



جامعة شرق إفريقيا
EAST AFRICA UNIVERSITY

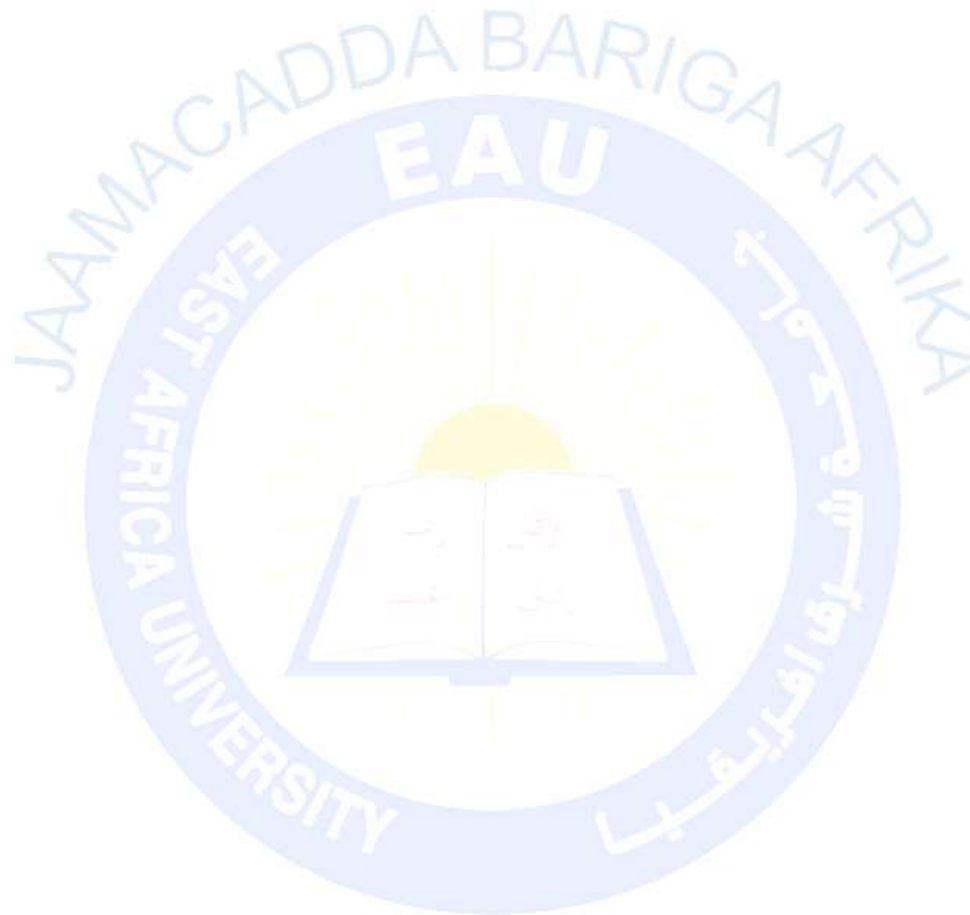


**Department of Curriculum and Development
Office of Academic Affairs**

**FACULTY OF INFORMATION SCIENCE AND
TECHNOLOGY
(JUNE 2021)**

Contents

BSc Computer Science	5
BSc Information Systems	10




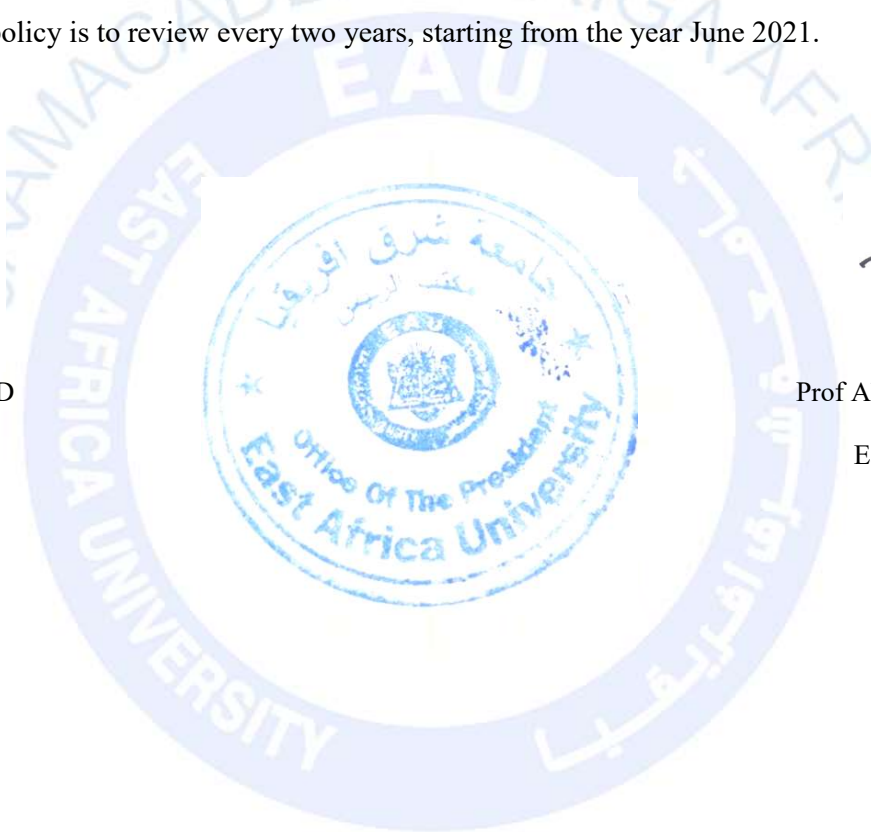
Department of Curriculum and Development Office of Academic Affairs

This curriculum plan has been officially approved by the delegates of all East Africa University Branches after reviewing and revising it between 08-11 August 2020 then again revised and reviews between 26-28 June 2021.

Part of our curriculum development policy is to review every two years, starting from the year June 2021.



Prof Abdirizak Mohamud Takar, PhD
Rector
East Africa University



Prof Abdisalam Issa-Salwe, PhD
Vice-Rector
East Africa University

Faculty of Information Science and Technology

The Faculty of Information Science and Technology implements education in the field of information science and technology. Our educational philosophy is to train students to be creative, planners, designers, and software developer.

In order to train graduates who can contribute to society, we provide an educational curriculum which fosters the development skills of computer systems and information contents from the foundation of information science and technology to develop modern technology.

The Faculty of Information Science and Technology offers a range of internationally accredited bachelors. Within these programs, there is special attention on issues which are related to the modern learning.

Our education is characterized by clear structure, intensive guidance and enthusiastic teachers, the small scale interdisciplinary offerings and its strong international orientation benchmarked with some of the higher educational institutions in the world

In the 21st century, it is difficult to imagine life without information technologies, the faculty produces graduates who are capable of facing the technological advancements of the new millennium.

The faculty the following programs:

1. BSc Computer Science
2. BSc Information Systems



East Africa University

جامعة شرق أفريقيا

BSc Computer Science

Semester One	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite	
	1	ENG-101	English Language Skills	3	0	3	---	
	2	PHS-101	General Physics	3	0	3	----	
	3	MTH-111	Precalculus	3	0	3	---	
	4	CIS-101	Computer Application	3	2	4	---	
	5	COM-101	Introduction to Computing	3	0	3	---	
	6	COM-103	Computer Hardware and Maintenance	3	0	3	---	
							19	
	Session Engagement 1		Topics selected from the tutorial sessions		0	2	0	---
Total Credit Unit						19		

Semester Two	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Hours	Prerequisite	
	1	ARB-101	Arabic Language	3	0	3	---	
	2	ENG-102	English Composition	3	0	3	ENG-101	
	3	MTH-122	Calculus I	3	0	3	MTH-111	
	4	COM-112	Introduction to Programming Languages	3	2	4	---	
	5	COM-124	Operating Systems	3	0	3	COM-101	
	6	COM-103	Basic Networking	3	0	3	COM-101	
						19		
	Session Engagement 2		Topics selected from the tutorial sessions		0	2	0	---
	Total Credit Hours					19		

Semester Three	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite
	1	ISL-101	دراسات إسلامية: القيم والأخلاق الإسلامية	3	0	3	--
	2	ENG-103	Communication Skills	3	0	3	MTH-122
	3	MTH-211	Probability and Statistics	3	0	3	----
	4	COM-213	Core Java	3	2	4	COM-112
	5	COM-215	Data Structures and Algorithms	3	0	3	---
	6	COM-217	Computer Architecture and Organization	3	0	3	COM-101
						19	
	Session Engagement 3		Topics selected from the tutorial sessions	0	2	0	---
	Total Credit Unit					19	

Semester Four	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite
	1	ISL-102	دراسات إسلامية: العقيدة والعبادة	3	0	3	---
	2	ENG-104	Technical Writing	3	0	3	ENG-103
	3	MTH-232	Discrete Mathematics	3	0	3	MTH-211
	4	CIS-226	Fundamentals of Web Development I	3	2	4	---
	5	CIS-228	Database Management Systems	3	2	4	COM-215
	6	COM-238	Human Computer Interaction	3	0	3	---
						20	
	Session Engagement 4		Topics selected from the tutorial sessions	0	2	0	
	Total Credit Unit					20	

Semester Five	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite	
	1	SOM-101	Somali Culture and History	3	0	3	--	
	2	MTH-207	Linear Algebra	3	0	3	MTH-232	
	3	CIS-313	Sequential Query Language	3	0	3	CIS-228	
	4	COM-311	Mobile Computing and Applications	3	2	4	COM-213	
	5	COM-313	Software Engineering	3	0	3	COM-101	
	6	COM-315	Computer Graphics	3	0	3	---	
							19	
	Session Engagement 5		Topics selected from the tutorial sessions		0	2	0	---
	Total Credit Unit						19	

Semester Six	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite	
	1	CIS-322	Fundamentals of Web Development II	3	2	4	CIS-226	
	2	CIS-317	Multimedia	3	0	3	---	
	3	COM-312	Advanced Java	3	0	3	COM-213	
	4	COM-334	Server Administration and Maintenance	3	0	3	---	
	5	COM-336	Digital Logic Design	3	2	4	---	
	6	COM-338	Artificial Intelligence	3	0	3	---	
							20	
	Session Engagement 6		Topics selected from the tutorial sessions		0	2	0	---
	Total Credit Unit						20	

Semester Seven	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite	
	1	COM-478	Research Methodology	3	0	3	---	
	2	COM-464	Computing, Society and Ethics	2	0	2	---	
	3	COM-411	Network and Information Security	3	2	4	COM-213	
	5	COM-413	Mobile Application	3	0	3	---	
	6	COM-100	Elective 1	3	2	4	See electives	
	7	COM-200	Elective 2	3	2	4	See electives	
							20	
	Session Engagement 7		Topics selected from the tutorial sessions		0	2	0	---
	Total Credit Unit						20	

Semester Eight	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite	
	1	COM-432	Managing Cyber Security Operations	3	0	3	---	
	2	COM-492	Graduation Project	0	3	3	COM-478	
	3	COM-478	Industrial/ Field Training	0	3	3	100 Crd units	
	4	COM-434	Theory of Computation	3	0	3	---	
	4	COM-300	Elective 3	3	2	4	See electives	
	5	COM-400	Elective 4	3	2	4	See electives	
							20	
	Session Engagement 8		Topics selected from the tutorial sessions		0	2	0	---
	Total Credit Unit						20	
Accumulative Total Credit Unit						153		

Elective Courses							
Elective Courses	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite
	1	COM-481	ASP.NET	3	2	4	---
	2	COM-482	C#	3	2	4	---
	3	COM-483	Visualization and Visual Analytics	3	2	4	---
	4	COM-484	IP Routing and Switches	3	2	4	---
	5	COM-485	Parallel Computing	3	2	4	---
	6	COM-486	Linux OS	2	2	3	---
	7	COM-487	Digital Images Processing and Analysis	3	2	4	---
	8	COM-488	Machine Learning	3	2	4	---
	9	COM-489	Natural Language Processing	3	2	4	---
	10	COM-491	Special Topic in Computer Science	3	2	4	---



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جامعة شرق أفريقيا

BSc Information Systems

Semester One	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite	
	1	ENG-101	English Language Skills	3	0	3	---	
	2	PHS-101	General Physics	3	0	3	----	
	3	MTH-111	Precalculus	3	0	3	---	
	4	CIS-101	Computer Application	3	2	4	---	
	5	COM-101	Introduction to Computing	3	0	3	---	
	6	COM-103	Computer Hardware and Maintenance	3	0	3	---	
							19	
	Session Engagement 1		Topics selected from the tutorial sessions		0	2	0	---
	Total Credit Unit						19	

Semester Two	No.	Course #	Course Title	Lecture	Lab	Credit	Prerequisite
				Hours	Hours	Unit	
	1	ARB-101	Arabic Language	3	0	3	---
	2	ENG-102	English Composition	3	0	3	ENG-101
	3	MTH-122	Calculus I	3	0	3	MTH-111
	4	COM-112	Introduction to Programming Languages	3	2	4	---
	5	COM-124	Operating Systems	3	0	3	COM-101
	6	COM-103	Basic Networking	3	0	3	COM-101
						19	
Session Engagement 2		Topics selected from the tutorial sessions		0	2	0	---
Total Credit Unit					19		

Semester Three	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite
	1	ISL-101	دراسات إسلامية: القيم والأخلاق الإسلامية	3	0	3	--
	2	SOM-101	Communication Skills	3	0	3	MTH-122
	3	COM-201	Probability and Statistics	3	0	3	----
	4	COM-212	Core Java	3	2	4	COM-112
	5	COM-215	Data Structures and Algorithms	3	0	3	COM-101
	6	CIS-201	Expert Systems	3	0	3	---
						19	
	Session Engagement 3		Topics selected from the tutorial sessions	0	2	0	---
	Total Credit Unit					19	

Semester Four	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite
	1	ISL-102	دراسات إسلامية: العقيدة والعبادة	3	0	3	---
	2	ENG-104	Technical Writing	3	0	3	ENG-103
	3	MTH-232	Discrete Mathematics	3	0	3	MTH-211
	4	COM-238	Human Computer Interaction	3	0	3	---
	5	CIS-226	Fundamentals of Web Development I	3	2	4	---
	6	CIS-228	Database Management Systems	3	2	4	COM-232
						20	
	Session Engagement 4		Topics selected from the tutorial sessions	0	2	0	---
	Total Credit Unit					20	

Semester Five	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite	
	1	SOM-101	Somali Culture and History	3	0	3	--	
	2	MTH-207	Linear Algebra	3	0	3	MTH-232	
	3	CIS-311	Sequential Query Language	3	0	3	CIS-228	
	4	CIS-325	Information Technology Infrastructure	3	0	3	---	
	5	COM-311	Mobile Computing and Applications	3	2	4	---	
	6	CIS-320	Systems Analysis and Design	3	0	3	---	
							19	
	Session Engagement 5		Topics selected from the tutorial sessions		0	2	0	---
	Total Credit Unit						19	

Semester Six	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite	
	1	BAD-222	Entrepreneurship and Small Business Management	3	0	3	---	
	2	COM-317	Advanced Java	3	2	4	CIS-226	
	3	CIS-322	Fundamentals of Web Development II	3	2	4	CIS-226	
	4	CIS-324	Information Systems Project Management	3	0	3	---	
	5	CIS-326	Multimedia	3	2	4	CIS-226	
	6	CIS-328	Knowledge Management Systems	3	0	3	---	
							21	
	Session Engagement 6		Topics selected from the tutorial sessions	0	2	0	---	
	Total Credit Unit						21	

Semester Seven	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite
	1	COM-478	Research Methodology	3	0	3	---
	2	COM-464	Computing, Society and Ethics	2	0	2	---
	3	COM-411	Network and Information Security	3	2	4	COM-212
	4	COM-413	Mobile Application	3	0	3	---
	5	CIS-100	Elective 1	3	2	4	See electives
	6	CIS-200	Elective 2	3	2	4	See electives
						20	
	Session Engagement 7		Topics selected from the tutorial sessions	0	2	0	---
	Total Credit Unit					20	

Semester Eight	No.	Course #	Course Title	Lecture Hours	Lab Hours	Credit Unit	Prerequisite	
	1	COM-413	Data Warehouse and Mining	3	0	3	CIS-228	
	2	COM-492	Graduation Project	0	3	3	COM-478	
	3	CIS-478	Industrial/ Field Training	0	3	3	100 Crd units	
	4	ACC-487	Banking, Financial Markets and Institutions	3	0	3	---	
	5	CIS-300	Elective 3	3	2	4	See electives	
	6	CIS-400	Elective 4	3	2	4	See electives	
						20		
	Session Engagement 8		Topics selected from the tutorial sessions		0	2	0	---
	Total Credit Unit					20		
Accumulative Total Credit Unit						157		

Elective Courses							
Elective Courses	No.	Course #	Course Title	Lecture Hours	Lab Unit	Credit Unit	Prerequisite
	1	CIS-480	ASP.NET	3	2	4	---
	2	CIS-481	C#	3	2	4	---
	3	CIS-482	Information Search, Retrieval and Visualization	3	2	4	---
	4	CIS-483	Business Process Management	3	2	4	---
	5	CIS-484	Information Technology Audit and Controls	3	2	4	---
	6	CIS-485	Decision Support Systems	3	2	4	---
	7	CIS-486	E-Business Technology	3	2	4	---
	8	CIS-487	Business Process Modeling, Simulation and Design	3	2	4	---
	9	CIS-489	Data Center Administration	3	2	4	---
	10	CIS-491	Special Topics in Information Systems	3	2	4	---