

Cybersecurity Engineering

Study Plan

	Course Code	Course Title	Course Type	Pre-R	Co-R	Credit Hours	Contact Hours
Semester 1	XXXX	Arts and Humanities (Group I) Elective	UM			3	3
	ENL101	English for Academic Studies	UM	IEP099 or Equivalent	DPS095	3	3
	MAT101	Calculus I	UM	IMP099 or Equivalent		3	3
	PHY101	Physics I	UM		MAT101	3	3
	PHY105	Physics I Lab	CM		PHY101	1	3
	MAT120	Discrete Mathematics	CM	IMP099 or Equivalent		3	3
	INF120	Computers and Information Systems	UM	DPS095		3	3
Total						19	21
Semester 2	BIO101 or CHM101	Biology I or Chemistry I	CM	IMP099 or Equivalent		3	3
	BIO105 or CHM105	Biology I Lab or Chemistry I Lab	CM		BIO101 or CHM101	1	3
	MAT102	Calculus II	CM	MAT101		3	3
	ENL102	English Composition	UM	ENL101 DPS095		3	3
	CCS120	Computational Thinking & Programming	CM	MAT120		3	3
	CCS121	Computational Thinking & Programming Lab	CM		CCS120	1	3
	GEN150	Professionalism and Ethics	UM			3	3
Total						17	21
Semester 3	CCS200	Digital Logic and Design	CM	PHY101		3	3
	MAT202	Linear Algebra	CM	MAT101		3	3
	MAT221	Number Theory	CM	MAT102		3	3
	ENL201	Writing and Research	UM	ENL102		3	3
	CCS220	Object-Oriented Design & Programming	CM	CCS120		3	3
	CCS221	Object-Oriented Design & Programming Lab	CM		CCS220	1	3
	MAT240	Differential Equations	CM	MAT102		3	3
Total						19	21

	Course Code	Course Title	Course Type	Pre-R	Co-R	Credit Hours	Contact Hours
Semester 4	XXXX	Innovation and Creativity Elective	UM			3	3
	ENG304	Engineering Probability & Statistics	CM	MAT102		3	3
	ENG308	Numerical Methods	CM	MAT202 MAT240		3	3
	CCS230	Fundamentals of Database Systems	CM	CCS220 MAT120		3	3
	CCS231	Fundamental of Database Systems Lab	CM		CCS230	1	3
	XXXX	Arts and Humanities (Group II) Elective	UM			3	3
	CCS241	Fundamentals of Computer Networks	CM	CCS200		3	3
Total						19	21

Semester 5	HST101	Islamic Culture and Values	UM			3	3
	CSE210	Fundamentals of Cyber Security Engineering	PM	MAT202		3	3
	CCS270	Data Structures and Algorithms	CM	CCS220		3	3
	CCS271	Data Structures and Algorithms Lab	CM		CCS270	1	3
	CCS330	Web Engineering	CM	CCS230		3	3
	CCS331	Web Engineering Lab	CM		CCS330	1	3
	CSE341	Network Security	PM	CCS241		3	3
Total						17	21

Semester 6	XXXX	Global Citizen Elective	UM			3	3
	CCS320	Fundamentals of Operating Systems	CM	CCS270		3	3
	CSE310	Cryptography and Data Security	PM	CSE210		3	3
	CSE311	Cryptography and Data Security Lab	PM		CSE310	1	3
	CSE325	Cybersecurity Risk Management	PM	CSE210		3	3
	CSE326	Cybersecurity Risk Management Lab	PM		CSE325	1	3
	CSE360	Ethical Hacking and Cyber Laws	PM	CSE210 GEN150		3	3
Total						17	21

	Course Code	Course Title	Course Type	Pre-R	Co-R	Credit Hours	Contact Hours
Semester 7	CSE410	Digital Forensics	PM	CSE310		3	3
	CSE411	Digital Forensics Lab	PM		CSE410	1	3
	CSE430	Web Security	PM	CSE210 CCS330		3	3
	CSE431	Web Security Lab	PM		CSE430	1	3
	CSE490	Capstone Design 1	PM	Pass 96 CH		3	3
	XXXX	Program Elective 1	PE			3	3
<i>Total</i>						14	18
Semester 8	CSE420	Software Security	PM	CCS320		3	3
	CSE421	Software Security Lab	PM		CSE420	1	3
	CSE491	Capstone Design 2	PM	CSE490		3	3
	XXXX	Program Elective 2	PE			3	3
<i>Total</i>						10	12

Note that the University Mandatory (UM), College Mandatory (CM), Program Mandatory (PM), and Program Elective (PE) courses