



# B.Sc Applied Computer Technology

     @USIUAfrica

 **United States  
International  
University-Africa**  
Education to take you places

## PROGRAM DESCRIPTION

The Bachelor of Science in Applied Computer Technology program addresses the integration, design, deployment and management of computing and telecommunication resources and services, as well as the development of technology infrastructures in organizations.

It prepares students to solve complex hardware and software problems requiring fundamental knowledge and competencies in the processes of needs assessment, technology transfer and user support.

## DEGREE REQUIREMENTS 150 UNITS

### GENERAL EDUCATION REQUIREMENTS 39 UNITS

#### STRATEGIES FOR UNIVERSITY SUCCESS 3 UNITS

SUS 1010 Strategies for University Success

#### RESEARCH METHODS 3 UNITS

GRM2000 Introduction to Research Methods

#### SYMBOLIC SYSTEMS AND INTELLECTUAL SKILLS 12 UNITS

#### WRITTEN, ANALYTICAL, CRITICAL THINKING SKILLS 6 UNITS

ENG 1106 Composition I (WI)

ENG 2206 Composition II (WI)

#### QUANTITATIVE AND TECHNOLOGICAL SKILLS 6 UNITS

IST1020 Introduction to Information Systems

MTH 1109 College Algebra

#### LANGUAGE STUDIES 6 UNITS

Students must have credit for a foreign language or must take up to a two-course foreign language sequence of one language. USIU-Africa offers courses in Arabic, French, Japanese, Spanish, Swahili and Chinese.

#### COMMUNITY SERVICE OR COMMUNITY PROJECT 3 UNITS

CMS 3700 Community Service

#### THE SENIOR EXPERIENCE 3 UNITS

The Senior Experience is required for each undergraduate degree program.

SEN 4800 Integrated Senior Seminar

#### GENERAL EDUCATION ELECTIVES 9 UNITS

Students are required to pick 3 elective courses (9 Units) from the other schools. One of the courses should be an upper level course. Lower Level courses are coded 1000-2999 while upper level courses are coded 3000 - 4999.

## SCHOOL OF HUMANITIES & SOCIAL SERVICES LIST OF LOWER & UPPER LEVEL ELECTIVES

### **Lower Level Electives**

PSY 1101: Introduction to Psychology

PHL 1104: Introduction to Philosophy

SOC 2201: Introduction to Sociology

### **Upper Level Electives**

GEO 3000: Geography and the Environment

PSY 3135: Psychology of Communication

SOC 3301: Social Problems

PHL 3310: Ethics and Value Theory

SOC 3500: Social Conflict & Resolution

LIT 4815: Oral Literature

## CHANDARIA SCHOOL OF BUSINESS LIST OF LOWER & UPPER LEVEL ELECTIVES

### **Lower Level Electives**

BUS 1010: Introduction to Business

ECO1010: Principles of Microeconomics

ENT1010: Introduction to Entrepreneurship

HRT1010: Introduction to Hospitality & Tourism Management

### **Upper Level Electives**

MGT 3010: Overview of Management Practice

MKT 3010: Principles of Marketing

## MAJOR

96 UNITS

### LOWER DIVISION CORE COURSES

51 UNITS

- MTH1110 Calculus
- IST 1025 Introduction to Programming
- APT 1030 Fundamentals of Programming Languages
- APT 1040 Introduction to Web Design and Applications
- APT 1050 Database Systems
- APT 2010 Systems Analysis and Design
- APT 2020 Computer Organization
- APT 2022 Introduction to Assembly Programming
- APT 2030 Digital Electronics
- APT 2040 Operating Systems
- IST 2045 Introduction to Computer Networks
- APT 2050 Computer Networks and Telecommunication
- APT 2055 Hardware and Software Practicum
- APT 2060 Data Structures & Algorithms
- APT 2080 Introduction to Software Engineering
- APT 2090 Computer Graphics
- MTH2215 Discrete Mathematics

### UPPER DIVISION CORE COURSES

45 UNITS

- APT 3010 Introduction to Artificial Intelligence
- APT 3025 Applied Machine Learning
- APT 3040 Object Oriented Design and Programming
- APT 3050 Introduction to Project Management
- APT 3060 Mobile Programming
- APT 3065 Mid-Term Project
- APT 3080 Management Information Systems
- APT 3090 Cryptography and Network Security
- APT 3095 Cloud Computing and Virtualization
- APT 4900 Applied Computer Technology Project
- APT 4910 Applied Computer Technology Internship
- IST 3015 Business Data Analytics
- IST 3050 Introduction to Security Systems
- IST 4035 Advanced Web Design and Applications
- IST 4078 IT Innovation and Entrepreneurship

### CONCENTRATION COURSES

15 UNITS

Applied Computer Technology majors must take Software Engineering, Networking, Mobile Computing & Distributed Systems or Forensic Information Technology and Cybercrime as their concentration or area of specialization

### DISTRIBUTED SYSTEMS & MOBILE COMPUTING

- DST 4010 Distributed Systems
- DST 4020 Mobile computing
- DST 4030 Parallel Computing
- DST 4040 Digital Wireless Communication and Networks
- DST 4050 Embedded Real-Time Systems



## **SOFTWARE ENGINEERING**

SFE 4010 Human Computer Interaction

SFE 4020 Software Design and Architecture

SFE 4030 Software Testing and Quality Assurance

APP 4035 Web Application Development Frameworks

APP 4080 Collaborative (Team Work in) Software Development

## **NETWORKING**

DST 4010 Distributed Systems

NET 4020 Network Management and Security

NET 4030 Internet Architecture and Protocols

APP 4035 Web Application Development Frameworks

NET 4050 Sensor Networks and Internet of Things

## **FORENSIC INFORMATION TECHNOLOGY & CYBERCRIME**

FIC 4010 Information System Security

FIC 4020 Forensic Accounting and Fraud Investigation

FIC 4030 Information Systems Audit

FIC 4040 Information Technology & Cybercrime

FIC 4050 Computer Forensics and Investigation

## CAREER OPTIONS

- Network Administrator
- Network Engineer
- Network Designer
- Network Architect
- Software Engineer
- Software Applications Developer
- Information Systems Developer
- Mobile Applications Developer
- Systems Analyst / Programmer
- Information Systems Project manager
- Systems Architect
- Database Administrator
- Web Applications Developer
- Information systems Auditor
- IT Forensics Engineer
- Internet and Cybercrime Consultant
- Network Security Engineer

## CONTACTS

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