

Proposed Roadmap of ADP Computer Science (F2023 - S2025)					
Semester 1					
Sr. No.	Course Code	Course Title	Credit Hours	Course Type	Pre-Req.
1	EN114	English Grammar and Composition -I	3	General Education Compulsory	
2	IS135	Computer Applications (Theory & Lab)	3	General Education Compulsory	
3	ISL112	Islamic Thought and Perspectives	3	General Education Compulsory	
4	MA107	Calculus and Analytical Geometry	3	General Education Compulsory	
5	POL121	Pakistan: Ideology, Constitution and Society	3	General Education Compulsory	
6	CC111	Programming Fundamentals (Theory & Lab)	4	Computing Core	
<b>Semester Credit Hours</b>			<b>19</b>		
Semester 2					
7	EN221	English Grammar and Composition II	3	General Education Compulsory	
8	CC141	Discrete Structures	3	General Education Compulsory	
9	MA210	Linear Algebra	3	Supporting Core	
10	CC112	Object Oriented Programming (Theory & Lab)	4	Computing Core	CC111
11	CC121	Digital Logic Design (Theory & Lab)	3	Computing Core	
12	CC241	Software Engineering	3	Computing Core	
<b>Semester Credit Hours</b>			<b>19</b>		
Semester 3					
13	CC230	Database Systems (Theory & Lab)	4	Computing Core	
14	CC213	Data Structures (Theory & Lab)	4	Computing Core	CC112
15	CC222	Computer Organization and Assembly Language (Theory & Lab)	3	Computing Core	CC121
16	IT291	Web Technologies (Theory & Lab)	3	Computing Elective	
17	CS397	Mobile Application Development (Theory & Lab)	3	Computing Elective	
<b>Semester Credit Hours</b>			<b>17</b>		
Semester 4					
18	MG224	Innovation and Entrepreneurship	3	General Education Compulsory	
19	CC361	Information Security (Theory & Lab)	3	Computing Core	
20	CC251	Computer Networks (Theory & Lab)	3	Computing Core	
21	CC371	Artificial Intelligence (Theory & Lab)	3	Computing Core	CC213
22	CC323	Operating Systems (Theory & Lab)	4	Computing Elective	
23	CS400	Final Project	3	Computing Elective	
<b>Semester Credit Hours</b>			<b>19</b>		
<b>Total Program Credit Hours</b>			<b>74</b>		