

**INTRODUCTION TO CLINICAL RESEARCH METHODS**

The Kamuzu University of Health Sciences (KuHES), will run a two-week intensive short course in Clinical Research Methods (CRM). The course will run from 13th to 24th September 2021 in Blantyre, Malawi. The course will be taught by researchers and academics working at KuHES, Malawi-Liverpool-Wellcome Trust and other affiliates. This short course is designed for postgraduates wishing to improve their research skills. The course will focus on skills relevant to the early stages of research projects.

1. **Course Outline**

The main objective of the course is to teach practical skills and understanding in research methodology*.* The topics to be covered will include:

1. **Quantitative module: Days 1 to 5 (13th – 17th September)**

A 5-day Module, structured into nine 2.5hr (1hr lecture/1.5hr practical) sessions. The aim of the module, is to introduce participants to quantitative research method designs. All practical data analysis practice sessions will be conducted using R software.

The module will cover:

* Introduction to R: core skills - data handling
* The principles of study design
* Cases, populations and data types/Data types and summary
* Cross-sectional studies/ Introduction to cross-sectional data analysis
* Cohort studies/ Introduction to analysis of cohort studies
* Case-control studies/ Introduction to analysis of case control studies
* Introduction to randomized controlled trials (RCTs)/ Analysis of RCTs
* Power and sample size calculations/ Software for sample size calculations
* Planning your analysis/ Getting started with statistical analysis plans
* Measures of occurence and effect: confounding and effect modification

1. **Basic biomedical research methods module: Day 6 to 7 (20th – 21st September)**

A 2-day module, structured into lecture and practical sessions. The aim of the module is to introduce participants to commonly encountered concepts and data analysis requirements (GraphPad Prism programme).

The module will cover:

* Principles of molecular biology
* Real time PCR
* Whole genome sequencing
* Microbiomes and human health
* Introduction to immunology
* Introduction to bioinformatics
* Introduction to biomedical aspects of anti-microbial stewardship
* Introduction to GraphPad Prism

1. **Professional Support: Day 08 to 10 (22nd – 24th September)**

A 3-day Module, structured into 2.5hr (1.5hr lecture / 1hr practical) sessions. The aim of the module, is to equip participants with the basic skills and understanding required for quality research, including: ethics, financial management, information literacy, and to orientate participants to the standards expected of them in scientific writing, oral presentations, and documentation. The module will cover:

* Scientific writing and presentation
* Ethics of health research and writing an informed consent form
* Requirements for submission of research protocol to IRBs
* Principles of accounting, budgeting and grant management
* Investigator site file and SOPs
* Information literacy skills
* Introduction to electronic data capture and ODK design practical

1. **Methods of Assessment and credits**

No formal assessment. Attendees will get a certificate of attendance and course materials.

1. **Duration:**

2 weeks delivered course (excluding weekends), **from 13th to 24th September 2021.**

1. **Fees:**

* US$200.00 for externals and US$100.00 for internals.Internals refer to postgraduate students from KuHES and its affiliates. The fee for externals also applies to international applicants.
* Details of method of payment will be shared with candidates following shortlisting
* Scholarships will be offered to a few selected candidates on merit. Scholarships are only to candidates resident in Malawi.

1. **Venue**:

Kamuzu University of Health Sciences (Formerly College of Medicine), Mahatma Gandhi Campus, Blantyre, Malawi (ICT Lab, Room 828, Chimutu Building)

1. **Enrolment and Eligibility:**

* We shall enroll a maximum of 30 participants. Selected candidates will be notified through emails to provide proof of payment within a specified period. Failure to do so, candidates shall forfeit their places.

1. We shall consider all postgraduate applications received from students registered with accredited academic institutions in Malawi and internationally. Candidates in training under a clinical research group are also encouraged to apply.
2. **Accommodation and travel:**

All participants are expected to cover their travel and accommodation costs.

1. **Registration:**

* To apply, please download the CRM application form from the web address (URL) below:

<https://drive.google.com/file/d/1i20aoXSvYTyCOWQ11jhAxsJgpP3Lcpq_/view>

* Completed forms should be emailed to [hnti@medcol.mw](mailto:hnti@medcol.mw).
* Candidates asking for bursary/scholarship should also submit a CV and a one page letter of motivation.

1. **Application deadline:**

* The deadline for receiving applications is **16th August, 2021**.

1. **Feedback**

* Successful candidates should expect to receive feedback by 19th August, 2021.
* Because of the large volume of applications we usually receive for this course, we are unable to offer individual feedback to unsuccessful candidates.

1. **Enquiries**

* Any questions regarding the course, should be addressed to [hnti@medcol.mw](mailto:hnti@medcol.mw)