**Faculty of Health Sciences Research Methods course for MMed students**

**A Course for Early MMeds: Foundations (Day 1 and 2)**

The journey of biomedical research is not just about acquiring skills; it's about fostering a passion for discovery and making a meaningful impact on healthcare. This course aims to equip young researchers with the tools and mindset to embark on that journey with confidence and enthusiasm.

The course is intended for registrars in the first 6-12 months of starting their training, prior to protocol submission to a DRC and HREC. However, it can be attended in the second to third year if the trainee has not yet started with their minor-dissertation or wishes to refresh their foundational research knowledge.

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| Time (min) | Topic |
| 09:00-12:00 | Building Strong Research Foundations  **DAY 1** |
| 15 min | Introduction to Biomedical Research: A dynamic journey through the world of medical research, understanding its importance and impact on healthcare. |
| 35 min | Navigating the MMed and Minor Dissertation: Simplifying the bureaucracy and timelines and forms. Supervisor MOU and interacting with supervisor. |
| 25 min | Identifying relevant, impactful, and feasible research questions. Sources of research projects. |
| 45 min | Literature Review Basics: Learning strategies to conduct comprehensive literature reviews, identify gaps, and position your research within the current knowledge landscape. Mention Systematic review/scoping. |
| 09:00-12:00 | **DAY 2** |
| 45 min | Research Design and Methodology Part 1: Exploring various study designs (observational, experimental, longitudinal) and methodologies (quantitative, qualitative) to match research goals. |
| 40 min | Ethical Considerations: Delving into the ethical dimensions of research involving human subjects, animal models, and privacy issues. |
| 20 min | The process of getting ethical approval and institutional for a study at UCT. |
| 55 min | Research Design and Methodology Part 2: Workshop |
| 45 min | Database Design and Management: Unpacking the basics of structuring and managing database tools (incl Redcap) for efficient data collection, storage, and retrieval. Introduction to Data Analysis: Building a foundation in statistical concepts and tools, setting the stage for advanced analysis in the future. |

Dates and registration: <https://redcap.link/96621scp>

**A Course for Senior MMeds: Finalisation (Day 3 and 4)**

This course is intended for registrars who have collected their data, regardless of year of study.

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| Time | Topic |
| 09:00-12:00 | Finalising Your Research Journey  **Day 3** |
| 45 min | Data Cleaning and Preparation: Navigating the crucial process of cleaning raw data and preparing it for analysis, ensuring accuracy and reliability. Interpreting Results: Developing skills to critically interpret statistical outputs and translating them into actionable insights. |
| 45 min | Basic Statistical Methods: Diving deeper into statistical techniques, including measures of central tendency/dispersion, comparison of continuous and categorical variables, and how to extract meaningful insights from your data. |
| 45 min | Scientific Writing Excellence: Mastering the art of constructing research manuscripts, abstracts, and posters that effectively communicate your findings to the scientific community. |
| 09:00-12:00 | **DAY 4** |
| 45 min | Effective Presentation Skills: Learning to present research findings with confidence and clarity, captivating both scientific and general audiences. Data Visualization: Transforming complex data sets into compelling visualizations that aid in conveying findings effectively. |
| 45 min | Submitting your Dissertation: Logistics of submission, formatting, different options, intention to submit, timelines, requirements. Navigating Peer Review/examiner responses: Understanding the peer review process and tips for addressing reviewer comments to enhance the quality of your work. |
| 30 min | Real-life Success Stories: Inviting guest speakers to share their journeys and experiences in biomedical research. Future Directions and Impact: Reflecting on your research's potential impact on healthcare, exploring avenues for further research, collaboration, and contribution to the field. |

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