SUBJECT OUTLINE

Subject Name: **Subject Code:**

Critical Research Skills BIOQ321

SECTION 1 – GENERAL INFORMATION

Award/s: Bachelor of Health Science (Acupuncture)

Total course credit points: 128

Level: 3rd Year

Duration: 1 Semester

Subject Coordinator: Nina Mezyk (Sydney campus)

Subject is: Core

Subject Credit Points: 2

Student Workload:		
No. timetabled hours per week: 3	**No. personal study hours per week: 2**	**Total hours per week: 5**

Delivery Mode:

Face to face	Details:	2 hour lecture 1 hour tutorial
E-Learning	Details:	Narrated Powerpoint presentations Asynchronous tutor-moderated discussion forum and activities Student handouts, web-based resources
Full Time		
Part Time		

Pre-requisites: Nil

Co-requisites: Nil

SECTION 2 – ACADEMIC DETAILS

Subject Rationale

The application of evidence-based practice to health care requires an understanding of design and analytic methods. This subject introduces different types and methodologies of research and their strengths and weaknesses as related to the health sciences. Students will explore the process of clinical research and statistical analysis. Students will become familiar with research literature in relation to their specific therapeutic modalities including the ethics involved, different approaches used, and the assumptions and underlying paradigms. The knowledge gained will equip students with skills required to read research articles and to evaluate the quality of evidence of different types of research.

Learning Outcomes

1. Describe the nature of research including the ethics involved, different approaches used, and the assumptions and underlying paradigms inherent in these approaches.
2. Explain and illustrate the application of statistical techniques appropriate to a particular research design and understand how to classify and present data associated with hypothesis testing.
3. Search and find research articles relating to the different hierarchies and conduct a preliminary literature review of the concepts comprising the research questions.
4. Compare and contrast the theory and procedures of a variety of different research models and provide an overview of the research process.
5. Appraise the use of different research models to the field of natural medicine using the knowledge gained in this subject review and identify quality research articles.

Assessment Tasks

Type	Learning Outcome Assessed	Week Content Delivered	Week Due	Weighting
Discussion Forums (Written response to tutorial question/s for specified weeks) (50-100 words per response)	1-5	1-13	Required in class each week 2-11	20%
Assignment 1: Short Answer (5 questions) (300-400 words)	1	1-3	Sunday following Week 4	10%
Assignment 2: Database Search and Literature Retrieval (200 words)	3-5	1-9	Sunday following Week 6	20%
Assignment 3: Literature Review (1000-1200 words)	3-5	1-9	Sunday following Week 11	40%
Assignment 4: Presentation of Research Abstract (150-300 words)	1-5	1-13	Week 12 or 13 (as scheduled by Lecturer)	10%

Prescribed readings:

1. Polgar, S., & Thomas, A. (2013). *Introduction to research in the health sciences* (6th ed.). Edinburgh, Scotland: Churchill Livingstone. [ebook available]

Recommended readings:

1. Fink, A. (2014). *Conducting research literature reviews: From internet to paper* (4th ed.). Thousand Oaks, LA: Sage.
2. Greenhalgh, T. (2014). *How to read a paper: The basics of evidence based medicine* (5th ed.). Chichester, England: Blackwell BMJ Books. [ebook available]
3. Hicks, C. (2009). *Research methods for clinical therapists* (5th ed.). Sydney, NSW: Churchill Livingstone.
4. Summers, J., & Smith, B. (2014). *Communication skills handbook* (4th ed.). Milton, QLD: Wiley & Sons.

Subject Content

Week	Lecture	Tutorial
1.	Introduction to Critical Research Skills: • Types of knowledge & ways of knowing • What is research? Why do we do it? What does it get us? Where does it come from? • Evidence Based medicine, Evidence Based Practice, Evidence Informed Practice • Research & Evidence Based Practice	Introduction to Critical Research Skills **Discussion forum** – student consider types of knowledge and ways of knowing

2.	• The Hierarchy of Research • Meta analyses, systematic reviews, literature reviews • Accessing literature	**Discussion forum –** Does evidence based medicine simply mean reading papers in medical journals?
3.	How to read – overview of a research paper: • What goes where and why • Issues that impact on the presentation of scientific articles • Problems which may occur related to the writing of a research article The Literature review: • Issues that might arise in the literature review	**Discussion forum –** how to make sense of a research article using an example
4.	Asking the right questions: • Hypothesis testing - is the question original? Principles of ethics: • Ethics committees and proposals	**Discussion forum –** scenario exercise, ethical analysis of a research brief
5.	Getting the answer: • An overview of the research design and methodology • Internal **and** external validity**,** reliability • Bias & other sources of error, Hawthorne, Rosenthal Placebo effects	**Discussion forum –** question and answer exercise
6.	• Quantitative, Qualitative & Mixed Methods approaches to research	**Discussion forum –** questions and critical evaluation of research (based on ch. 23 of text)
7.	Research Designs: • Experimental designs and randomised control trials • Surveys and quasi-experimental design • Single case (n=1) designs • Qualitative Research	**Discussion forum** – scenario exercise based on 'Research Designs' section of set text + lecture material
	NON-TEACHING WEEK **Semester 1** - This aligns with the week after Easter so it may fall between weeks 6 to 8. **Semester 2 & Online students** - The break week falls between Weeks 7 and 8.	
8.	Making sense of Quantitative Data Analysis	**Discussion forum –** interpreting quantitative data
9.	Making sense of traditional evidence	**Discussion forum** – Traditional evidence in today's world
10.	• Interpreting the evidence • Writing The literature review	**Discussion forum**
11.	Health Literacy - research into practice	**Discussion forum** – Translating and communicating health information
12.	Presentation of Research Abstracts	
13.	Presentation of Research Abstracts	
14-15.	**Non-Teaching Weeks / Practical Exam Weeks 1 & 2. Note that make-up classes may be scheduled in these weeks.**	
16-17.	**Final Exam Weeks 1 & 2** This Subject does not have a Final Exam	