A. Mandatory Requirements: University Requirements (6 credit hours 4 courses)

Code	Course	Number of Hours / week			Requirement
		Credit Hours	Lecture	Practical	
GN170	English language-1 (Scientific & Technical Report Writing)	3	3	-	-
OD112	Fundamental of Management	3	3	-	-
---	Human Rights	-	1	-	-
---	Quality	-	1	-	-
		6			

B. Optional Requirements: University Requirement (3 credit hours 1 Course)

Code	Course	Number of Hours / week			Requirement
		Credit Hours	Lecture	Practical	
HU120	Communication & Negotiation Skills	3	3	-	-
HU130	Creative Thinking	3	3	-	-
HU140	Professional Ethics	3	3	-	-
NG150	Fund. of Economy	3	3	-	-
		3		-	-

C. Mandatory Requirements: Faculty Requirements (66 Credit Hours 11 Courses)

Code	Course	Number of Hours /Week			Requirement
		Credit Hours	Lecture	Practical	
MA111	Mathematics-1	3	2	3	-

Code	Course				Prerequisite
OD111	Discrete Mathematics	3	2	3	-
CS131	Fundamentals of Programming	3	2	3	-
CS111	Computer Introduction	3	2	3	-
IT181	Introduction to Electronics	3	2	3	-
MA112	Mathematics-2	3	2	3	Mathematics-1 MA111
ST190	Statistics & Probabilities	3	2	3	Mathematics-1 MA111
CS132	Computer Programming-1	3	2	3	Fundamentals of Programming CS131
IT282	Computer Organization	3	2	3	Introduction to Electronics IT181
CS233	Computer Programming-2	3	2	3	Computer Programming-1 CS132
CS212	Data Structure	3	2	3	Computer Programming-1 CS132
IS212	System Analysis & Design-1	3	2	3	-
CS261	Operating Systems-1	3	2	3	Computer Programming-1 CS132
CS251	Software Engineering-1	3	2	3	Computer Programming-2 CS233
IS221	Database Systems-1	3	2	3	Data Structure CS212
IT211	Computer Networks-1	3	2	3	Introduction to Electronics IT181
CS313	Analysis and Design of Algorithms	3	2	3	Computer Programming-1 CS132

Code	Course	Credit Hours	Lecture	Practical	Requirement
CS250	File Organization	3	2	3	Data Structure CS212
IS251	Web Design and Development	3	2	3	Computer Programming-1 CS132
OD342	Modeling & Simulation	3	2	3	System Analysis & Design-1 IS212
CS335	Logic programming	3	2	3	Computer Programming-2 CS233
CS321	Artificial Intelligence	3	2	3	Computer Programming-2 CS233
		66			

D. Optional Requirements: Faculty Requirements (6 Credit Hours 2 Courses)

Code	Course	Number of Hours/Week			
		Credit Hours	Lecture	Practical	Requirement
MA213	Mathematics-3	3	2	3	Mathemtics-2 MA112
ST291	Statistical Methods	3	2	3	Statistics & Probabilities ST190
IS324	Database Programming	3	2	3	Database Systems-1 IS221
IT261	Multimedia	3	2	3	Computer Programming-1 CS132
ST292	Mathematical Statistics and Data Analysis	3	2	3	Statistics & Probabilities ST190
CS110	Semiconductors	3	2	3	-
IS111	Introduction to IS	3	2	3	-
IS252	Systems Integration	3	2	3	Computer Programming-1 CS132

Code	Course	Credit Hours	Lecture	Practical	Requirement
CS234	Web Programming	3	2	3	Fundamentals of Programming CS131
		6			

E. Mandatory Requirements: Software Engineering Program Requirements (48 credit hours, 16 courses)

Code	Course	Number of Hours /Week			Requirement
		Credit Hours	**Lecture**	**Practical**	
CS351	Algorithms for Image Analysis	3	2	3	Mathematics-2 MA112
CS310	Cryptography and Security	3	2	3	Computer Programming-2 CS233
CS421	Artificial Intelligence and Software agents	3	2	3	Artificial Intelligence CS321
CS352	Software Engineering-2	3	2	3	Software Engineering-1 CS251
CS334	Computer Programming-3	3	2	3	Computer Programming-2 CS233
CS425	Game programming	3	2	3	Computer Programming-3 CS334
CS473	Human Computer Interaction	3	2	3	Software Engineering-2 CS352
CS353	Software Testing and Verification	3	2	3	Software Engineering-2 CS252
CS430	Distributed and Parallel Systems	3	2	3	Computer Programming-3 CS334
CS453	Software Development for Embedded and Real-time Systems	3	2	3	Software Engineering-2 CS252

Code	Course	Credit Hours	Lecture	Practical	Requirement
CS454	Software Maintenance and Configuration Management	3	2	3	Software Testing and Verification CS353
CS455	Quality Assurance and Process Improvement	3	2	3	Software Testing and Verification CS353
CS441	Mobile Application Programming	3	2	3	Computer Programming-3 CS334
CS362	Operating Systems-2	3	2	3	Operating Systems-1 CS261
CS482	Project	6	2	8	-
		48			

F. Optional Requirements: Software Engineering Program Requirements (15 credit hours, 5 courses)

Code	Course	Number of Hours/Week			Requirement
		Credit Hours	**Lecture**	**Practical**	
CS336	Microprocessors and Assembly Language	3	2	3	Introduction to Electronics IT181
CS322	Advanced Artificial Intelligence	3	2	3	Artificial Intelligence CS321
CS323	Machine Learning	3	2	3	Artificial Intelligence CS321
CS314	Formal Languages and Automata Theory	3	2	3	Computer Programming-2 CS233
CS341	Internet Computing	3	2	3	Computer Programming-2 CS233
CS437	Advanced Computer Programming	3	2	3	Computer Programming-3 CS334
CS335	Wireless Programming	3	2	3	Computer

					Programming-2 CS233
CS474	Computer Arabization	3	2	3	Computer Programming-3 CS334
CS471	Compiler Design	3	2	3	Computer Programming-3 CS334
CS472	Natural Language Processing	3	2	3	Artificial Intelligence CS321
CS343	Parallel Programming	3	2	3	Computer Programming-3 CS334
CS442	Mobile Application Development	3	2	3	Computer Programming-3 CS334
CS363	Embedded Systems	3	2	3	Operating Systems-2 CS362
CS426	Robotics	3	2	3	Artificial Intelligence CS321
CS456	Selected Topics in Software Engineering-1	3	2	3	-
CS457	Selected Topics in Software Engineering-2	3	2	3	-
		15			