6.2.3  BACHELOR OF SCIENCE (COMPUTER SCIENCE)

Entry Requirements
i. A candidate pursuing the B.Sc. degree in Computer Science must meet the minimum University entry mean grade of C+ in KCSE or any other entry mean grade/qualification recognized by the university senate. In addition the candidate must have attained the following minimum grades at KCSE or equivalent qualifications: Mathematics B+, Physics B+ and English C+.
OR
ii. Accredited Diploma Holders. Candidates with an accredited Diploma in Computer Science or related field with a credit pass and mean grade of C in KCSE with a C+ in Physic and Mathematics may be admitted into the first year of study and acquire credit transfer for equivalent courses with credit grade at diploma level.

Examinations
Common University regulations shall apply

Certification
No certification

Unit Code and Title
Level 100
UCU 100: Communication Skills
SCO 100: Computer Fundamentals
SCO 102: Introduction to Programming
SCO 104: Computer Organization and Architecture I
SCO 106: Electronics
SCO 108: Discrete Mathematics
SCO 110: Mathematical Foundations for Computer Science
UCU 101: Development Studies
UCU 103: Introduction to Critical and Creative Thinking
SCO 103: Object Oriented Programming I
SCO 105: Data Communication Technologies
SCO 113: Foundations of Artificial Intelligence
SCO 109: Linear Algebra for Computer Science
SMA 104: Calculus I
Level 200
SCO 200: Object Oriented Programming II
SCO 204: Data Structures and Algorithms
SCO 206: Database Systems
SCO 208: Object Oriented Analysis and Design
SMA 200: Calculus II
SCO 212: Probability and Statistics for Computer Science
SCO 201: Computer Organization and Architecture II
SCO 203: Software Testing and Quality Assurance
SCO 207: Web Development Technologies
SCO 209: Microprocessor and Assembly Language Programming
SCO 211: Automata Theory
SCO 215: System Analysis and Design
SCO 217: Operating Systems
SIT 205: Entrepreneurship and Business Planning

Level 300
SCO 300: Computer Networks
SCO 302: Software Project Management
SCO 304: Advanced Database Systems
SCO 306: Programming Languages
SCO 308: Design and Analysis of Algorithms
SCO 310: Component Programming
SMA 330: Numerical Analysis I
SCO 301: Compiler Construction
SCO 303: Simulation and Modelling
SCO 305: Computer Graphics
SCO 307: Human Computer Interface
SCO 309: Research Methods and Technical Writing
SCO 311: Electronic Commerce
SCO 312: Industrial Attachment

Level 400
SCO 400: Project (2 units)
SCO 402: Legal and Ethical Issues in Computing
SCO 404: Entrepreneurship
SCO 406: Computer Systems Security
SCO 408: Information Systems Management
SCO 410: Distributed Systems
SCO 412: Mobile Computing and Wireless Technology
ECU 400: Research Methodology

Select all 4 units from one of the following areas of specialization
Net Centric Computing
SCO 401: Network Management
SCO 403: Networked Applications
SCO 405: Compression
SCO 407: Multimedia Technologies
**Intelligent Systems**
SCO 409: Natural Language Processing
SCO 411: Neural Networks
SCO 413: Robotics
SCO 415: Data Warehouse and Data Mining

**Information Systems**
SCO 417: Geographic Information Systems (GIS)
SCO 419: Enterprise Resource Planning (ERP) Systems
SCO 421: Decision Support Systems
SCO 423: Information System Auditing