

Subject Name:

**Research Methodology**

Subject Code:

**RESM511**

## SECTION 1 – GENERAL INFORMATION

Award/s:	Total course credit points:	Level:
Bachelor of Health Science (Acupuncture) (Honours)	32	Core 5 <sup>th</sup> Year
Bachelor of Health Science (Myotherapy) (Honours)	32	Core 4 <sup>th</sup> Year
Bachelor of Health Science (Naturopathy) (Honours)	32	Core 5 <sup>th</sup> Year
Bachelor of Health Science (Nutritional and Dietetic Medicine) (Honours)	32	Core 4 <sup>th</sup> Year

**Duration:** 1 Semester

**Subject Coordinator:** Helene Diezel (Brisbane Campus)

**Subject is:** Core

**Subject Credit Points:** 4

### Student Workload:

No. timetabled hours per week:	No. personal study hours per week:	Total hours per week:
<b>6</b>	<b>4</b>	<b>10</b>

**Delivery Mode:**

E-Learning	Details:	Interactive online delivery Asynchronous and synchronous tutor-moderated discussion forum and activities Student handouts, web-based resources
Full Time		
Part Time		

**Pre-requisites:** Entry to Honours Program

**Co-requisites:** Nil

## SECTION 2 – ACADEMIC DETAILS

### Subject Rationale

This subject provides students with an overview of the variety of research methods used in health research and the skills to determine which research method/s best answer/s their research question. Research challenges, including appropriate selection of design, research participants, sample size, data collection, selection of appropriate measures, data analysis and interpretation of results are studied. Concepts such as validity, reliability, and rigour are examined in relation to the methodological approaches explored throughout the subject. Biostatistics, the science of describing, collecting, summarising, analysing, interpreting, drawing conclusions, and presenting the numerical data, are also covered. Students will have opportunities to advance their understanding of data analysis methods required to interpret data collected during the course of the proposed research.

### Learning Outcomes

1. Critically analyse research methodologies identified in existing literature.
2. Propose and distinguish appropriate research designs and methodologies to apply to a specific research project.
3. Develop a comprehensive research methodology for a research question.
4. Apply the understanding of feasibility and practicality of research methodology for a proposed project.

Assessment Tasks				
Type	Learning Outcomes Assessed	Sessions Content Delivered	Due	Weighting
<b>Writing Bootcamp - Active Participation</b> (must attend 4 writing bootcamps for this subject)	1-4	1-24	Session 26	10% (2.5% per bootcamp)
<b>Study design and methodology assignment</b> (2000 words)	1-2	1-10	Session 18	35%
<b>Methodology for research project</b> (2500 words)	2-4	1-24	Week 17	55%
All written assessments and online quizzes are due at 11:55PM and submitted through the LMS				

#### Prescribed readings:

- Pickard, A. (2013). *Research Methods in Information* (2nd ed. Vol. 2nd Edition). London, United Kingdom: Facet Publishing.
- Specific peer-reviewed journal articles related to methodologies, research topic and modality suggested each session.

#### Recommended readings:

- Creswell, J. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (Vol. 4): SAGE Publications.
- Fowler, F. (2013). *Survey Research Methods (Applied Social Research Methods)* (Vol. 5): SAGE Publications.
- Walter, M. (2013). *Social Research Methods* (Vol. 3). South Melbourne, VIC: Oxford University Press.
- Ziebland, S., Coulter, A., Calabrese, J., & Locock, L. (2013). *Understanding and Using Health Experiences: Improving Patient Care*. Oxford, England: Oxford University Press.

Subject Content		
Week	Lecture	Tutorial/Facilitated workshop
1.	Session 1 <b>Introduction to Research Methodology</b> <ul style="list-style-type: none"> <li>Areas of research relevant to complementary medicine</li> <li>Theoretical underpinning of research methodology</li> <li>Lens of inquiry/Spectrum of research paradigms</li> <li>Hierarchies of evidence and traditional knowledge</li> </ul>	<b>Workshop and online discussion</b>
	Session 2 <b>Defining an Appropriate Research Paradigm, Purpose and Strategy</b> <ul style="list-style-type: none"> <li>Identifying the research question/purpose</li> <li>Relationship between methodology and paradigm</li> </ul>	<b>Workshop and online discussion</b>
2.	Session 3	<b>Workshop and online discussion</b>

	<b>Research Design Frameworks</b> <ul style="list-style-type: none"> <li>• Relationship between methodology and framework</li> <li>• Mixed method research frameworks</li> <li>• Relationship between framework and data collection</li> </ul>	
	Session 4 <b>Introduction to Methods of Data Collection and Sampling</b> <ul style="list-style-type: none"> <li>• Methods vs methodology</li> <li>• Common quantitative tools</li> <li>• Common qualitative tools</li> <li>• Sampling methods</li> </ul>	<b>Workshop and online discussion</b>
3.	Session 5 <b>Systematic Reviews and Meta-Analyses</b> <ul style="list-style-type: none"> <li>• Systematic Reviews</li> <li>• Meta-Analyses</li> </ul>	<b>Workshop and online discussion</b>
	Session 6 <b>Introduction to Qualitative Research Methods</b> <ul style="list-style-type: none"> <li>• Characteristics of qualitative research methods</li> <li>• The natural setting of qualitative research</li> <li>• Reflexivity</li> </ul>	<b>Workshop and online discussion</b>
4.	Session 7 <b>Theories and Qualitative Research</b> <ul style="list-style-type: none"> <li>• Phenomenology</li> <li>• Grounded theory</li> <li>• Descriptive qualitative approaches</li> <li>• Other theories</li> </ul>	<b>Workshop and online discussion</b>
	Session 8 <b>Interviews and Focus Groups</b> <ul style="list-style-type: none"> <li>• Interview styles</li> <li>• Focus group research</li> <li>• Narrative research</li> <li>• Ethnographic research</li> <li>• Diary methods</li> </ul>	<b>Workshop and online discussion</b>
5.	Session 9 <b>Document Analysis and Observation</b> <ul style="list-style-type: none"> <li>• Document and content analysis research</li> <li>• Observation studies</li> <li>• Qualitative case studies</li> </ul>	<b>Workshop and online discussion</b>
	Session 10 <b>Theoretical Sampling and Methodological Triangulation</b> <ul style="list-style-type: none"> <li>• Theoretical sampling</li> <li>• Methodological triangulation in qualitative research</li> <li>• Constant comparative method</li> </ul>	<b>Workshop and online discussion</b>

6.	Session 11 <b>Qualitative Analysis Approaches</b> <ul style="list-style-type: none"> <li>• Organising data</li> <li>• Computer assisted data management</li> <li>• Transcription and coding</li> <li>• Thematic analysis</li> <li>• Narrative analysis</li> <li>• Discourse analysis</li> <li>• Framework analysis</li> <li>• Process tracing</li> </ul>	<b>Workshop and online discussion</b>
	Session 12 <b>Presenting Qualitative Data</b> <ul style="list-style-type: none"> <li>• Layering and related themes</li> <li>• Using vignettes</li> <li>• Creating typologies</li> </ul>	<b>Workshop and online discussion</b>
7.	Session 13 <b>Introduction to Quantitative Research Methods</b> <ul style="list-style-type: none"> <li>• Quantitative research methods</li> <li>• Experimental vs. non-experimental</li> <li>• Observational studies</li> <li>• Epidemiological studies</li> <li>• Cross-sectional studies</li> <li>• Cohort studies</li> </ul>	<b>Workshop and online discussion</b>
	Session 14 <b>Surveys and Survey Design</b> <ul style="list-style-type: none"> <li>• Surveys and survey design</li> <li>• Mode of survey delivery</li> </ul>	<b>Workshop and online discussion</b>
8.	Session 15 <b>Applied Survey Design</b> <ul style="list-style-type: none"> <li>• Planning and design</li> <li>• Conventions of survey question format</li> <li>• Question types, logic and looping</li> <li>• Piloting, testing and pretesting</li> <li>• Ethical implications of online surveys</li> </ul>	<b>Workshop and online discussion</b>
	Session 16 <b>Clinical Case Studies</b> <ul style="list-style-type: none"> <li>• Conducting case study research</li> <li>• Single and multiples case studies</li> <li>• Single-Subject design studies</li> </ul>	<b>Workshop and online discussion</b>
9.	Session 17 <b>Experimental Designs</b> <ul style="list-style-type: none"> <li>• Double-blind placebo-controlled cross-over trials</li> <li>• Randomised controlled trials</li> <li>• Double-blind placebo-controlled cross-over trials</li> <li>• Feasibility studies</li> <li>• Pilot studies</li> <li>• Hypothesis formation/null hypothesis</li> </ul>	<b>Workshop and online discussion</b>

	Session 18 <b>Health Economic Studies</b> <ul style="list-style-type: none"> <li>Identifying, measuring, valuing and analyzing costs</li> <li>Identifying, measuring, valuing and analyzing outcomes</li> <li>Policy use and interpretation of cost-effectiveness analysis</li> </ul>	<b>Workshop and online discussion</b>
10.	Session 19 <b>Applied Health Economic Analysis</b> <ul style="list-style-type: none"> <li>Measuring health-related quality of life and use of clinical outcomes</li> <li>Collecting relevant healthy system and patient cost data</li> <li>Economic evaluation, uncertainty and modelling</li> </ul>	<b>Workshop and online discussion</b>
	Session 20 <b>Introduction to Statistics</b> <ul style="list-style-type: none"> <li>Purpose and strengths</li> <li>Descriptive vs inferential statistics</li> <li>Standard deviation and Standard error of the mean</li> <li>Confidence intervals</li> </ul>	<b>Workshop and online discussion</b>
11.	Session 21 <b>Applied Statistics</b> <ul style="list-style-type: none"> <li>The language of statistics</li> <li>Analysing categorical data</li> <li>Designing an analysis</li> <li>Quality control in data management</li> </ul>	<b>Workshop and online discussion</b>
	Session 22 <b>Analysing and Presenting the Data</b> <ul style="list-style-type: none"> <li>Distribution and Related samples</li> <li>Independent samples</li> <li>Parametric or non-parametric statistics</li> <li>Comparing the data (t-test, correlation coefficients)</li> </ul>	<b>Synchronous online workshop</b>
12.	Session 23 <b>Analysing and Presenting the Data</b> <ul style="list-style-type: none"> <li>Regression analysis</li> <li>Analysis of variance and covariance</li> <li>Longitudinal (repeated measures) epidemiological or clinical studies</li> </ul>	<b>Workshop and online discussion</b>
	Session 24 <b>Assumptions in Research</b> <ul style="list-style-type: none"> <li>Reliability vs validity issues in research</li> <li>Accuracy vs precision issues in research</li> <li>Chance, Bias and other confounders</li> <li>Research perspectives in qualitative research</li> </ul>	<b>Workshop and online discussion</b>
13.	Session 25	<b>Workshop and online discussion</b>

	<b>Implications of Results Based on Methodology</b> <ul style="list-style-type: none"> <li>• Association and cause</li> <li>• Acknowledgement of limitations</li> <li>• Translational research</li> </ul>	
	Session 26 <b>Challenges Associated with CM Research</b> <ul style="list-style-type: none"> <li>• Sham acupuncture</li> <li>• Biological plausibility</li> <li>• Complex interventions</li> <li>• Quality of product</li> </ul>	<b>Workshop and online discussion</b>
<b>14.</b>	<b>Non-Teaching Week 1. Note that make-up classes may be scheduled in this week.</b>	
<b>15.</b>	<b>Non-Teaching Week 2. Note that make-up classes may be scheduled in this week.</b>	
<b>16-17.</b>	<b>Final Exam Weeks 1 &amp; 2 - there is no final exam in this subject.</b> <b>Methodology for research Project Due Week 17</b>	