



AFROMED EDUCATION INITIATIVE

AFROMED MEDICAL RESEARCH FELLOWSHIP PROGRAM LECTURE SCHEDULE 2023/24 (DRAFT)

JUNIOR RESEARCH FELLOWSHIP

*MOTTO: "EMPOWERING THE NEXT GENERATION OF MEDICAL
RESEARCHERS IN AFRICA AND BEYOND."*

AFROMED MEDICAL & CLINICAL RESEARCH FELLOWSHIP TRAINING PROGRAM

GENERAL OVERVIEW:

The Afromed Medical & Clinical Research Training Fellowship is an annual program that trains and connects health professionals and students interested in conducting and applying medical research in Africa and beyond. The program consists of a three-six month online training phase and a one-day conference where participants present their research projects. The program covers various aspects of medical research, such as design, ethics, analysis, and dissemination, and provides mentorship and networking opportunities for the participants.

It aims to equip health professionals and students with the high-quality knowledge and skills required to foster the development and implementation of medical and clinical research studies that address relevant health problems and generate evidence-based solutions. It also aims to promote disseminating and utilizing clinical research findings in health care practice and policy. It also facilitates networking and collaboration among medical researchers, practitioners, educators, students, and other relevant stakeholders in the health ecosystem.

Email: afromededucation@gmail.com

INTRODUCTION

Objectives:

- ✓ To equip undergraduate medical students with the skills and knowledge to conduct high-quality medical and clinical research in Africa.
- ✓ To foster a culture of research excellence, innovation, and collaboration among the next generation of African medical and clinical researchers.
- ✓ To provide mentorship, guidance, and support for the fellows to develop and implement their own research projects.

Duration:

The program is a 3-month fellowship training program, consisting of three phases: online learning, residential training and project implementation.

Modules:

The program covers the following modules:

Module 1: Introduction to Medical and Clinical Research

This module introduces the fellows to the basic concepts, principles, and methods of medical and clinical research. It covers topics such as research ethics, research design, literature review, data collection, data analysis, and data presentation.

Module 2: Advanced Medical and Clinical Research

This module builds on the foundation of module 1 and exposes the fellows to more advanced topics and techniques in medical and clinical research. It covers topics such as systematic reviews, meta-analysis, randomized controlled trials, qualitative research, mixed methods research, and evidence-based medicine.

Module 3: Research Proposal Development

This module guides the fellows to develop their own research proposals based on their interests and needs. It covers topics such as research questions, hypotheses, objectives, methodology, budget, timeline, and ethical clearance.

Module 4: Research Project Implementation

This module supports the fellows to implement their research projects in their respective settings. It covers topics such as data management, quality assurance, monitoring and evaluation, dissemination, and publication.

MODULE 1: INTRODUCTION TO MEDICAL AND CLINICAL RESEARCH

This module introduces the fellows to the basic concepts, principles, and methods of medical and clinical research. It covers topics such as research ethics, research design, literature review, data collection, data analysis, and data presentation.

Learning Outcomes:

By the end of this module, the fellows will be able to:

- ✓ Explain what is meant by research, distinguish between basic and applied research and state the importance of research in health care delivery.
- ✓ Explain the importance and relevance of medical and clinical research in Africa.
- ✓ Identify and apply the ethical principles and standards of medical and clinical research.
- ✓ Describe and compare the different types of research design and methods.
- ✓ Conduct a comprehensive and critical literature review on a given topic.
- ✓ Collect, analyze, and interpret quantitative and qualitative data using appropriate tools and software.
- ✓ Present and communicate research findings effectively using various formats and platforms.

Learning Activities:

This module consists of 10 online sessions, each lasting 1 - 2 hours. The sessions are delivered through a combination of lectures, videos, readings, discussions, quizzes, and assignments. The sessions cover the following topics:

Module/ Course Name: Introduction to Medical and Clinical Research

Code: JRF 101

SESSION	TOPIC	MONTH/ WEEK/DATE	LECTURER
Session 1	Introduction to Medical and Clinical Research	1/WK 1	Dr Irumba Henry,

Session 2	Research Ethics	1/Wk 1	Dr Abena Agyarkowa Otchere-Darko
Session 3	Research Design	1/Wk 2	Dr. Hilkih Suga, Pharm. Adam, Kiganja, Dr Irumba Henry
Session 4	Literature Review	1/Wk 2	Dr Nubahumpatse Emmanuel, Miss. Naomi Kalaba
Session 5	Data Collection	1/Wk 3	Dr. Abena Agyarkowa Otchere-Darko, Mr. Benyumiza Deo
Session 6	Data Analysis	1/Wk 3	Dr.Kasadha Nasser-linear, logistic, poisson and Neg Binomial
Session 7	Data Presentation	1/Wk 4	Dr Kolade Afolayan Afolobi
Session 8	Data Interpretation	1/Wk 4	Dr Himali Amin, Mr Benyumiza Deo
Session 9	Data Communication	2/Wk 1	Dr. Abena Agyarkowa Otchere-Darko
Session 10	Review and Feedback	2/Wk 1	Dr Mutinta Chiyabi Dr Irumba Henry,

Assessment Methods:

This module is assessed by three online assessment methodologies:

- Quiz: 10%
- Assignment 1: Literature Review (15%)

The fellows are required to conduct a literature review on a given topic related to medical and clinical research in Africa. They are expected to search, select, synthesize, critique, and

reference at least 10 relevant sources using APA style. The literature review should be between 1500-2000 words.

- Assignment 2: Data Analysis and Presentation (15%)

The fellows are required to analyze and present a given dataset using Excel or SPSS. They are expected to perform descriptive and inferential statistics, create charts and tables, and write a summary of the results. The data analysis and presentation should be between 1000-1500 words.

MODULE 2: ADVANCED MEDICAL AND CLINICAL RESEARCH

This module builds on the foundation of module 1 and exposes the fellows to more advanced topics and techniques in medical and clinical research. It covers topics such as systematic reviews, meta-analysis, randomized controlled trials, qualitative research, mixed methods research, and evidence-based medicine.

Learning Outcomes:

By the end of this module, the fellows will be able to:

- ✓ Evaluate and apply the best available evidence to inform clinical decision making and practice.
- ✓ Conduct and interpret systematic reviews and meta-analyses on a given topic or question.
- ✓ Design and conduct randomized controlled trials using appropriate methods and tools.
- ✓ Conduct and analyze qualitative research using various approaches and techniques.
- ✓ Conduct and analyze mixed methods research using various strategies and models.

Learning Activities:

This module consists of 10 online sessions, each lasting 1 - 2 hours. The sessions are delivered through a combination of lectures, videos, readings, discussions, quizzes, and assignments. The sessions cover the following topics:

Module/ Course Name: Advanced Medical and Clinical Research

Code: JRF 102

SESSION	TOPIC	MONTH/ WEEK/DATE	LECTURER
Session 1	Evidence Based Medicine	2/WK 2	Prof. Simon Pius
Session 2	Systematic Reviews	2/Wk 2	Dr Victor Meza Kyaruzi, Mr Tariku Mengesha, Dr Kebby Muzyamuna

Session 3	Meta-Analysis	2/Wk 3	Dr Victor Meza Kyaruzi, Dr. Olabinri Patience Folashade
Session 4	Randomized Controlled Trials	2/Wk 3	Dr.Kasadha Nasser, Mrs. Anne Namarome Simiyu
Session 5	Qualitative Research	2/Wk 4	Dr. Abena Agyarkowa Otchere-Darko
Session 6	Qualitative Data Analysis	2/Wk 4	Dr Kebby Muzyamuna, Mr Byaruhanga Vincent,
Session 7	Mixed Methods Research	3/Wk 1	Dr Evelyn Mwila Mulenga, Mr. Benyumiza Deo
Session 8	Mixed Methods Data Analysis	3/Wk 1	Dr Kebby Muzyamuna, Mr Mawogole John
Session 9	Critical Appraisal of Research Articles	3/Wk 2	Dr. Hilkiyah Suga Mr. Joseph Miti
Session 10	Review and Feedback	3/Wk 2	Dr Mutinta Chiabi, Miss Naomi Kalaba

Assessment Methods:

This module is assessed by three online assessments:

Quiz: 10%

- Assignment 1: Systematic Review (15%)

The fellows are required to conduct a systematic review on a given topic or question related to medical and clinical research in Africa. They are expected to follow the PRISMA guidelines for conducting and reporting systematic reviews. The systematic review should be between 2000-2500 words.

- Assignment 2: Critical Appraisal (15%)

The fellows are required to critically appraise two research articles, one quantitative and one qualitative, using the CASP checklists. They are expected to identify and evaluate the

strengths and weaknesses of the articles, and provide constructive feedback and recommendations. The critical appraisal should be between 1000-1500 words

MODULE 3: RESEARCH PROPOSAL DEVELOPMENT

This module guides the fellows to develop their own research proposals based on their interests and needs. It covers topics such as research questions, hypotheses, objectives, methodology, budget, timeline, and ethical clearance.

Learning Outcomes:

By the end of this module, the fellows will be able to:

- ✓ Formulate clear and feasible research questions, hypotheses, and objectives for their own research projects.
- ✓ Select and justify the most suitable research design and methods for their own research projects.
- ✓ Develop a detailed and realistic research plan, including the methodology, budget, timeline, and ethical clearance for their own research projects.
- ✓ Write a coherent and persuasive research proposal for their own research projects.

Learning Activities:

This module consists of 5 online sessions, each lasting 1 - 2 hours. The sessions are delivered through a combination of lectures, videos, readings, discussions, quizzes, and assignments. The sessions cover the following topics:

Module/ Course Name: Research Proposal Development

Code: JRF 103

SESSION	TOPIC	MONTH/ WEEK/DATE	LECTURER
Session 1	Research Questions, Hypothesis, and Objectives	3/WK 3	Dr Kebby Muzyamuna, Mr. Benyumiza Deo
Session 2	Research Design and Methods	3/Wk 3	Dr. Abena Agyarkowa Otchere-Darko, Dr. Hilkih Suga, Pharm. Adam Kiganja
Session 3	Research Plan	3/Wk 4	Dr Irumba Henry,

			Dr. Abena Agyarkowa Otchere-Darko
Session 4	Research Proposal Writing	3/Wk 4	Dr Kasimu Mamuda, Mr. Benyumiza Deo
Session 5	Review and Feedback	4/Wk 1	Miss Naomi Kalaba, Mr Ally Tuwa Hassan, Dr Kebby Muzyamuna

Assessment Methods:

This module is assessed by two online assessments:

- Quiz: 10%
- Assignment 1: Research Proposal (40%)

The fellows are required to write a research proposal for their own research projects. They are expected to follow the AFROMED research proposal template and guidelines. The research proposal should be between 3000-4000 words.

MODULE 4: RESEARCH PROJECT IMPLEMENTATION

This module supports the fellows to implement their research projects in their respective settings. It covers topics such as data management, quality assurance, monitoring and evaluation, dissemination, and publication.

Learning Outcomes:

By the end of this module, the fellows will be able to:

- ✓ Implement their research projects in their respective settings according to their research plans.
- ✓ Manage their data effectively and securely using appropriate tools and software.
- ✓ Ensure the quality and validity of their data using various methods and techniques.
- ✓ Monitor and evaluate their research progress and performance using various indicators and tools.
- ✓ Disseminate and publish their research findings using various formats and platforms.

Learning Activities:

This module consists of 5 residential training workshops, each lasting 1 - 2 hours. The workshops are delivered through a combination of lectures, videos, readings, discussions, presentations, and field visits. The workshops cover the following topics:

Module/ Course Name: Research Project Implementation

Code: JRF 104

SESSION	TOPIC	MONTH/ WEEK/DATE	LECTURER
Workshop 1	Data Management	4/WK 1	Dr. Abena Agyarkowa Otchere-Darko, Dr. Kasadha Nasser
Workshop 2	Quality Assurance	4/Wk 2	Dr Kebby Muzyamuna
Workshop 3	Monitoring and Evaluation	4/Wk 2	Dr. Abena Agyarkowa Otchere-Darko

Workshop 4	Dissemination and Publication	4/Wk 3	Dr. Hilkih Suga
Workshop 5	Project Review and Feedback	4/Wk 3	Dr Kebby Muzyamuna, Dr Mutina Chiabi, Miss Naomin Kalaba,

Assessment Methods:

This module is assessed by two residential assignments:

- Quiz: (10%)
- Assignment 1: Research Project Report (30%)

- The fellows are required to write a research project report for their own research projects. They are expected to follow the AFROMED research project report template and guidelines. The research project report should be between 5000-6000 words.

- Assignment 2: Research Project Presentation (20%)

The fellows are required to present their research project findings to a panel of experts and peers. They are expected to use PowerPoint slides or posters to support their presentation. The presentation should be between 15-20 minutes.

Program Coordinator: Dr Mutinta Chiabi

Vice-Program Coordinator: Miss Naomi Kalaba