

BS Civil Engineering Roadmap

First Semester			
Course Code	Course Title	Cr. Hr.	Pre Req
POL 121	Ideology and Constitution of Pakistan	2	
EN 104	Functional English	3	
HM 150	Islamic Studies/Ethics	2	
MA 107	Calculus and Analytical Geometry	3	
CE 111	Civil Engineering Drawing	1	
CE 111L	Civil Engineering Drawing (Lab)	2	
CS 143	Programming Fundamentals	2	
CS 143L	Programming Fundamentals (Lab)	1	
Total		16	

Second Semester			
Course Code	Course Title	Cr. Hr.	Pre Req
CE 102	Engineering Mechanics	3	
CE 102L	Engineering Mechanics (Lab)	1	
CE 122	Engineering Surveying	2	
CE 122L	Engineering Surveying (Lab)	1	
EF 132	Basic Electrical Engineering	2	
EF 132L	Basic Electrical Engineering (Lab)	1	
MA 130	Differential Equations	3	MA 107
CE 113	Construction Materials	2	
CE 113L	Construction Materials (Lab)	1	
NS 141	Engineering Geology	2	
Total		18	

Third Semester			
Course Code	Course Title	Cr. Hr.	Pre Req
CE 211	Construction Practices	2	
CE 211L	Construction Practices (Lab)	1	
CE 251	Fluid Mechanics	3	CE 102
CE 251L	Fluid Mechanics (Lab)	1	CE 102
CE 203	Mechanics of Solids	3	CE 102
CE 203L	Mechanics of Solids (Lab)	1	CE 102
MA 210	Linear Algebra	3	
MS 221	Engineering Economics	2	
SD 210	Civics and Community Engagement	2	
Total		18	

Fourth Semester			
Course Code	Course Title	Cr. Hr.	Pre Req
MA 231	Probability and Statistics for Engineers	3	MA 107
CE 242	Geotechnical Engineering-I	3	CE 102
CE 242L	Geotechnical Engineering-I (Lab)	1	CE 102
CE 215	Geomatics	3	CE 122
CE 215L	Geomatics (Lab)	1	CE 122
CE 204	Structural Analysis-I	3	CE 203
CE 216	Computer Graphics and Building Information Modeling	1	CE 211
CE 216L	Computer Graphics and Building Information Modeling (Lab)	2	CE 211
Total		17	

Fifth Semester			
Course Code	Course Title	Cr. Hr.	Pre Req
CE 310	Computational Methods in Engineering	3	MA 130, MA 210
CE 310L	Computational Methods in Engineering (Lab)	1	MA 130, MA 210
CE 306	Structural Analysis-II	3	CE 204
CE 353	Environmental Engineering	3	CE 251
CE 353L	Environmental Engineering (Lab)	1	CE 251

CE 352	Advanced Fluid Mechanics	2	CE 251
CE 352L	Advanced Fluid Mechanics (Lab)	1	CE 251
CE 343	Geotechnical Engineering-II	3	CE 242
CE 343L	Geotechnical Engineering-II (Lab)	1	CE 242
Total		18	

Sixth Semester			
Course Code	Course Title	Cr. Hr.	Pre Req
CE 362	Plain and Reinforced Concrete	3	CE 203
CE 362L	Plain and Reinforced Concrete (Lab)	1	CE 203
CE 354	Engineering Hydrology	3	CE 251
CE 354L	Engineering Hydrology (Lab)	1	CE 251
CE 305	Advanced Mechanics of Solids	2	CE 203
CE 305L	Advanced Mechanics of Solids (Lab)	1	CE 203
CE 374	Highway and Traffic Engineering	3	
EN 325	Technical Report Writing	3	
Total		17	

Seventh Semester			
Course Code	Course Title	Cr. Hr.	Pre Req
CE 466	Structural Steel Design	3	CE 203
CE 445	Foundation Engineering	3	CE 343
CE 455	Irrigation and Hydraulic Engineering	3	CE 251
CE 455L	Irrigation and Hydraulic Engineering (Lab)	1	CE 251
CE 463	Reinforced Concrete Design	3	CE 362
CE 498	Project (Phase-I)	3	CE 251, CE 204, CE 242
Total		16	

Eighth Semester			
Course Code	Course Title	Cr. Hr.	Pre Req
CE 474	Pavement Engineering	3	CE 343
CE 474L	Pavement Engineering (Lab)	1	CE 343
CE 410	Occupational Health and Safety	2	
MS 405	Entrepreneurship for Engineers	2	
MS 414	Construction Engineering Management	2	CE 211
MS 414L	Construction Engineering Management (Lab)	1	CE 211
MS 415	Engineering Ethics	2	
CE 499	Project (Phase-II)	3	CE 498
Total		16	

Total Credit Hours = 136