

# CURRICULUM STRUCTURE FOR CIVIL ENGINEERING PROGRAMME

**Total credit hours required: 139**

## SEMESTER III (Year 2 Semester 1: 17.5 c.h.)

Course Code	Course Title	Credit hours	Pre-requisites	Co-requisites
CIVE 2112	Engineering Survey Practical	1	-	CIVE 2211
CIVE 2114	Civil Engineering Drawing	1	MANU 1201	-
CIVE 2116	Civil Engineering Lab I	1	-	CIVE 2313 CIVE 2319
CIVE 2211	Engineering Survey	2	-	-
CIVE 2313	Fluid Mechanics	3	-	-
CIVE 2315	Geology and Soil Mechanics	3	-	-
CIVE 2317	Strength of Materials	3	MECH 1301	-
CIVE 2319	Civil Engineering Materials	3	-	-
CCXX YYYY	Co-Curriculum	0.5	-	-

## SEMESTER IV (Year 2 Semester 2: 17.5 c.h.)

Course Codes	Course Title	Credit Hours	Pre-Requisites	Co-Requisites
CIVE 2122	Civil Engineering Lab II	1	CIVE 2116 CIVE 2315	CIVE 2223 CIVE 2323
CIVE 2223	Water Resources and Hydrology	2	CIVE 2313	-
CIVE 2225	Construction Engineering	2	-	-
CIVE 2321	Theory of Structures	3	CIVE 2317	-
CIVE 2323	Hydraulics	3	CIVE 2313	-
MATH 2310	Differential Equations	3	MATH 1302	-
UNGS 2030	The Islamic Worldview	3	-	-
CCXX YYYY	Co-Curriculum	0.5	-	-

## SEMESTER V (Year 3 Semester 1: 16.5 c.h.)

Course Codes	Course Title	Credit Hours	Pre-Requisites	Co-Requisites
CIVE 3112	Civil Engineering Lab III	1	CIVE 2122 CIVE 2321	CIVE 3311 CIVE 3315
CIVE 3311	Structural Analysis	3	CIVE 2321	-
CIVE 3313	Reinforced Concrete Design I	3	CIVE 2319 CIVE 2321	-
CIVE 3315	Geotechnical Engineering	3	CIVE 2315	-
MATH 2330	Computational Methods and Statistics	3	MATH 2310	-
UNGS 2040	Islamic Knowledge and Civilisation	3	UNGS 2030	-
CCXX YYYY	Co-Curriculum	0.5	-	-

**SEMESTER VI (Year 3 Semester 2: 16.5 c.h.)**

Course Codes	Course Title	Credit Hours	Pre-Requisites	Co-Requisites
CIVE 3122	Civil Engineering Lab IV	1	CIVE 3112	CIVE 3323 CIVE 3325
CIVE 3124	Seminar	1	-	-
CIVE 3221	Contract and Estimation	2	CIVE 2114	-
CIVE 3321	Reinforced Concrete Design II	3	CIVE 3313	-
CIVE 3323	Highway and Traffic Engineering	3	-	-
CIVE 3325	Environmental Engineering	3	CIVE 2223 CIVE 2323	-
CIVE 3327	Steel and Timber Structure Design	3	CIVE 2319 CIVE 3311	-
CCXX YYYY	Co-Curriculum	0.5	-	-

**INDUSTRIAL TRAINING (Short Sem: 5 c.h.)**

Course Codes	Course Title	Credit Hours	Pre-Requisites
EITR 3531	Engineering Industrial Training	5	CIVE 3122

**SEMESTER VII (Year 4 Semester 1: 16 c.h.)**

Course Codes	Course Title	Credit Hours	Pre-Requisites	Co-Requisites
CIVE 4312	Final Year Project I	3	CIVE 3112	-
CIVE 4314	Integrated Design Project	3	CIVE 3112	-
CIVE 41XX	Elective I-X (Design Lab)	1	-	-
CIVE 43XX	Elective II-X	3	-	-
MANU 3318	Engineering Economics and Management	3	-	-
UNGS 2050	Ethics and Fiqh for Everyday Life	3	UNGS 2040	-

**SEMESTER VIII (Year 4 Semester 2: 16 c.h.)**

Course Codes	Course Title	Credit Hours	Pre-Requisites	Co-Requisites
CIVE 4221	Construction Project Management	2	-	-
CIVE 4322	Final Year Project II	3	CIVE 4312	-
CIVE 43XX	Elective III-X	3	-	-
CIVE 43XX	Elective IV-X	3	-	-
MANU 4211	Technology Entrepreneurship	2	-	-
GEN 4300	Engineering Ethics, Safety and Environment	3	-	-

## LIST OF ELECTIVE COURSES FOR CIVIL ENGINEERING

Elective courses are to be selected based on three main streams, namely *Structural and Construction Engineering, Water and Environmental Engineering and Geotechnical and Transportation Engineering*. Students are required to take at least two electives from the same stream.

### ELECTIVE GROUP - A (STRUCTURAL AND CONSTRUCTION ENGINEERING)

Course Code	Course Title	Credit Hours	Pre-requisites	Co-requisites
<b>Elective I-A</b>				
CIVE 4130	Design Lab - Structural Eng.	1	CIVE 3311 CIVE 3321	-
<b>Elective II-A to IV-A (Any 3 Courses from the following; subject to Department's Offering)</b>				
CIVE 4331	Design of Tall Buildings	3	CIVE 3311	-
CIVE 4333	Bridge Engineering	3	CIVE 3321	-
CIVE 4335	Pre-stressed Concrete Design	3	CIVE 3321	-
CIVE 4337	Finite Element for Structural Analysis	3	CIVE 3311	-
CIVE 4341	Building and Infrastructure Maintenance	3	CIVE 2319	-
CIVE 4343	Advanced Civil Engineering Materials	3	CIVE 2319	-
CIVE 4345	Sustainable Construction	3	CIVE 2319 CIVE 2225	-
CIVE 4347	Industrialized Building System	3	CIVE 2319 CIVE 2225	-

### ELECTIVE GROUP - B (WATER AND ENVIRONMENTAL ENGINEERING)

Course Code	Course Title	Credit Hours	Pre-requisites	Co-requisites
<b>Elective I-B</b>				
CIVE 4150	Design Lab - Water & Env. Eng.	1	CIVE 3325	-
<b>Elective II-B to IV-B (Any 3 Courses from the following; subject to Department's Offering)</b>				
CIVE 4351	Integrated Water Resources Management	3	CIVE 3325	-
CIVE 4353	Urban Stormwater Management	3	CIVE 3325	-
CIVE 4355	Hydraulic Structures	3	CIVE 2323	-
CIVE 4357	Coastal Engineering	3	CIVE 2323	-
CIVE 4361	Advanced Water and Wastewater Treatment	3	CIVE 3325	-
CIVE 4363	Air Pollution Control	3	CIVE 3325	-
CIVE 4365	Solid Waste Engineering	3	CIVE 3325	-
CIVE 4367	Green Technology and Resource Conservation	3	CIVE 3325	-

### ELECTIVE GROUP - C (GEOTECHNICAL AND TRANSPORTATION ENGINEERING)

Course Code	Course Title	Credit Hours	Pre-requisites	Co-requisites
<b>Elective I-C (Any one from the following)</b>				
CIVE 4170	Design Lab - Geotechnical Eng.	1	CIVE 3115	-
CIVE 4190	Design Lab - Transportation Eng.	1	CIVE 3323	-
<b>Elective II-C to IV-C (Any 3 Courses from the following; subject to Department's Offering)</b>				
CIVE 4371	Advanced Geotechnical Engineering	3	CIVE 3115	-

CIVE 4373	Slope Engineering	3	CIVE 3115	-
CIVE 4375	Geo-environmental Engineering	3	CIVE 3115	-
CIVE 4377	Earthwork Engineering	3	CIVE 3115	-
CIVE 4391	Transportation Engineering	3	CIVE 3323	-
CIVE 4393	Traffic Management	3	CIVE 3323	-
CIVE 4395	Pavement Engineering	3	CIVE 3323	-
CIVE 4397	Urban Transport Planning	3	CIVE 3323	-