

Faculty of Information Science and Technology

BSc Computer Science and Information Systems Program Plans (June 2021)

Contents

BSc Computer Science 3
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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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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 Hours	Lab Hours	Credit Unit	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 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	---