

Subject Code	RS517
Subject Title	Research Methods & Data Analysis
Credit Value	3
Level	5
Pre-requisite / Co-requisite/ Exclusion	Nil Recommended: Basic knowledge of research methods equivalent to the final year of a recognized undergraduate programme of a health care discipline.
Objectives	The subject is designed to provide students with an in-depth knowledge of research methodologies and data analysis. It equips students with theoretical knowledge and analytical skills required to design or critique research studies.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> a. Develop a researchable question. b. Describe the various study designs and their pros and cons. c. Explain the principles involved in measurement and instrumentation. d. Develop a conceptual model in outcomes research. e. Select appropriate statistical methods to analyze data and interpret research findings, including the use of software packages (e.g. SPSS). f. Critically evaluate scientific research publications.
Subject Synopsis/ Indicative Syllabus	<ol style="list-style-type: none"> 1. Developing research <ul style="list-style-type: none"> - developing a researchable question, study designs, conceptual modeling, research proposal writing 2. Measurement issues <ul style="list-style-type: none"> - measurement tools, measurement reliability and validity 3. Paradigms of research <ul style="list-style-type: none"> - experimental studies, correlational studies, descriptive studies, epidemiology, qualitative research, survey studies, systematic review, meta-analyses 4. Methods of data analysis <ul style="list-style-type: none"> - qualitative data - quantitative data (with the use of software packages such as SPSS) 5. Evaluating research <ul style="list-style-type: none"> - Critical appraisal of selected scientific publications

Teaching/Learning Methodology	The online lectures and tutorials will cover the major concepts related to research methodologies and statistical analysis (including the use of SPSS).																																																					
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" data-bbox="454 309 1477 748"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th>f</th> </tr> </thead> <tbody> <tr> <td>1. Online quizzes</td> <td>20</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>2. Written test</td> <td>50</td> <td></td> <td>√</td> <td>√</td> <td></td> <td>√</td> <td></td> </tr> <tr> <td>3. Presentation</td> <td>30</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p data-bbox="454 768 1477 831">Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p data-bbox="454 853 1477 916">Online quizzes: This assessment aims to evaluate the student's understanding of the material covered each week.</p> <p data-bbox="454 938 1477 1001">Written test: This assessment aims to evaluate the student's understanding of all the major concepts learned in the semester.</p> <p data-bbox="454 1023 1477 1086">Presentation: The students are required to integrate what is learned throughout the semester and present a research proposal.</p>								Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e	f	1. Online quizzes	20	√	√	√	√	√		2. Written test	50		√	√		√		3. Presentation	30	√	√	√	√	√	√	Total	100 %						
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Student Study Effort Required	Class contact:							(39 Hrs.)																																														
	• Tutorial							27 Hrs.																																														
	• Online lectures							12 Hrs.																																														
	Other student study effort:							(78 Hrs.)																																														
	• Self-study							48 Hrs.																																														
	Course works (presentation)							(30 Hrs.)																																														
	Total student study effort							117 Hrs.																																														
Reading List and References	<p data-bbox="454 1597 1477 1693"><u>Required textbook:</u> Portney LG (2020) Foundations of Clinical Research. Applications to Evidence-based Practice. 4th ed. Philadelphia: F. A. Davis.</p> <p data-bbox="454 1731 1477 1827"><u>Reference texts:</u> Barbour RS. (2013) Introducing Qualitative Research: a Student's Guide. 2nd ed. London: Sage Publications.</p> <p data-bbox="454 1865 1477 1928">Line H, Berg BL. (2017) Qualitative Research Methods for the Social Sciences. London: Pearson.</p> <p data-bbox="454 1966 1477 1995">Huizingh E. (2007) Applied Statistics with SPSS. London: Sage Publications.</p>																																																					

