



THE COLLEGE OF SURGEONS OF EAST CENTRAL AND SOUTHERN AFRICA

(COSECSA)

RESEARCH METHODOLOGY COURSE

INTRODUCTION:

More than 5 billion people lack access to timely, safe, affordable, and quality surgical care, with the greatest unmet need in low- and middle-income countries, including those served by the College of Surgeons of East, Central and Southern Africa (COSECSA). Despite this need, research from the region remains limited, restricting locally relevant evidence to inform policy and practice. A COSECSA needs assessment identified research methodology skills as a key gap among trainees and fellows. In response, COSECSA has developed this interactive, practice-oriented online course to strengthen research capacity and support high-quality surgical research across the region.

LEARNING OBJECTIVES

By the end of the course, participants will be able to:

- Identify priority research questions relevant to global surgery and the regional context.
- Design and conduct high-quality surgical research using appropriate study methods.
- Develop competitive research proposals to secure funding.
- Effectively disseminate research findings to inform clinical practice, policy, and surgical systems strengthening.

ELIGIBILITY CRITERIA:

We invite anyone interested in global surgery research; surgeons, nurses, anesthesiologists and obstetricians.

TRAINING METHODOLOGY:

The programme combines self-paced online learning through the COSECSA Research Methodology Course with live interactive webinars. Each live session will feature two faculty presentations followed by discussion and questions. Participants are expected to complete assigned learning activities on the online platform, contribute to discussions, and provide

constructive feedback on at least one colleague's submission. The live webinars will offer opportunities to engage directly with faculty and peers.

DURATION AND TIMELINE

This online training will be conducted for 9 weeks, **starting from 28th August 2026 to 23rd October 2026**. There will be one live online session every week, taking a maximum of 2 hours.

CERTIFICATION:

The COSECSA Research Methodology Course is accredited Continuing Professional Development (CPD) credits. To be eligible for a Certificate of Completion and the award of CPD credits, participants must:

- Attend at least 80% of the live webinar sessions.
- Complete the required online learning modules.
- Participate in the online discussion forums and complete assigned activities.
- Submit all required assignments and successfully complete the course requirements.

FACULTY MEMBERS:

The training will be delivered by an identified pool of experts from COSECSA and partners will take part in delivering this program.

PROGRAM:

All sessions will begin from 3PM - 5PM East African Time (EAT)

DAY	Time	TOPIC	TRAINER
28 th August 2026	3:00-3:10PM	Introductions, welcome remarks and course expectations	Dr Michael Mwachiro
	3:10-4:05PM	Why surgical research in the ECSA region?	Dr John Tarpley
	4:05-5:00PM	Formulating a Research Question and Overview of Epidemiological Study Designs	Dr Robert Parker
4 th September 2026	3:00-4:00PM	Cross-sectional study designs	Dr Michael Mbambiko
	4:00-5:00PM	Case-control study designs	Dr Alemayehu Amberbir
11 th September 2026	3:00 - 3:40PM	Cohort Study designs	Dr. Jana McLeod
	3:40-4:20PM	Randomized Study Designs in Surgical Care	Dr Akutu Munyika
	4:20-5:00PM	Introduction to Implementation Science designs	Dr Godfrey Sama Philipo
18 th September 2026	3:00 - 3:40PM	Introduction to data analysis using a desired software	Dr. Rhondi Khauffmann
	3:40-4:20PM	Sampling techniques & sample size determination	Dr Robert Riviello
	4:20-5:00PM	Random errors, bias and confounding	Dr. Olivia Kituuka

25 th September 2026	3:00-4:00PM	Introduction to Correlation and Regression	Dr Gibson Kagaruki
	4:00-5:00PM	Statistical Tests Examples and Uses	Dr. Georges Bucybaruta
2 nd October 2026	3:00-4:00PM	Introduction to logistic regression	Dr. Dennis Mazingi
	4:00-5:00PM	Linear Regression Analysis	Dr. Isaac Cheruiyot
9 th October 2026	3:00-4:00PM	Logistic Regression Analysis	Dr Chester Kalinda
	4:00-5:00PM	Statistical Tests Examples and Uses	Dr. Isaac Cheruiyot
16 th October 2026	3:00-4:00PM	Basics of Research Ethics and IRB application	Dr. Barnabas Alayande
	4:00-5:00PM	Research Proposal components	Dr Catherine Mohr
23 rd October 2026	3:00-4:00PM	Manuscript Writing and Publication (Choosing the right journal)	Dr Vincent Kipkorir
	4:00-5:00PM	What reviewers want – Introduction to Peer Reviewing	Dr. Mumba Chalwe