

Software 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
	CCS270	Data Structures and Algorithms	CM	CCS220		3	3
	CCS271	Data Structures and Algorithms Lab	CM		CCS270	1	3
	SWE301	Software Process and Methodologies	PM	CCS230		3	3
	SWE305	Software Requirements Engineering	PM	CCS230		3	3
	SWE306	Software Requirements Engineering Lab	PM		SWE305	1	3
	XXXX	Global Citizen Elective	UM			3	3
Total						17	21

Semester 6	CCS320	Fundamentals of Operating Systems	CM	CCS270		3	3
	CCS330	Web Engineering	CM	CCS230		3	3
	CCS331	Web Engineering Lab	CM		CCS330	1	3
	SWE340	Software Design and Architecture	PM	SWE305		3	3
	SWE341	Software Design and Architecture Lab	PM		SWE340	1	3
	SWE310	Human-Computer Interaction	PM	SWE301		3	3
	SWE311	Human-Computer Interaction Lab	PM		SWE310	1	3
	SWE345	Software Modelling and Analysis	PM	SWE301		3	3
Total						18	24

	Course Code	Course Title	Course Type	Pre-R	Co-R	Credit Hours	Contact Hours
Semester 7	XXXX	Program Elective1	PE			3	3
	SWE430	Software Testing and Quality Assurance	PM	SWE340		3	3
	SWE431	Software Testing and Quality Assurance Lab	PM		SWE430	1	3
	SWE490	Capstone Design 1	PM	Pass 96 CH		3	3
	SWE420	Software Construction and Evolution	PM	SWE340		3	3
	SWE421	Software Construction and Evolution Lab	PM		SWE420	1	3
<i>Total</i>						14	18
Semester 8	SWE440	Software Security and Analysis	PM	SWE430		3	3
	SWE491	Capstone Design 2	PM	SWE490		3	3
	XXXX	Program Elective 2	PE			3	3
<i>Total</i>						9	9

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