13.1.4 BACHELOR OF SCIENCE (MOLECULAR AND CELLULAR BIOLOGY)

Entry requirements
i. Kenyatta University entry requirements shall apply.
ii. A candidate wishing to enroll for a B.Sc. in Molecular and Cellular Biology must satisfy the minimum entry requirements for the School of Pure and Applied Sciences of Kenyatta University.
iii. Candidates must have passed with a minimum of C+ in the overall average aggregate. In addition, the student must have passed in the following subjects:

Alternative A:  
Biology B-  
Chemistry B-  
Mathematics/ Physics C+

Alternative B:  
Biological Science B  
Physical Science B

iv. Diploma (or equivalent qualification) in relevant discipline from a recognized institution, with credit or distinction. In addition, candidates must have had a minimum of a C grade in KCSE.
v. Mean grade of C- (minus) at KCSE and progressed from certificate to Diploma at Kenyatta University or any other recognized/accredited Institutions.

Programme of Study and Degree Pattern
Students taking B.Sc. (MCB) must complete 48 departmental units in addition to the university common units.

Examinations
The general university regulations shall apply.

Certification
Graduates of this programme will be awarded a Bachelor of Science degree in Molecular and Cellular Biology (B.Sc. MCB).

Unit Code and Title

Level 100
SBC 100: Structure of Biomolecules
SBC 101: The Cell and its- External environment
SBC 103: Proteins and enzymes I
SBC 113: Introduction to Molecular Biology
SBC 116: Cytoskeleton I
SBC 120: Introduction to Genetics
SBC 151: Developmental Biology
SBC 212: Cell Surface and Intercellular Communication
SBT 101: Survey of Plant Kingdom
SBT 102: Plant Morphology and Anatomy
SCH 100: Fundamentals of Inorganic Chemistry
SZL 100: General Zoology
UCU Unit

Level 200
SBC 170: Basic Metabolism I
SBC 270: Advanced Proteins and Enzymes
SBC 203: Bio-membranes and Sub-cellular Organelles
SBC 271: Cellular Basis of Morphogenesis
SBC 272: Biochemistry of Tumours
SBC 273: Cytoskeleton II SBC 274: Cell Cycle
SBC 275: Genome Organization I SBC 276: Genetics II
SBC 250: Virology
SBC 252: Basic Immunology
SBC 427: Fundamentals of Bioinformatics
UCU Unit

Level 300
SBC 312: Genome Organization II
SBC 313: Experiments in DNA Identification and Molecular Genetics SBC 314: Human Disease and the Development of Therapeutic Agents SBC 315: Advanced Cell Biology Laboratory (in lieu of 352N)
SBC 370: Advanced Biochemistry Laboratory
SBC 371: Fundamentals of Microbiology
SBC 318: Molecular Biology of Eukaryotic Cells
SBC 321: Gene mapping techniques
SBC 322: Plant tissue culture
SBC 350: Cytoskeleton III
SBC 351: Genetic Engineering and Functional Genomics SBC 373: Attachment/Practicum (in lieu of SBC 315) SBC 353: Molecular Immunology

Level 400
SBC 403: Advanced Immunology
SBC 406: Pharmaceutical Chemistry
SBC 411: Advanced Eukaryotic Genetics
SBC 412: Principles of Genomics
SBC 470: Principles of Organic Spectroscopy
SBC 416: Membrane Biology Cellular Biochemistry
SBC 417: Transgenic Expression Systems SBC 418: Introduction to Neuroscience SBC 425: Biosafety and Bioethics
SBC 428: Research Project (Two units equivalent) SBC 471: Molecular Evolution and Bioinformatics SBC 472: Molecular Genetics
UCU Unit