

## Dual Degree 4.5-Year Program Outline (Total Credit Hours: 169)

Semester	COURSES							Total Courses
1	Credit Hours 3	2	3	3	3	2	2	18
	English 1	Arts and Humanities Course 1	Social Science Course 1	Natural Sciences Course 1	Quantitative Reasoning Course 1	User Experience Design	Entrepreneurship 1	
	General Ed.	General Ed.	General Ed.	General Ed.	General Ed.	General Ed.	Distribution Course	
2	Credit Hours 3	2	3	3	3	2	2	18
	English 2	Arts and Humanities Course 2	Social Science Course 2	Natural Sciences Course 2	Quantitative Reasoning Course 2	Entrepreneurship 2	Computational Thinking 1	
	General Ed.	General Ed.	General Ed.	General Ed.	General Ed.	Distribution Course	Distribution Course	
3	Credit Hours 3	3	3	3	2	2	2	18
	Pakistan Studies	Discrete Mathematics	English 3	Principles of Accounting	Applied Electronics	Fundamentals of Logic Design	Computational Thinking 2	
	General Ed.	CS Major	General Ed.	Business Major	CS Major	CS Major	Distribution Course	
4	Credit Hours 2	3	3	3	3	2	2	18
	Embedded Systems	Islamic Studies	Principles of Management	Microeconomics	Probability and Statistics	Entrepreneurship 3	Introduction to Computer Science	
	CS Major	General Ed.	Business Major	Business Major	Distribution Course	Distribution Course	Distribution Course	

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Semester	COURSES						Total Courses
5	Credit Hours 3	4	4	4	3		18
	Computer Organization and Assembly Language Programming	Data Structures & Algorithms	Object Oriented Programming	Digital Logic	Macroeconomics		
	CS Major	CS Major	CS Major	CS Major	Business Major		
6	Credit Hours 3	3	3	3	3	3	18
	Database Systems	Design & Analysis of Algorithms	Principles of Marketing	Financial Accounting	Introduction to Business Finance	Linear Algebra and Differential Equations	
	CS Major	CS Major	Business Major	Business Major	Business Major	Distribution Course	
7	Credit Hours 3	3	3	3	3	3	18
	Operating Systems	Computer Networks	Business Law and Taxation	Financial Management	Managerial Economics and Business Analysis	Organizational Behavior	
	CS Major	CS Major	Business Major	Business Major	Business Major	Distribution Course	
8	Credit Hours 3	3	3	3	3	3	18
	Numerical Methods	Artificial Intelligence	Financial Institutions and Markets	Cost & Managerial Accounting	Production and Operations Management	Human Resource Management	
	CS Major	CS Major	Business Major	Business Major	Business Major	Business Major	

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Semester	COURSES					Total Courses
9	Credit Hours 3	3	3			9
	Analysis of Pakistani Industries	Business Research Methods	FYP			
	Business Major	Business Major	CS Major			
10	Credit Hours 4	3	3	3	3	16
	Software Engineering	Automata & Complexity	<b>Elective</b>	Strategic Management	FYP	
	CS Major	CS Major	CS Major	Business Major	CS Major	