

B.E (Civil Engineering) Curriculum – Regulation 2017

Minimum Credits to be Earned : 180

MODEL CURRICULUM

Semester I								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17OA01	Environmental Science for Engineers	HS	5	3	0	2	4
2	17OA11	English for Engineers	HS	5	3	2	0	4
3	17OB01	Matrices and Calculus	BS	6	4	2	0	5
4	17OB21	Physics for Engineers	BS	5	3	0	2	4
5	17CC02	C Programming – I	ES	7	3	0	4	5
6	17CC05	Basics of Mechanical Engineering	ES	3	3	0	0	3
7	17CC07	Engineering Practices Laboratory	ES	4	0	0	4	2
TOTAL				35	19	4	12	27

Semester II								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17OA12	Communicative English	HS	5	3	0	2	4
2	17OB02	Vector Calculus and Integral Transforms	BS	6	4	2	0	5
3	17OB25	Basics of Mechanics	BS	5	3	2	0	4
4	17CC04	Basics Construction Materials	ES	5	3	0	2	4
5	17CC06	Engineering Drawing	ES	5	3	2	0	4
6	17CC14	Building Drawing – Manual	ES	6	0	0	6	3
TOTAL				32	16	6	10	24

Semester III								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17CC08	Earth Science for Civil Engineering	ES	4	4	0	0	4
2	17CD04	Mechanics of Solids – I	PC	6	4	0	2	5
3	17CD18	Surveying and Levelling	PC	6	4	0	2	5
4	17CD20	Water Supply and Waste Water Engineering	PC	3	3	0	0	3
5	17OB03	Curve Fitting, Partial Differential Equations and Mathematical Statistics	BS	6	4	2	0	5
6	17OB24	Material Science	BS	4	4	0	0	4
TOTAL				29	23	2	4	26

Semester IV								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17CC13	Environmental Engineering Laboratory	ES	4	0	0	4	2
2	17CD02	Mechanics of Fluids	PC	6	4	0	2	5
3	17CD05	Mechanics of Solids – II	PC	6	4	0	2	5
4	17CD16	Geotechnical Engineering - I	PC	6	4	0	2	5
5	17CD19	Advanced Surveying	PC	6	4	0	2	5
6	17CEXX	Elective- I	PE	3	3	0	0	3
TOTAL				31	19	0	12	25

Semester V								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17CD06	Structural Analysis – I	PC	6	4	2	0	5
2	17CD08	Design of Reinforced Concrete Structures	PC	7	3	0	4	5
3	17CD09	Design of Steel Structures	PC	5	3	2	0	4
4	17CD17	Geotechnical Engineering - II	PC	6	4	2	0	5
5	17CEXX	Elective- II	PE	5	3	0	2	4
6	17CF01	Soft Skills	EEC	4	2	2	0	3
TOTAL				32	20	6	6	26

Semester VI								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17CD07	Structural Analysis – II	PC	6	4	2	0	5
2	17 CEXX	Elective – III	PE	4	4	0	0	4
3	17CF04	Project – Analysis and Design of Structures	EEC	4	0	0	4	2
4	17XXXX	Elective –IV	OE	3	3	0	0	3
5	17XXXX	Elective –V	OE	3	3	0	0	3
TOTAL				20	14	2	4	17

Semester VII								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17CD15	Estimating and Costing	PC	6	4	2	0	5
2	17 CEXX	Elective – VI	PE	4	4	0	0	4
3	17CF25	Project Work – Phase I	EEC	6	0	0	6	3
4	17XXXX	Elective –VII	OE	4	4	0	0	4
TOTAL				20	12	2	6	16

Semester VIII								
S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17CEXX	Elective- VIII	PE	4	4	0	0	4
2	17CF50	Project Work – Phase II	EEC	30	0	0	30	15
TOTAL				34	4	0	30	19

TOTAL CREDITS	180
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GROUPING OF COURSES**1. Humanities and Social Sciences (HS)**

S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17OA01	Environmental Science for Engineers	HS	5	3	0	2	4
2	17OA02	Principles of Management and Engineering Ethics	HS	3	3	0	0	3
3	17OA11	English for Engineers	HS	5	3	2	0	4
4	17OA12	Communicative English	HS	5	3	0	2	4
5	17OA13	Business English	HS	5	3	0	2	4
6	17OA21	Basics of French	HS	5	3	2	0	4
7	17OA22	Functional French	HS	5	3	2	0	4
8	17OA31	Basics of German	HS	5	3	2	0	4
9	17OA32	Functional German	HS	5	3	2	0	4
10	17OA41	Basics of Japanese	HS	5	3	2	0	4
11	17OA42	Functional Japanese	HS	5	3	2	0	4

2. Basic Sciences (BS)

S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17OB01	Matrices and Calculus	BS	6	4	2	0	5
2	17OB02	Vector Calculus and Integral Transforms	BS	6	4	2	0	5
3	17OB03	Curve Fitting, Partial Differential Equations and Mathematical Statistics	BS	6	4	2	0	5
4	17OB04	Partial Differential Equations, Scientific Computing and Complex Variables	BS	6	4	2	0	5
5	17OB05	Z - Transform, Differential Equations and Complex Variables	BS	6	4	2	0	5
6	17OB06	Mathematical Foundations of Computing Sciences	BS	6	4	2	0	5
7	17OB07	Probability Theory and Mathematical Statistics	BS	6	4	2	0	5
8	17OB08	Probability and Random Processes	BS	6	4	2	0	5
9	17OB09	Curve Fitting and Optimization Techniques	BS	6	4	2	0	5
10	17OB10	Discrete Mathematical Structures	BS	6	4	2	0	5
11	17OB11	Probability and Statistics	BS	6	4	2	0	5

S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
12	17OB12	Mathematical Optimization Techniques	BS	6	4	2	0	5
13	17OB21	Physics for Engineers	BS	5	3	0	2	4
14	17OB22	Physics for Electrical Sciences	BS	4	4	0	0	4
15	17OB23	Physics for Mechanical Sciences	BS	4	4	0	0	4
16	17OB24	Material Science	BS	4	4	0	0	4
17	17OB25	Basics of Mechanics	BS	5	3	2	0	4
18	17OB31	Engineering Chemistry	BS	4	4	0	0	4
19	17OB32	Applied Chemistry	BS	4	4	0	0	4

3. Engineering Sciences (ES)

S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17CC01	Introduction to Programming Logics and Design	ES	3	3	0	0	3
2	17CC02	C Programming – I	ES	7	3	0	4	5
3	17CC03	C Programming – II	ES	7	3	0	4	5
4	17CC04	Basic Construction Materials	ES	5	3	0	2	4
5	17CC05	Basics of Mechanical Engineering	ES	3	3	0	0	3
6	17CC06	Engineering Drawing	ES	5	3	2	0	4
7	17CC07	Engineering Practices Laboratory	ES	4	0	0	4	2
8	17CC08	Earth Science for Civil Engineering	ES	4	4	0	0	4
9	17CC09	Principles of Architecture	ES	3	3	0	0	3
10	17CC10	Landscape Architecture and Site Planning	ES	3	3	0	0	3
11	17CC11	Building Services	ES	4	4	0	0	4
12	17CC12	Energy Efficiency in Buildings	ES	4	4	0	0	4
13	17CC13	Environmental Engineering Laboratory	ES	4	0	0	4	2
14	17CC14	Building Drawing – Manual	ES	6	0	0	6	3
15	17CC15	Environmental and Irrigation Engineering Drawing Laboratory	ES	4	0	0	4	2
16	17CC16	Construction Engineering and Graphics	ES	7	3	0	4	5
17	17CC17	Fundamentals of Computers	ES	5	3	0	2	4
18	17CC18	Basics of Electrical and Electronics Engineering	ES	3	3	0	0	3

4. Professional Core (PC)

S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17CD01	Modern Construction Materials	PC	3	3	0	0	3
2	17CD02	Mechanics of Fluids	PC	6	4	0	2	5
3	17CD03	Applied Hydraulic Engineering	PC	6	4	2	0	5
4	17CD04	Mechanics of Solids – I	PC	6	4	0	2	5
5	17CD05	Mechanics of Solids – II	PC	6	4	0	2	5
6	17CD06	Structural Analysis – I	PC	6	4	2	0	5
7	17CD07	Structural Analysis – II	PC	6	4	2	0	5
8	17CD08	Design of Reinforced Concrete Structures	PC	7	3	0	4	5
9	17CD09	Design of Steel Structures	PC	5	3	2	0	4
10	17CD10	Basics of Dynamics and Seismic Design	PC	4	4	0	0	4
11	17CD11	Structural Dynamics and Earthquake Engineering	PC	6	4	2	0	5
12	17CD12	Prefabricated Structures	PC	3	3	0	0	3
13	17CD13	Industrial Structures	PC	4	4	0	0	4
14	17CD14	Construction Planning and Scheduling	PC	4	4	0	0	4
15	17CD15	Estimating and Costing	PC	6	4	2	0	5
16	17CD16	Geotechnical Engineering - I	PC	6	4	0	2	5
17	17CD17	Geotechnical Engineering - II	PC	6	4	2	0	5
18	17CD18	Surveying and Levelling	PC	6	4	0	2	5
19	17CD19	Advanced Surveying	PC	6	4	0	2	5
20	17CD20	Water Supply and Wastewater Engineering	PC	3	3	0	0	3
21	17CD21	Water Resource and Irrigation Engineering	PC	3	3	0	0	3
22	17CD22	Water Resource Management	PC	4	4	0	0	4

5. Professional Electives (PE)

S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17CE01	Bridge Engineering	PE	4	4	0	0	4
2	17CE02	Pavement Engineering	PE	4	4	0	0	4
3	17CE03	Construction Equipments and Practices	PE	4	4	0	0	4
4	17CE04	Concrete Technology	PE	5	3	0	2	4
5	17CE05	Advanced Concrete Technology	PE	5	3	0	2	4
6	17CE06	Pre-stressed Concrete Structures	PE	4	4	0	0	4

S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
7	17CE07	Construction Technology	PE	4	4	0	0	4
8	17CE08	Finite Element Techniques	PE	4	4	0	0	4
9	17CE09	Maintenance and Rehabilitation of Structures	PE	4	4	0	0	4
10	17CE10	Remote Sensing and GIS	PE	4	4	0	0	4
11	17CE11	Environmental Impact Assessment	PE	4	4	0	0	4
12	17CE12	Highway Engineering	PE	3	3	0	0	3
13	17CE13	Railway Engineering	PE	3	3	0	0	3
14	17CE14	Airports, Docks and Harbour Engineering	PE	3	3	0	0	3
15	17CE15	Construction Management	PE	4	4	0	0	4
16	17CE16	Hydrology	PE	5	3	2	0	4
17	17CE17	Solid Waste Management	PE	3	3	0	0	3
18	17CE18	Ground Improvement Techniques	PE	3	3	0	0	3
19	17CE19	Green Buildings	PE	3	3	0	0	3
20	17CE20	Building Bye Laws	PE	3	3	0	0	3
21	17CE21	Fire Safety Engineering	PE	3	3	0	0	3
22	17CE22	Quality Control and Assurance in Construction	PE	3	3	0	0	3
23	17CE23	Town Planning and Urban Development	PE	3	3	0	0	3
24	17CE24	Housing Planning Management	PE	3	3	0	0	3
25	17CE25	Construction Quality and Safety Management	PE	3	3	0	0	3
26	17CE26	Engineering Economics and Cost Analysis	PE	3	3	0	0	3

6. Employability Enhancement Courses (EEC)

S. No.	Course Code	Course Title	Category	Contact Hours	Instruction Hours/Week			C
					L	T	P	
1	17CF01	Soft Skills	EEC	4	2	2	0	3
2	17CF02	Mini Project	EEC	4	0	0	4	2
3	17CF03	Comprehension	EEC	-	-	-	-	-
4	17CF04	Project – Analysis and Design of Structures	EEC	4	0	0	4	2
5	17CF25	Project Work – Phase I	EEC	6	0	0	6	3
6	17CF50	Project Work – Phase II	EEC	30	0	0	30	15