



Program Handbook

Bachelor of Science in Cyber Security

Texila American University, Zambia

Table of Contents

1. Introduction 3

2. Rationale 3

3. Aims of the programme 3

4. Programme Learning Outcomes 4

5. Level of Qualification and Articulation in the Zambia Qualifications Framework..... 4

6. Program Structure 5

7. Academic Delivery Plan 7

8. Assessment 7

9. Facilities for Programme Delivery 7

10. Entrance Requirements, Curricula and Degree Regulations 10

11. Examinations..... 10

12. Career Progression 10

13. Degree Regulations 10

14. Degree Classification 12

1. Introduction

School of Business and Information Technology at TAU, imparts all the basic technical skills to the students to get expertise in various technologies and keeping them updated in the global scenario. The School is dedicated in providing a unique learning experience that would enhance a student's education professionally. The School strictly adheres to its curriculum on the current technology and standards so as to meet the everyday challenges in the industry. The course is offered in Full time, Part time and Distance & Blended mode.

2. Rationale

Information Technology is a developing and pressing field across the world, which makes a great choice for students to take an active role in changing life around them! Texila American University renders a cost-effective approach in Information Technology programs specifically designed with an objective of making students as IT Professionals with various sub sections of IT like Cyber Security

3. Aims of the programme

TAU Bachelor program in Cyber Security envisages every student's pre-requisites and provides suitable technical training for the students to get placed in the well-established organization. The program gives in-depth knowledge about various concepts such as ethical hacking, cryptography, computer networks & security, application security, idAM (identity & access management), vulnerability analysis, malware threats, sniffing, SQL injection, DoS, session hijacking, and various security practices for businesses from scratch with hands-on demonstrations.

Cyber security is the combination of processes, practices, and technologies designed to protect networks, computers, programs, data and information from attack, damage, or unauthorized access.

- Students will be prepared with the technical knowledge and skills required to protect and defend computer systems and networks.
- To produce graduates capable of planning, implementing, and monitoring cyber security mechanisms to aid in the protection of information technology assets.

- To produce graduates capable of detecting, analysing, and correcting computer security breaches.
- To create a skilled resource on the roles such as Network Administrator, System Administrator, Security Analyst, Security Engineer, Pen Tester, and more to serve sub-Saharan Africa and the globe

4. Programme Learning Outcomes

The learners would be able to:

- The student will understand a holistic & a wide variety of foundational topics of cyber security domain which will be helpful to lead freshers as well as IT professional having 1 to 2 years of experience, into the next level of choice such as Network Administrator / System Administrator / Security Analyst / Security Engineer / Ethical Hacker/ Cryptographer / Penetration Tester and so on
- The student will be a mastery of Cyber security and Ethical Hacking and skill to Analyze and evaluate the cyber security needs of an organization.
- Should have knowledge to Conduct a risk assessment for cyber security ,Measure the performance of cyber security systems and troubleshoot them and to Put cyber security solutions in place.
- Be able to use software/tools for cyber security, information assurance, and cyber/computer forensics, to Create a security architecture for an organization and Create operational and strategic cyber security policies and strategies.

5. Level of Qualification and Articulation in the Zambia Qualifications Framework

ZQF level : 7

EXAMPLE:

At this level, it is expected that the graduate shall:

- a) Gain knowledge and critical understanding of well-established principles of all the emerging issues in Computing and Information Technology, and of the way in which those principles have developed.

- b) Develop the ability to apply underlying concepts and principles outside the context in which they were first studied, including, where appropriate, the application of these principles in varied contexts.
- c) Gain knowledge of the main principles of Computing and Information Technology and ability to critically evaluate the appropriateness of different approaches in solving problems.
- d) Apply a range of established Computing and Information Technology techniques to initiate and undertake critical analysis of information, and to propose solutions to problems in the field of Cyber Security .
- e) Effectively communicate information, arguments, and analysis, in a variety of forms, to various audiences.
- f) Present information, manage team, transfer knowledge, skills and values to others through delegation and practice.
- g) Develop existing Computing and Information Technology skills and acquire new competencies to enable assumption of significant responsibility within organizations.
- h) Exercise personal responsibility, initiative and decision-making in complex and unpredictable contexts.
- i) Demonstrate some originality, innovativeness and creativity in formulating, evaluating and applying evidence-based solutions and arguments within the field of Computing and Information Technology.

6. Program Structure

		YEAR 1	
YEAR		COURSE TITLE	CREDIT POINTS
Year 1	SIT101	Introduction to Computer Programming	15
	SIT102	Mathematics – I	15
	SIT103	Introduction to Cyber Security	15
	SIT104	Introduction to Digital Technologies	15
	SIT105	Introduction to Emerging Technologies	15
	SIT106	Introduction to Mobile Application Development	15
	SIT107	Introduction to Web Development	15
	SIT108	Computer Organization and Architecture	15
		Total	120
		YEAR 2	

YEAR		COURSE TITLE	CREDIT POINTS
Year 2	SIT201	IT and Society	12
	SIT202	Mathematics - II	12
	SIT203	Computer Programming	12
	SIT204	Human Computer Interaction	12
	SIT205	Systems Analysis and Design	12
	SIT206	Software Engineering	12
	SIT207	E-commerce Applications	12
	SIT208	Relational Database Systems	12
	SIT209	Information Systems Theory and Practice	12
	SIT210	Management Information Systems	12
	SIT000	Internship - (Non-Credit Course -8 weeks)	
		Total	120
YEAR 3			
YEAR		COURSE TITLE	CREDIT POINTS
Year 3	SIT301	Cyber Security	12
	SIT302	Advanced Database Design and Development	12
	SIT303	Web Based Development	12
	SIT304	Network Design	12
	SIT305	Ethical, Legal and Regulatory Issues and Professional Responsibilities in IT	12
	SIT306	Strategic Management Information Systems*	12
	SIT307	Innovative Technologies in Computing	12
	SIT308	Computing Research Methods	12
	SIT309	Software Development Methodologies	12
	SIT310	Managing a Computing Project - Project Work	12
		Total	120
YEAR 4			
YEAR		COURSE TITLE	CREDIT POINTS
Year 4	BCS401	Ethical Hacking	12
	BCS402	Cryptography	12
	BCS403	Computer Networks & Security	12
	BCS404	IdAM (Identity and Access Management)	12
	BCS405	Vulnerability Analysis & System Hacking	12
	SIT400	Internship and Project	60
		Total	120

Total Programme Credits : 480

7. Academic Delivery Plan

Texila American University Zambia is providing quality education with its state-of-the-art infrastructure, best learning methodology and technology enabled academic services.

- Uniquely Designed Learning Methodology
- Outcome Based Academic Delivery
- Continuous Academic Support
- Enhanced Learning Management Systems
- Technology Enabled Services

8. Assessment

A candidate has to pass both formative assessment and summative assessment. Candidate should secure at least 50 % of total marks in formative as well as summative assessment to clear each course.

Assessment	Weightage
Formative Assessment	
Unit Test	40%
Summative Assessment	
Final Exam (MCQ's)	60%
TOTAL	100 %

9. Facilities for Programme Delivery

TAU has excellent facilities for the program delivery designed keeping in mind the needs of the student in all means.

Classroom:

All our classrooms are well equipped with Hi tech facilities like specially designed classroom projector with computer with uninterrupted network connection. Our entire classrooms are

centralized air-conditioned with good lighting. Comfortable seating arrangements are made for student's comfort. We have well equipped and designed computer laboratory with more than 60 computers and one dedicated Server connection for use. To strengthen our Information and Communication technology we have authorized CISCO networking systems.

Research policy: TAU-Zambia has a separate research policy to develop and maintain state of the art technology, resources (research grants/scholarships etc.), facilities and personnel to support educational and advanced research for both students and faculty.

Library

A learning hub for students to satisfy their thirst for inquisitive knowledge and urge. Our huge database is filled with information which can easily help in your academic brilliance.

TAU Library is equipped with good number of relevant books for the students to refer and make use of the books for their continuous academic growth.

Learning Management System (LMS)

Learning Management System is the Academic Delivery platform for student, through which lecture contents, video lectures, learning resources, assessment, project submission, grading, etc. A Learning Management System (LMS) is a web-based application through which learning content is delivered and managed. An LMS is tied to on-line and off-line training, administration, and performance management and includes functionality for course catalogs, launching courses, registering learners, tracking learner progress and assessments. An LMS combines a front-end for the learner with a back-end for administrators and instructors. This LMS seamlessly displays, in a browser interface, real-time information drawn from a database. It also allows for competency-driven assessment and course associations

ERP: Enterprise Resource Planning Portal is Campus Management System, It manages enrolled students database, exam results, faculty details, student's survey, calendar etc. All students are provided access to this portal for viewing followings: • Enrollment Status, Profile of the Student, Exam Results, Calendars, Invoice and Payment Status.

E-Conference:

E-Conference is an innovative platform which provides an excellent international forum for sharing knowledge and results. The E-Conference was conducted on the OPEN FORUM, the first of its kind. It includes Open forum, all accepted articles will be placed for discussion. Every article to be reviewed by other Authors or Reviewers. The Reviewers or Authors can place in their comments and views on the article as part of the discussion forum. The highlight of the Open forum discussion is that there is no time or place constraint.

E-Journal:

E-INTERNATIONAL JOURNALS OF ACADEMIC & SCIENTIFIC RESEARCH: EIJSR

is an endeavor by the organization to overcome the barriers in the easy and fast access of research data. Our goal has been to go beyond borders in the field of academic research. There is an interactive platform where individuals can gain access to educational and scientific journals. Besides publishing journals related to various field of study, the EIJSR helps in indexing and calculation of impact factor of journals. This online journal website assists students in checking out the findings and scientific details of the latest technologies and diseases. It helps one to publish his or her findings and create awareness about it in the scientific and medical field. There is a great shortage of platforms where one can publish his thesis or findings and it has led to various discoveries and cures being shelved up.

10. Entrance Requirements, Curricula and Degree Regulations

- O level with minimum Credit or better in 5 subjects (or)
- 3 years Diploma in relevant speciality from recognized university (or)
- 2 years Diploma in relevant speciality from recognized university with 3 years of work experience

Non- English-Speaking Countries:

Additional requirements required as proof of English proficiency from

- TOEFL (Test of English as a Foreign Language)
- IELTS (International English Language Testing System) Score of 4.0 and above
- Cambridge/ The International Baccalaureate (IB)

11. Examinations

- Formative assessment comprises of 40 % and Summative assessment comprises of 60% weightage.
- A candidate has to pass both formative assessment and summative assessment.
- Candidate should secure at least 50 % of total marks in formative as well as summative assessment to clear each course.

12. Career Progression :

On successful completion of B.Sc. degree students have opportunities to do their master's degree in Information Technology / Computer Science / Data Informatics/ Information Security / Artificial Intelligence locally and globally.

- On successful completion of B.Sc. In Cyber Security Degree following are the opportunities available in Zambia and globe.
- IT Project Manager/ Ethical Hacker/ Cryptographer / Penetration Tester or Information Security Analyst.
- Data Scientist / Security Officer
- Business Intelligence Developer
- IT Security officer
- IT Consultant o Information Security Engineer

13. Degree Regulations

The student will be eligible for the award of the Bachelor of Science in Cyber Security, on successful completion of all the academic requirements.

14. Degree Classification

TAU offers Bachelor of Science in Cyber Security program for the students who have successfully fulfilled all the academic requirements.
