

PROPOSED SCHEME OF STUDY FOR BS CIVIL ENGINEERING FOR FALL-2023

Semester-I

Sr. #	Course Code	Subject	Credit Hours	Contact Hours	Domain
1	CIEN-1101	Construction Materials	2	2	Disciplinary
2	CIEN-1201	Construction Materials Lab	1	3	Disciplinary
3	CIEN-1103	Civil Engineering Drawing	1	1	Disciplinary
4	CIEN-1203	Civil Engineering Drawing Lab	1	3	Disciplinary
5	ISLS-1128	Islamic Studies	2	2	General Education
6	CPEN-1114	Introduction to Computing	2	2	General Education
7	CPEN-1214	Introduction to Computing Lab	1	3	General Education
8	MATH-1106	Quantitative Reasoning-I	3	3	General Education
9	PHYS-1123	Engineering Physics	2	2	General Education
10	PHYS-1223	Engineering Physics Lab	1	3	General Education
Total Hours			16	24	

Semester-II

Sr. #	Course Code	Subject	Credit Hours	Contact Hours	Domain
1	CIEN-1104	Engineering Geology	2	2	Disciplinary
2		Principles of Statics	2	2	General Education
3		Principles of Statics Lab	1	3	General Education
4	SSCI-2111	Professional Ethics	2	2	General Education
5	ENGL-1118	Functional English	3	3	General Education
6	MATH-1131	Applied Calculus	3	3	General Education
7	MATH-1107	Quantitative Reasoning-II	3	3	General Education
8	PAKS-1121	Ideology and Constitution of Pakistan	2	2	General Education
9	ISLS-1140	Seerat of the Holy Prophet Muhammad (SAW)	0	2	General Education
Total Hours			18	22	

Semester-III					
Sr. #	Course Code	Subject	Credit Hours	Contact Hours	Domain
1	CIEN-2102	Fluid Mechanics-I	3	3	Disciplinary
2	CIEN-2202	Fluid Mechanics-I Lab	1	3	Disciplinary
3	CIEN-2101	Mechanics of Materials	3	3	Disciplinary
4	CIEN-2201	Mechanics of Materials Lab	1	3	Disciplinary
5	CIEN-2110	Elementary Surveying	1	1	Disciplinary
6	CIEN-2210	Elementary Surveying Lab	2	6	Disciplinary
7	MATH-2122	Differential Equations	3	3	General Education
8	ENGL-2114	Expository Writing	3	3	General Education
9	MSCI-2113	Introduction to Entrepreneurship	2	2	General Education
10	QURN-1122	Fahm-e-Quran (translation,tafseer,tajveed)	0	2	General Education
Total Hours			19	29	
Semester-IV					
Sr. #	Course Code	Subject	Credit Hours	Contact Hours	Domain
1	CIEN-2107	Plain & Reinforced Concrete-I	3	3	Disciplinary
2	CIEN-2207	Plain & Reinforced Concrete-I Lab	1	3	Disciplinary
3	CIEN-2108	Quantity and Cost estimation	2	2	Disciplinary
4	CIEN-2208	Quantity and Cost estimation lab	1	3	Disciplinary
5	CIEN-2103	Geotechnical Engineering-I	3	3	Disciplinary
6	CIEN-2203	Geotechnical Engineering-I Lab	1	3	Disciplinary
7	CIEN-2109	Elementary Structural Analysis	3	3	Disciplinary
8	SSCI-2131	Civics and Community Engagement	2	2	General Education
Total Hours			16	22	
Semester-V					
Sr. #	Course Code	Subject	Credit Hours	Contact Hours	Domain
1	CIEN-3102	Structural Analysis	2	2	Disciplinary
2	CIEN-3104	Environmental Engineering-I	2	2	Disciplinary

3	CIEN-3204	Environmental Engineering-I Lab	1	3	Disciplinary
4	CIEN-3110	Civil Engg. Drawing & Graphics	1	1	Disciplinary
5	CIEN-3210	Civil Engg. Drawing & Graphics Lab	2	6	Disciplinary
6	CIEN-3111	Advanced Surveying	2	2	Disciplinary
7	CIEN-3211	Advanced Surveying Lab	1	3	Disciplinary
8	CIEN-3105	Transportation Engineering-I	3	3	Disciplinary
9	MATH-2124	Numerical Analysis	3	3	Interdisciplinary
Total Hours			17	25	
Semester-VI					
Sr. #	Course Code	Subject	Credit Hours	Contact Hours	Domain
1	CIEN-3103	Geotechnical Engineering-II	3	3	Disciplinary
2	CIEN-3203	Geotechnical Engineering-II Lab	1	3	Disciplinary
3	CIEN-3109	Engineering Hydrology	2	2	Disciplinary
4	CIEN-3209	Engineering Hydrology Lab	1	3	Disciplinary
5	CIEN-3112	Plain & Reinforced Concrete-II	3	3	Disciplinary
6	CIEN-3212	Plain & Reinforced Concrete-II Lab	1	3	Disciplinary
7	CIEN-3108	Structural Mechanics	2	2	Disciplinary
8	CIEN-3208	Structural Mechanics Lab	1	3	Disciplinary
9	CIEN-3101	Fluid Mechanics-II	3	3	Disciplinary
10	CIEN-3201	Fluid Mechanics-II Lab	1	3	Disciplinary
Total Hours			18	28	
Semester-VII					
Sr. #	Course Code	Subject	Credit Hours	Contact Hours	Domain
1	CIEN-4103	Environmental Engineering-II	2	2	Disciplinary
2	CIEN-4111	Hydraulics & Irrigation Engineering	3	2	Disciplinary
3	CIEN-4211	Hydraulics & Irrigation Engineering Lab	1	3	Disciplinary
4	CIEN-4114	Steel Structures	3	3	Disciplinary
5	CIEN-4109	Architecture & Town Planning	2	2	Interdisciplinary
6	CIEN-4601	Civil Engineering Project-I	3	9	Capstone

Total Hours			14	21	
Semester-VIII					
Sr. #	Course Code	Subject	Credit Hours	Contact Hours	Domain
1	CIEN-4110	Transportation Engineering-II	3	3	Disciplinary
2	CIEN-4210	Transportation Engineering-II Lab	1	3	Disciplinary
3	CIEN-4113	Construction Engineering	2	2	Disciplinary
4	MSCI-3109	Construction Project Management	2	2	General Education
5	MSCI-2106	Occupational Health and Safety Management	1	1	Interdisciplinary
6	CIEN-4602	Civil Engineering Project II	3	9	Capstone
Total Hours			12	20	
Total Credit Hours =			130.00		

LIST OF MINORS				
Sr. #	Course Code	Subject	Credit Hours	Contact Hours
1	CIEN-3110	Civil Engineering Drawing & Graphics	1	1
	CIEN-3210	Civil Engineering Drawing & Graphics Lab	2	6
2	CIEN-2110	Elementary Surveying	1	1
	CIEN-2210	Elementary Surveying Lab	2	6
3	CIEN-4106	Irrigation Engineering	3	3
4	CIEN-2108	Quantity & Cost estimation	2	2
	CIEN-2208	Quantity & Cost estimation lab	1	3

Scheme of Study for MS Civil Engineering

Core Courses

Sr. #	Course Code	Subject	Credit Hours	Contact Hours
1	CIEN-5151	Advanced Construction Materials & Methods	3	3
2	CIEN-6111	Research Methodology	3	3
3	CIEN-6112	Modeling Techniques	3	3
Total Hours			9	9

Elective Courses for MS/Ph.D

Sr. #	Course Code	Subject	Credit Hours	Contact Hours
A. Geotechnical Engineering				
1	CIEN-5111	Soil and Site Improvement	3	3
2	CIEN-5112	Design and Construction of Earth Dams	3	3
3	CIEN-6113	Geotechnical Site Investigations	3	3
4	CIEN-6115	Advanced Soil Mechanics	3	3
5	CIEN-6116	Foundation Engineering	3	3
6	CIEN-6117	Soil Structure Interaction	3	3
B. Environmental Engineering				
12	CIEN-5113	Physico-Chemical Processes in Environmental Engineering	3	3
13	CIEN-5114	Solid and Hazardous Waste Management	3	3
14	CIEN-5115	Health, Safety and Environmental Management	3	3
15	CIEN-5116	Modeling of Environmental Systems	3	3
18	CIEN-6122	Water Supply and Wastewater Collection System	3	3
19	CIEN-6123	Experimental Methods in Environmental Engineering	3	3
20	CIEN-6124	Water Quality Modeling	3	3
C. Water Resources & Irrigation Engineering				
24	CIEN-5120	Drainage Engineering	3	3
25	CIEN-5133	Water Resources Management & Planning	3	3
26	CIEN-6128	Applied Engineering Hydrology	3	3
27	CIEN-6130	Sediment Transport Engineering	3	3
28	CIEN-6131	Ground Water Engineering	3	3
29	CIEN-6132	Hydro Power Engineering	3	3
30	CIEN-6133	Irrigation Engineering & Practices	3	3
D. Structural Engineering				

36	CIEN-5123	Advanced Concrete Technology	3	3
37	CIEN-5110	Advanced Construction Techniques	3	3
38	CIEN-6135	Advanced Reinforced Concrete Design	3	3
39	CIEN-6136	Pre-stressed Concrete	3	3
40	CIEN-6138	Durability of Concrete Structures	3	3
41	CIEN-6xxx	Seismic Design of Building Structures	3	3
42	CIEN-6xxx	Advanced Structural Analysis	3	3
Supervised Research				
	CIEN-6601	Thesis	6	6

Revised Scheme of Study / Courses after 2nd BoS and Common Courses Implementation:

Semester-I				
Sr. #	Course Code	Subject	Contact Hours	Credit Hours
1	CIEN-1101	Construction Materials	2	2
2	CIEN-1201	Construction Materials Lab	3	1
3	COSC-1101	Programming Fundamentals	3	3
4	COSC-1201	Programming Fundamentals Lab	3	1
5	CIEN-1102	Civil Engineering Drawing	1	1
6	CIEN-1202	Civil Engineering Drawing Lab	6	2
7	ELEN-1108	Basic Electrical Engineering	1	1
8	ELEN-1208	Basic Electrical Engineering Lab	3	1
9	MATH-1131	Applied Calculus	3	3
10	ISLS-1112/ETIC-1112	Islamic Studies/ Ethics	2	2
Total Hours			27	17

Semester-II				
Sr. #	Course Code	Subject	Contact Hours	Credit Hours
1	CIEN-1103	Surveying-I	1	1
2	CIEN-1203	Surveying-I Lab	6	2
3	CIEN-1104	Engineering Geology	2	2
4	PHYS-1124	Engineering Mechanics	2	2
5	PHYS-1224	Engineering Mechanics Lab	3	1
6	MSCI-2114	Business Management	2	2
7	ENGL-1119	Communication Skills	3	3
8	PAKS-1113	Pakistan Studies	2	2

Total Hours	21	15
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Semester-III				
Sr. #	Course Code	Subject	Contact Hours	Credit Hours
1	CIEN-2101	Mechanics of Materials	2	2
2	CIEN-2201	Mechanics of Materials Lab	3	1
3	CIEN-2102	Fluid Mechanics-I	3	3
4	CIEN-2202	Fluid Mechanics-I Lab	3	1
5	CIEN-2103	Geotechnical Engineering-I	3	3
6	CIEN-2203	Geotechnical Engineering-I Lab	3	1
7	CIEN-2104	Civil Engg. Drawing & Graphics	1	1
8	CIEN-2204	Civil Engg. Drawing & Graphics Lab	6	2
9	MSCI-5143	Total Quality Management	3	3
10	MATH-2122	Differential Equations	3	3
Total Hours			29	20

Semester-IV				
Sr. #	Course Code	Subject	Contact Hours	Credit Hours
1	CIEN-2105	Surveying-II	2	2
2	CIEN-2205	Surveying-II Lab	3	1
3	CIEN-2106	Elementary Structural Analysis	2	2
4	CIEN-2107	Plain & Reinforced Concrete-I	3	3
5	CIEN-2207	Plain & Reinforced Concrete-I Lab	3	1
6	MSCI-2112	Engg. Economics	2	2
7	MSCI-3109	Construction Project Management	2	2
8	MSCI-3209	Construction Project Management lab	3	1
9	STAT-2104	Probability and Statistics	3	3
Total Hours			24	17

Semester-V				
Sr. #	Course Code	Subject	Contact Hours	Credit Hours
1	CIEN-3101	Fluid Mechanics-II	3	3
2	CIEN-3201	Fluid Mechanics-II Lab	3	1
3	CIEN-3102	Structural Analysis	2	2
4	CIEN-3103	Geotechnical Engineering-II	3	3
5	CIEN-3203	Geotechnical Engineering-II Lab	3	1
6	CIEN-3104	Environmental Engineering-I	2	2
7	CIEN-3204	Environmental Engineering-I Lab	3	1
8	CIEN-3105	Transportation Engineering-I	2	2
9	CIEN-3205	Transportation Engineering-I Lab	3	1
10	MATH-2124	Numerical Analysis	3	3
Total Hours			27	19

Semester-VI				
Sr. #	Course Code	Subject	Contact Hours	Credit Hours
1	CIEN-3106	Steel Structures	2	2
2	CIEN-3107	Hydraulic Engineering	2	2
3	CIEN-3207	Hydraulic Engineering Lab	3	1
4	CIEN-3108	Structural Mechanics	2	2
5	CIEN-3208	Structural Mechanics Lab	3	1
6	CIEN-3109	Engineering Hydrology	2	2
7	CIEN-3209	Engineering Hydrology Lab	3	1
8	CIEN-3110	Quantity & Cost estimation	2	2
9	CIEN-3210	Quantity & Cost estimation lab	3	1
10	ENGL-2111	Technical Writing & Presentation Skills	3	3
Total Hours			25	17

Semester-VII				
Sr. #	Course Code	Subject	Contact Hours	Credit Hours
1	CIEN-4101	Plain & Reinforced Concrete-II	3	3
2	CIEN-4201	Plain & Reinforced Concrete-II Lab	3	1
3	CIEN-4102	Transportation Engineering-II	2	2
4	CIEN-4202	Transportation Engineering-II Lab	3	1
5	CIEN-4103	Environmental Engineering-II	2	2
6	CIEN-4104	Structural Engineering	2	2
7	CIEN-4204	Structural Engineering-Lab	3	1
8	CIEN-4601	Civil Engineering Project I	3	3
9	CIEN-4105	Geo-Informatics	2	2
10	CIEN-4205	Geo-Informatics Lab	3	1
Total Hours			26	18

Semester-VIII				
Sr. #	Course Code	Subject	Contact Hours	Credit Hours
1	CIEN-4106	Irrigation Engineering	3	3
2	CIEN-4206	Irrigation Engineering Lab	3	1
3	CIEN-4107	Design of Structures	2	2
4	CIEN-4207	Design of Structures Lab	3	1
5	CIEN-4109	Architecture & Town Planning	2	2
6	CIEN-4602	Civil Engineering Project II	3	3
7	MSCI-3113	Hazards & Disaster Management	3	3
Total Hours			19	15

Total Credit Hours = 138