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MWANZA RESEARCH METHODS COURSE 2023

Introduction: This is a two-week, practical research methods course suitable for health researchers, social scientists and students undertaking professional training (MSc, MMed, MPH, and PhD). Facilitators for this course are highly experienced researchers from the National Institute for Medical Research (NIMR) Mwanza Centre, Mwanza Intervention Trials Unit (MITU), the Catholic University of Health and Allied Sciences (CUHAS), Cornell University and the London School of Hygiene & Tropical Medicine (LSHTM). The course consists of eight introductory modules on Epidemiology, Medical statistics, Bioethics, Field methods and Implementation Research, Laboratory methods and evaluation, Qualitative research methods, Clinical trials and Scientific critical reading and referencing.

The Course Objectives are:

1. To introduce the main methods used in health research
2. To develop expertise in the use of research methods introduced in the course
3. To enable participants to implement their future research Projects using appropriate methodologies

Venue: National Institute for Medical Research, Mwanza Centre, Isamilo area, Mwanza city

Dates: Monday 27th Feb 2023 to Friday 10th March 2023.

Course Details: Below is an outline of main topics which will be covered in each module: -

1. Epidemiology
 - a. Introduction to epidemiological studies
 - b. Measuring of disease occurrence
 - c. Measure of effects and association
 - d. Epidemiological study designs
 - e. Random errors, bias and confounding
 - f. Addressing confounding in analysis
2. Statistics
 - a. Introduction to biostatistics
 - b. Exploration of data
 - c. Analysis of continuous variables
 - d. Introduction to simple linear regression
 - e. Analysis of binary outcomes
 - f. Introduction to logistic regression
 - g. Sample size determination
3. Implementation research and field methods
 - a. Introduction to implementation research
 - b. Questionnaire design
 - c. Field survey methods
 - d. Interviewing skills
 - e. Survey, timelines and budgeting
4. Laboratory methods
 - a. Introduction and evaluating performance of diagnostic tests
 - b. Planning project laboratory testing
 - c. Good Clinical Laboratory Practice (GCLP)
 - d. Quality management system
5. Qualitative research



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- a. Overview of qualitative research
 - b. Common qualitative data collection methods
 - c. Key steps in qualitative data analysis
6. Clinical trials
 - a. Introduction to randomized clinical trials
 - b. Analysis of clinical trial data
 - c. Cluster randomized trials
 - d. Reporting of clinical trial results
 - e. Principles of Good Clinical Practice (GCP)
 7. Bio-ethics
 - a. Introduction to principles of Bioethics
 - b. Ethics in health research and ethical consideration
 8. Proposal writing, critical reading and referencing
 - a. Key steps in preparing a research proposal
 - b. Introduction to critical reading skills
 - c. Searching the internet for referencing

Mode of teaching: Experienced researchers will share their expertise and experiences with the course participants and teach the latest developments in research techniques. This will be done in the form of:

1. Lectures
2. Practical sessions to enhance the understanding of topics and to build skills in key techniques
3. Group activities to facilitate participant interaction

Evaluation

At the end of the course, participant will have to write an examination and those who score above fifty percent will be awarded a certificate of performance. Participants scoring below 50% will be awarded a certificate of attendance.

Mode of Application: Please submit your application letter outlining your current work/engagement(s) and how this course will benefit your work and career. Include with your application a CV and a letter of recommendation from your line manager or supervisor (where applicable). This should be submitted to the address below not later than **Friday, 13th January, 2023, 5.00pm** East African Time.

**The Director,
NIMR Mwanza Centre
Attention: Research Methods Course Coordinator
P.O Box 1462, Mwanza, TANZANIA
e-mail: rmcourse@mitu.or.tz**

Requirements: Applicants should have at least a Master's degree (or equivalent) in a relevant field of study and either working or doing post-graduate studies in a health-related field.

NOTE: *International applicants selected to attend the course are required to observe all health and visa requirements for entry to the United Republic of Tanzania.*