Bachelor of Science in

Epidemiology & Biostatistics

USIU-Africa is accredited in Kenya by the Commission for University Education (CUE) & the United States of America by WASC Senior College and University Commission respectively.

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Education to take you places

PROGRAM DESCRIPTION

The USIU-Africa Bachelor of Epidemiology & Biostatistics program is based on two basic and seamlessly integrated sciences of public health. The program promotes the development, application and teaching of descriptive and analytic approaches used to understand the increasingly complex causes, distribution and determinants of major local, national, regional and global public health problems.
At the same time, the program develops, applies and teaches theories and methods in the design of biological, biomedical and health-related studies and in collection, analysis and interpretation of data to inform and support the descriptive and analytic approaches that can be used to prevent and control diseases as well as promote public health.

LEARNING OUTCOMES

Upon successful completion of the program, the students will be able to:

1. Use epidemiologic knowledge to respond to a variety of practical situations that impact on public health.
2. Employ biostatistical methods to conduct basic life science research.
3. Analyze the appropriateness of existing laws and ethics in assuring population public health
4. Interpret research results of statistical analyses in public health.
5. Use relevant statistical software to organize, analyze, and report on life science research data.
6. Develop a plan for data management and analysis using appropriate statistical techniques.
7. Design Clinical trials and analyse disease prediction data.
8. Apply mathematical modelling for disease outcomes.

DEGREE REQUIREMENTS 194 UNITS

GENERAL EDUCATION 39 UNITS

SIGNATURE COURSES 15 UNITS

STRATEGIES FOR UNIVERSITY SUCCESS 3 UNITS

SUS 1010 Strategies for University Success

RESEARCH METHODS 3 UNITS

GRM 2000 Introduction to Research Methods

COMMUNITY SERVICE OR COMMUNITY PROJECT 3 UNITS

CMS 3700 Community Service

THE SENIOR EXPERIENCE 3 UNITS

SEN 4800 Integrated Senior Seminar

FUNDAMENTALS OF INFORMATION LITERACY 3 UNITS

FIL 1010 Fundamentals of Information Literacy

LANGUAGE STUDIES 12 UNITS

ENGLISH LANGUAGE 6 UNITS

ENG 1106 Composition I (WI)
ENG 2206 Composition II (WI)

FOREIGN LANGUAGE 6 UNITS

Students must have credit for a foreign language or must take a two-course foreign language sequence of one language.
USIU-Africa offers courses in Arabic (ARB1000), French (FRN1000), Japanese (JPN1000), Spanish (SPN1000), Swahili (SWA1000), Chinese (CHI1000) and Kenya Sign Language (KSL1000).

DISCIPLINARY GENERAL EDUCATION ELECTIVES 6 UNITS

IST 1010 Introduction to Information Systems
MTH 1109 College Algebra

SCHOOL-BASED GENERAL EDUCATION ELECTIVES 6 UNITS

Students are required to pick 2 electives from other Schools. These are:

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES - LOWER LEVEL ELECTIVES

SOC 1101 Introduction to Sociology

CHANDARIA SCHOOL OF BUSINESS – UPPER LEVEL ELECTIVES

MGT 3010 Overview of Management Practice

CORE COURSES — 155 UNITS

LOWER LEVEL CORE COURSES — 84 UNITS

EPI	1000	Introduction to Epidemiology	3 Units
BST	1010	Introduction to Biostatistics	4.5 Units
EPI	1010	Epidemiology of Disease	3 Units
HSC	1394	Introduction to Global Health	3 Units
HSC	1330	Calculus for Health Sciences	3 Units
BST	1020	Introduction to Statistical Computing	4.5 Units
MIC	2360	Introduction to Microbiology & Parasitology	4.5 Units
EPI	2010	Nutritional Epidemiology	3 Units
IST	1025	Introduction to Programming	3 Units
EPI	3010	Advanced Epidemiology	3 Units
BST	2010	Probability and Statistical Inference	3 Units
HSC	2391	Principles of Health Economics	3 Units
PHT	2010	Disease Prevention & Health Promotion	3 Units
BST	3010	Regression Modelling	3 Units
HSC	3395	Environmental & Occupational Health	3 Units
DAN	3010	Multivariate Methods/Analysis	3 Units
NSC	2205	Human Physiology	3 Units
PHT	2020	Control & Prevention of Infectious Diseases	3 Units
PHT	3010	Contemporary Community Health Issues	3 Units
BST	3020	Demographic Techniques	4.5 Units
BUS	4090	Strategic Management	3 Units
HSC	3492	Law and Bioethics in Research	3 Units
DAN	3020	Data Mining	3 Units
HSC	4010	Sociology for Health Sciences	3 Units
EPI	4010	Exposure Assessment in Epidemiology	3 Units
EPI	4020	Genetic & Molecular Epidemiology	3 Units

UPPER LEVEL CORE COURSES — 71 UNITS

EPI	4030	Pharmacoepidemiology and Drug Safety	4.5 Units
HSC	4396	Fundamentals of Global Health	3 Units
DAN	4010	Design & Management of Clinical Trials	3 Units
PHT	4010	Public Health Epidemiology	3 Units
DAN	4015	Longitudinal Data Analysis	3 Units
BST	4030	Spatial Statistics and Disease Mapping	3 Units
HSC	4496	Research Methods in Health Sciences	3 Units
DAN	4030	Time Series Analysis	3 Units
BST	4040	Statistical Genetics	3 Units
HSC	4495	Project Planning & Proposal Development	3 Units
BST	4020	Mathematical Modelling of Infectious Diseases	4.5 Units
PHT	4020	Monitoring & Evaluation of Health Programs	3 Units
DAN	4020	Survival Data Analysis	4.5 Units
BST	4050	Biostatistical Consultancy	4.5 Units
BST	4010	Research Project	6 Units
PHM	4510	Fundamentals of Pharmacometrics	3 Units
BST	4060	Principles of Bioinformatics	3 Units
ENT	4005	Entrepreneurial Behavior & Ethics	3 Units
HSC	4494	Practicum & Attachment	8 Units

CAREER OPPORTUNITIES

A Bachelor of Science in Epidemiology & Biostatistics opens up a wide range of career opportunities. Here are some potential career paths:

1. Public health officials or analysis
2. Data Science
3. Bioinformatics Specialist
4. Health Policy experts
5. Project managers
6. Biostatisticians/Statistical Analysts
7. Epidemiologists
8. Researchers
9. Lecturers
10. Health Data Managers
11. Monitoring and Evaluation Officers
12. Independent Consultants
13. Big Data Managers
14. Clinical Trial Experts
15. Clinical Trial Studies Specialists

ADMISSION REQUIREMENTS

Kenya Certificate of Secondary Education (KCSE) or its equivalent with a minimum aggregate of C+ and attained the following minimum grades in the specified subjects: Biology C+; Mathematics and English B-.

CONTACTS

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