Subject Outline: Research Methods 1

Course: Master of Dermatology (Coursework)

Subject: Research Methods I (Fundamental)

Credit Points: 3

Co-requisite(s): Research Methods II

Year/Semester Delivered: 1/1

Subject Outline:
The subject is supported by the online content/resource module “Research Methods I – Introduction to Evidence Based Medicine”.

The subject focuses on an introduction to EBM and its common principles.

The subject introduces the student to the basic knowledge required to understand and appreciate the concepts used in medical research and medical publications. It provides a stepping stone to the more demanding materials presented in Research Methodology II and III

Each of the sections covered in this subject deals with the topics in a non-mathematical way.

This subject covers the following broad concepts and principles of Evidence based medicine. Refer to the online content module for a complete listing of topics that will be covered during teaching sessions.

- Overview of the concept of evidence based medicine and its role is modern medical practice
- An A to Z of commonly used terms and concepts and their meanings and/or application
- Basic statistical approaches and tools commonly used in research. Topics covered in an introductory way include parametric and non-parametric statistical approaches, basic analysis techniques and Quality of Life Assessment as a tool in research
• Experimental design including simple explanations of some of the more commonly utilized experimental design types. Among those included are Randomised Double Blind Trials, Cohort Studies and Case–Control studies, to list a few.
• Basic concepts of sampling techniques.
• The basics of evaluation of studies. It provides an introduction to the pitfalls inherent in the interpretation of published result.

Learning Outcomes:
On completion of this subject students will be able to:
1. demonstrate a basic understanding of the role of EBM in modern medical research and understand the ‘hierarchy of evidence’.
2. demonstrate a knowledge of the key terms and concepts involved
3. demonstrate an awareness of the basic statistical tools commonly used in medical research
4. apply basic statistical tools appropriately in simple situations
5. apply experimental design and sampling techniques to hypothetical situations
6. demonstrate a basic skill in selecting and applying appropriate designs and sampling techniques
7. critically evaluate medical research papers at a basic level

Student Workload:

The following extract for the ACD Academic Awards Framework Policy should be used as a guide to the minimum time a student should spend working on this subject.

“A 3 credit point subject will have a minimum of 36 hours teaching time associated with it”… per semester.

“1CP will equate to a minimum of 2.5 hours personal study time per week for the student. Over a semester (20 weeks) this equates to 150 hours of personal study time for a 3 CP subject.

Teaching:
• Weekly F2F Lecture/Tutorials
• Weekly virtual classroom session(s) (Webinars) - Includes online discussion contribution
• Student self-paced online study
Assessment:
- Formal MCQs
- Written Assignment(s)
- Virtual classroom contributions

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Weight</th>
<th>Subject Learning outcomes assessed</th>
<th>Curriculum Learning Outcomes</th>
<th>Due date</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCQ Exam/Quiz</td>
<td>40%</td>
<td>1, 2, 3, 4, 5, 6</td>
<td>LO 7/ LO 25</td>
<td>TBA</td>
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<tr>
<td>Assignment 1: Design Exercise</td>
<td>20%</td>
<td>5, 6</td>
<td>LO 25</td>
<td>TBA</td>
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<tr>
<td>Assignment 2: Paper Critique</td>
<td>20%</td>
<td>7</td>
<td>LO 7</td>
<td>TBA</td>
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<td>Assignment 3: Evaluate experimental designs</td>
<td>15%</td>
<td>5</td>
<td>LO 7</td>
<td></td>
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<tr>
<td>Discussion/webinar Contribution</td>
<td>5%</td>
<td>All</td>
<td>LO 7</td>
<td>Assessed Weekly</td>
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Recommended Additional Resources:
- Research Methods 1 Webinar online
- Other published papers referred to in the online supporting module.
**Curriculum Mapping:**

**BLO 4:** Critically analyse appropriate investigations to develop and justify well-reasoned diagnosis

**BLO 12:** Plan, execute and report on substantial research projects in specialty dermatology fields

**Domain 2 Medical Dermatology**

LO7 Evaluate evidence-based medicine and relevant research methodology in clinical case-based dermatology

**Domain 4: Professional Qualities**

LO 25: Participate in dermatological research, building own dermatological knowledge and skills as well as contributing to the dermatological knowledge base and the understanding of patients, carers and other health care professionals.