I: article write-up</li> <li>13. Communication of results and conclusions II: oral presentation</li> <li>14. Communication of results and conclusions III: media and lay audiences</li> </ol>																									
Teaching Methodology	This programme is delivered via distance learning (online) and includes recorded lectures, interactive online tutorials (Webinars) and discussion forums, as well as online exercises and other activities.																									
Bibliography	<p><b>Required Textbooks / Reading:</b></p> <table border="1"> <thead> <tr> <th>Title</th> <th>Author(s)</th> <th>Publisher</th> <th>Year</th> <th>ISBN</th> </tr> </thead> <tbody> <tr> <td>Concepts of Epidemiology: Integrating the ideas, theories, principles, and methods of epidemiology</td> <td>Bhopal, RS</td> <td>Oxford University Press (Oxford Medicine Online)</td> <td>3rd</td> <td>2016</td> </tr> <tr> <td>Epidemiology in Medicine 1st Edition</td> <td>Hennekens (Author), Julie E. by Charles H. Buring (Author),</td> <td>Sherry L. Mayrent (Editor)</td> <td>1987</td> <td>978-0316356367</td> </tr> </tbody> </table> <p><b>Recommended Textbooks / Reading:</b></p> <table border="1"> <thead> <tr> <th>Title</th> <th>Author(s)</th> <th>Publisher</th> <th>Year</th> <th>ISBN</th> </tr> </thead> <tbody> <tr> <td>Mastering Public Health: A Postgraduate Guide to Examinations and Revalidation, (2<sup>nd</sup> ed.)</td> <td>Lewis G, Sheringham J, Bernal JL, Crayford T</td> <td>CRC Press</td> <td>2014</td> <td>978-1444152692</td> </tr> </tbody> </table>	Title	Author(s)	Publisher	Year	ISBN	Concepts of Epidemiology: Integrating the ideas, theories, principles, and methods of epidemiology	Bhopal, RS	Oxford University Press (Oxford Medicine Online)	3rd	2016	Epidemiology in Medicine 1st Edition	Hennekens (Author), Julie E. by Charles H. Buring (Author),	Sherry L. Mayrent (Editor)	1987	978-0316356367	Title	Author(s)	Publisher	Year	ISBN	Mastering Public Health: A Postgraduate Guide to Examinations and Revalidation, (2 <sup>nd</sup> ed.)	Lewis G, Sheringham J, Bernal JL, Crayford T	CRC Press	2014	978-1444152692
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	Research methods in community medicine: surveys, epidemiological research, programme evaluation, clinical trials	Abramson, J. H.	Wiley	2008	978-0470986615
	Research Methods in Health: Investigating Health and Health Services	Ann Bowling	Open University Press	2009	978-0335233649
	Doing a Systematic Review: A Student's Guide (1 <sup>st</sup> ed.)	Boland A, M, Cherry G, Dickson R.	SAGE Publications Ltd	2013	978-1446269688
	Cochrane Handbook for Systematic Reviews of Interventions (Ver. 5.1.0)	Higgins JPT, Green S.	The Cochrane Collaboration	2011	978-0470699515
	Introduction to Meta-Analysis (1 <sup>st</sup> ed.)	Borenstein M, Larry V. Hedges LV, Higgins JPT, Rothstein HR	Wiley	2009	978-0470057247
	Qualitative Methods in Public Health: A Field Guide for Applied Research (2 <sup>nd</sup> ed.)	Tolley EE, Ulin PR, Mack N, Robinson ET, Elizabeth T. Robinson, Succop SM	Jossey-Bass	2016	978-1118834503
Assessment	<ul style="list-style-type: none"> <li>Research proposal PICO/PECO (10%)</li> </ul>				

	<ul style="list-style-type: none"><li>• Research proposal abstract (10%)</li><li>• Research proposal for grant application (80%)</li></ul>
Language	English