

Kenya Methodist University

School of Science and Technology

Department of Pure and Applied Sciences

Bachelor of Science in Mathematics and Computer Science

YEAR	SEMESTER	S/No.	Course Code	Course Title	Credits	Equivalent
ONE	ONE	1	COMP 101	Introduction to Computer Science	3	CISY 101
		2	COMP 110	Introduction to Programming	3	CISY 110
		3	MATH 102	Foundations of Mathematics	3	
		4	MATH 103	Calculus I	3	
		5	SOST 131	Introduction to Sociology	3	
		6	THEO 111	Christian Beliefs	3	
					18	
	TWO	1	COMM 111	Communication Skills	3	
		2	COMP 104	Analogue Electronics	3	CISY 104
		3	COMP 111	Structured Programming	3	CISY 111
		4	MATH 104	Calculus II	3	
		5	MATH 110	Linear Algebra I	3	
6		MATH 132	Probability and Statistics I	3		
				18		
TWO	ONE	1	COMP 131	Introduction to Computer Networks	3	CISY 131
		2	COMP 211	Object Oriented Programming	3	CISY 210
		3	COMP 231	Telecommunication Networks	3	CISY 231
		4	MATH 200	Calculus III	3	
		5	MATH 210	Linear Algebra II	3	
		6	MATH 230	Probability and Statistics II	3	
					18	
	TWO	1	COMP 201	Computer Organization and Architecture	3	CISY 201
		2	COMP 210	Data Structures	3	CISY 212
		3	COMP 220	System Analysis and Design	3	CISY 222
		4	HSCI 225	HIV/AIDS	3	
		5	MATH 211	Discrete Structures	3	
6		MATH 220	Ordinary Differential Equations I	3		
				18		
THREE	ONE	1	COMP 300	Operating Systems	3	CISY 300
		2	COMP 302	Digital Electronics	3	CISY 204
		3	COMP 340	Database Management System	3	CISY 221
		4	ENVI 201	Environmental Science	3	
		5	MATH 221	Vector Analysis	3	
		6	MATH 310	Real Analysis I	3	
					18	
	TWO	1	BUSS 114	Fundamentals of Entrepreneurship	3	
		2	COMP 303	Computer Hardware and Maintenance	3	CISY 303
		3	COMP 304	Research Methodology	3	CISY 302
		4	MATH 320	Numerical Analysis I	3	
		5	MATH 331	Operation Research I	3	
6		PHYS 310	Electrical Circuits	3		
				18		
FOUR	ONE	1	COMP 400	Internship	3	
		2	COMP 422	Automata and Formal Language	3	CISY 402
		3	MATH 410	Complex Variable Theory I	3	
		4	MATH 412	Algebraic Structures	3	

		5	MATH 420	Partial Differential Equations I	3	
		6	One Course in Option		3	
					18	
	TWO	1	COMP 401	Research Project	6	MATH 401
		2	COMP 445	Information Systems Security	3	CISY 431
		3	MATH 430	Operation Research II	3	
		4	One Course in Option		3	
		5	One Course in Option		3	
					18	
Option Courses						
1.0 MATHEMATICS						
A. APPLIED MATHEMATICS						
FOUR	ONE	1	MATH 321	Classical Mechanics	3	
		2	MATH 322	Ordinary Differential Equations II	3	
	TWO	1	MATH 421	Partial Differential Equations II	3	
		2	MATH 422	Methods of Mathematical Physics	3	
		3	MATH 423	Fluid Mechanics I	3	
		4	MATH 424	Fluid Mechanics II		
		5	MATH 425	Dynamics		
		6	MATH 426	Numerical Analysis II		
	B. STATISTICS					
FOUR	ONE	1	MATH 332	Theory of Estimation	3	
		2	MATH 333	Sample Surveys	3	
	TWO	1	MATH 431	Test of Hypotheses	3	
		2	MATH 432	Time Series	3	
		3	MATH 433	Design and Analysis of Experiment	3	
		4	MATH 434	Non Parametric Methods	3	
		5	MATH 435	Econometrics	3	
		6	MATH 436	Probability and Stochastic Processes	3	
	C. PURE MATHEMATICS					
FOUR	ONE	1	MATH 311	Real Anlysis II	3	
		2	MATH 414	General Topology	3	
	TWO	1	MATH 415	Functional Analysis	3	
		2	MATH 419	Measure Theory	3	
		3	MATH 411	Complex Analysis II	3	
2.0 COMPUTER SCIENCE						
A. SOFTWARE ENGINEERING						
FOUR	ONE	1	COMP 311	Advanced Programming	3	CISY 310
		2	COMP 312	Management Information Systems	3	CISY 421
	TWO	1	COMP 420	Software Engineering Principles	3	CISY 321
		2	COMP 421	Simulation and Modeling	3	CISY 403
		3	COMP 430	Mobile Computing	3	CISY 412
		4	COMP 440	Artificial Intelligence	3	CISY 422
		5	COMP 441	Advanced Database Systems	3	CISY 423
		6	BBIT 314	Human Computer Interaction	3	

B. COMPUTER NETWORKS						
FOUR	ONE	1	COMP 311	Internet Applications and Programming	3	CISY 311
		2	COMP 331	Network Administration I	3	CISY 331
	TWO	1	COMP 426	Multimedia Systems	3	CISY 426
		2	COMP 431	Digital Signal Processing	3	CISY 434
		3	COMP 442	Object Oriented Analysis and Design	3	CISY 411
		4	COMP 443	Distributed Systems	3	CISY 432
		5	COMP 444	Network Hardware and Configuration	3	CISY 332
		6	COMP 446	Wireless Communication	3	CISY 333
		7	COMP 447	Cryptography and Network Security	3	CISY 433
		8	COMP 448	Client Server Systems and Computing	3	CISY 436
		9	COMP 449	Network Performance and Optimization	3	CISY 437