

FIRST YEAR (Freshmen)							
First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
CIS 103	Programming Fundamentals I	4	ORN 03C ORN 03R	CIS 104	Programming Fundamentals II	4	CIS 103 ORN 05C ORN 05R
CHM 101	General Chemistry	4	ORN 04R ORN 04C	CNE 100	Data Communications and Computer Networks	3	CIS 103
MTH 106	Discrete Mathematics	3	ORN 04C ORN 04R	MTH 104	Calculus I	3	ORN 03C ORN 03R
ENG 101	English Essay Writing	3	ORN 05R ORN 05C	PHY 103	Physics I	4	ORN 04R ORN 04C
ISL 101	Foundation of Islamic Culture	2	ORN 02R ORN 02C	ARB 102	Communication Skills in Arabic	2	ORN 02R ORN 02C
	Humanities / Social Science Elective I	3	ORN 04R ORN 04C		Humanities / Social Science Elective II	3	ORN 04R ORN 04C
Sub-Total		19		Sub-Total		19	

SECOND YEAR (Sophomore)							
First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
CIS 202	Data Structures	3	CIS 104	CIS 221	Introduction to Database Systems	3	CIS 104
CNE 200	Network Protocols & Architecture	3	CNE 100	CNE 300	Switching and Routing	3	CNE 200
MTH 204	Calculus II	3	MTH 104	CNE 221	Digital Logic and Design	3	MTH 106
PHY 203	Physics II	4	PHY 103	MTH 301	Linear Algebra	3	MTH 104
ENG 201	Technical Report Writing	3	ENG 101	STT 103	Probability and Statistics	3	ORN 03C, ORN 03R
ISL 202	Financial Awareness	2	ORN 02R, ORN 02C	ARB 202	Writing Skills in Arabic	2	ORN 02R, ORN 02C
Sub-Total		18		Sub-Total		17	

THIRD YEAR (Junior)							
First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
CIS 304	Computer Architecture	3	CNE 221		CNE Elective I	3	
CIS 383	Cybersecurity and Cryptography	3	CNE 100	CIS 306	Embedded Systems	3	CIS 304
CIS 386	Project Management	3	CIS 221	CIS 321	Operating Systems	3	CIS 304
CNE 303	Wireless Networks	3	CNE 200	CNE 307	Network Security	3	CIS 383; CNE 200
CNE 305	Internet of Things	3	CNE 200	CNE 308	Network Design and Modelling	3	CNE 300
MTH 304	Differential Equations	3	MTH 204	CNE 310	Network Programming	3	CNE 200
Sub-Total		18		Sub-Total		18	

FOURTH YEAR (Senior)							
First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
	CNE Elective II	3			CNE Elective III	3	
CNE 405	Cloud Infrastructure Design	2	CNE 300	CNE 411	Datacenters and System Administration	3	CIS 321; CNE 300
CNE 406	Computer Network Management	3	CNE 300	CNE 412	Virtual Network Design and Implementation	3	CNE 300
CIS 416	Introduction to Machine Learning	3	MTH 301	CIS 492	Graduation Project II	3	CIS 491
CIS 491	Graduation Project I	3	CNE 308; CIS 386; Completion of 90 CHs	CSK 001	Career Skills	0	
Sub-Total		14		Sub-Total		12	

FOURTH YEAR (Senior)			
Summer Semester			
Code	Course Title	CR	Pre-Requisite
CIS 490	Cooperative Assignment (*)	6	CNE 308, Completion of 90 CHs
Sub-Total		6	

(*) it is recommended to take CSK 001 before CIS 490.

BCNE Electives, students should register 3 courses			
Course Code	Course Title	Pre-requisites	Credit Hours*
CNE 450	Signals and System Analysis	MTH 304	3
CNE 451	Network Troubleshooting	CNE 300	3
CNE 452	Network Simulation and Modeling	CNE 300	3
CNE 453	Advance Topics of Switching and Routing	CNE 300	3
CNE 454	Enterprise Networking	CNE 300	3
CNE 455	IT Technical Support	CNE 300	3
CNE 456	Optical Networks	CNE 300	3
CNE 457	Broadband Networks	CNE 300	3
CNE 458	Fault-Tolerant Systems	CNE 300	3
CNE 470	Selected Topics in Computer Network Engineering	CNE 300	3
CNE 471	Smart Cities and IoT Applications	CNE 305	3
CNE 472	Mobile Edge Computing (MEC)	CNE 303	3
CNE 473	5G Technologies and Beyond	CNE 303	3
CNE 474	Mobile Network Architecture and Protocols	CNE 303	3
CNE 475	Virtual Networking and Software Defined Networking	CNE 303	3
CNE 480	Cyber Threats	CIS 383	3
CNE 481	Ethical Hacking	CIS 383;CNE 300	3
CNE 482	Digital Forensics and Incident Response	CIS 383	3
CNE 483	Cloud Services and Security	CIS 383	3
CNE 484	Critical Infrastructure Protection	CNE 307	3
CNE 485	Intrusion Detection/Prevention Systems	CNE 307	3

Humanities / Social Science Electives (Two courses from this list)			
Code	Course Title	CR	Pre-Requisite
SOS 102	Introduction to Social Science	3	ORN 04R & ORN 04C
PHL 101	Critical Thinking	3	ORN 04R & ORN 04C
PSY 101	Principle of Psychology	3	ORN 04R & ORN 04C
SOS 101	Saudi Heritage	3	ORN 04R & ORN 04C
FRE 106	Conversational French 1	3	ORN 04R & ORN 04C
CHI 107	Chinese Language	3	ORN 04R & ORN 04C
ENG 103	Introduction to English Literature	3	ORN 05R & ORN 05C