

B.E. (Civil Engineering)
Curriculum Structure
2015 – 19 Batch
(2015-16 Admission)

**II Year Bachelor of Engineering (Civil Engineering)
Curriculum Structure – 2015 Scheme**

III Semester B.E.

No.	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA Marks	ESA Marks	Total Marks	Exam Duration
1	15EMAB202	Statistics and Integral transforms	BS	4-0-0	4	4	50	50	100	3 hours
2	15ECVC201	Building Technology & Services	PC	3-0-0	3	3	50	50	100	3 hours
3	15ECVC202	Surveying	PC	4-0-0	4	4	50	50	100	3 hours
4	15ECVF201	Mechanics of Fluids	ES	4-0-0	4	4	50	50	100	3 hours
5	15ECVF202	Mechanics of Materials	ES	4-0-0	4	4	50	50	100	3 hours
6	15ECVF203	Engineering Geology	ES	2-0-0	2	2	50	50	100	2 hours
7	15ECVP201	Survey Practice I	PC	0-0-1	1	2	80	20	100	3 hours
8	15ECVP202	Building Engineering Drawing	PC	0-0-2	2	2	80	20	100	3 hours
9	15ECVP203	Engineering Geology Laboratory	ES	0-0-1	1	2	80	20	100	3 hours
Total				21-0-4	25					

Note: L – Lecture, T – Tutorial, P – Practical, ISA – In Semester Assessment, ESA – End Semester Assessment, PC-Programme Core, BS – Basic Science, ES- Engineering Science, OE - Open Elective, PE - Program Electives, HS – Humanities, PW – Project

IV Semester B.E.

No.	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA Marks	ESA Marks	Total Marks	Exam Duration
1	15EMAB207	Numerical methods and Partial differential equations	BS	4-0-0	4	3	50	50	100	3 hours
2	15ECVC203	Structural Analysis-I	PC	3-0-0	3	3	50	50	100	3 hours
3	15ECVC204	Environmental Engineering	PC	4-0-0	4	3	50	50	100	3 hours
4	15ECVC205	Concrete Technology	PC	3-0-0	3	3	50	50	100	3 hours
5	15ECVC206	Construction Project Management	PC	3-0-0	3	3	50	50	100	3 hours
6	15ECVC207	Hydrology & Irrigation Engineering	PC	3-0-0	3	3	50	50	100	3 hours
7	15ECVP204	Survey Practice - II	PC	0-0-1	1	2	80	20	100	3 hours
8	15ECVP205	Material Testing Laboratory	PC	0-0-2	2	4	80	20	100	3 hours
9	15ECVP206	Fluid Mechanics Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
Total				20-0-4	24					

Note: L – Lecture, T – Tutorial, P – Practical, ISA – In Semester Assessment, ESA – End Semester Assessment, PC-Programme Core,

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III Year Bachelor of Engineering (Civil Engineering)**Curriculum Structure – 2015 Scheme****V Semester B.E.**

No.	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA Marks	ESA Marks	Total Marks	Exam Duration
1	15ECVC301	Structural Analysis-II	PC	3-0-0	3	3	50	50	100	3 hours
2	15ECVC302	Geotechnical Engineering	PC	3-0-0	3	3	50	50	100	3 hours
3	15ECVC303	Design of RCC Structures	PC	4-0-0	4	4	50	50	100	4 hours
4	15ECVC304	Transportation Engineering	PC	4-0-0	4	4	50	50	100	3 hours
5	15ECVC305	Advanced Project Management	PC	3-0-0	3	3	50	50	100	3 hours
6	15ECVP301	Highway Engineering Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
7	15ECVP302	Environmental Engineering Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
8	15ECVP303	Engineering Computation Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
9	15ECVW301	Mini Project	PW	0-0-3	3	3	50	50	100	3 hours
Total				17-0-6	23					

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VI Semester B.E.

No.	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA Marks	ESA Marks	Total Marks	Exam Duration
1	15ECVC306	Advanced Geotechnical Engineering	PC	3-0-0	3	3	50	50	100	3 hours
2	15ECVC307	Estimation and Costing	PC	3-0-0	3	3	50	50	100	3 hours
3	15ECVE3**	Program Elective -1	PE	3-0-0	3	3	50	50	100	3 hours
4	15EHSC301	Professional Aptitude & Logical Reasoning	HS	3-0-0	3	3	50	50	100	3 hours
5	15ECVP304	Geotechnical Engineering Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
6	15ECVP305	Computer Aided Design Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
7	15ECVP306	Construction Engineering & Management Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
8	15ECVW302	Minor Project	PW	0-0-6	6	6	50	50	100	3 hours
Total				12-0-9	21					

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BS – Basic Science, ES- Engineering Science, OE - Open Elective, PE - Program Electives, HS – Humanities, PW – Project

Note: Student has to take one elective subjects from major Vertical and one elective subject from minor vertical.

Program Elective -1:

1	15ECVE302	Traffic Engineering	3	15ECVE304	Design of Hydraulic Structures
2	15ECVE303	Pavement Engineering	4	15ECVE305	Matrix Method of Structural Analysis

IV Year Bachelor of Engineering (Civil Engineering)
Curriculum Structure – 2015 Scheme
VII Semester B.E.

No.	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA Marks	ESA Marks	Total Marks	Exam Duration
1	15ECVC401	Design of Steel Structures	PC	3-0-0	3	3	50	50	100	3 hours
2	15ECVE4**	Program Elective -2	PE	3-0-0	3	3	50	50	100	3 hours
3	15ECVE4**	Program Elective -3	PE	3-0-0	3	3	50	50	100	3 hours
4	15ECVE4**	Program Elective -4	PE	3-0-0	3	3	50	50	100	3 hours
5	15ECVE401	Open Elective- 1	OE	3-0-0	3	3	50	50	100	3 hours
6	15ECVP401	Design Studio - Steel and RC Structures	PC	0-0-2	2	3	50	50	100	3 hours
7	15ECVE4**	Program Elective -5	PE	3-0-0	3	3	50	50	100	3 hours
8	15EHS401	CIPE /EVS	HS	-	Audit	3	50	50	100	3 hours
Total				18-0-2	20					

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Note: Student has to take two elective subjects from major Vertical and one elective subject from minor vertical.

Open Elective – 1

15ECVO401- Nano Composite Materials

Program Electives -2, 3 and 4

Vertical 1 - Structural Engineering		Vertical 2 - Construction Engineering & Management		Vertical 3 - Environmental Engineering	
15ECVE401	Design of Sub-structures	15ECVE404	Horizontal and Vertical Construction Methods	15ECVE407	Solid Waste Management
15ECVE402	Advanced RCC	15ECVE405	Construction Economics & Management	15ECVE408	Advanced Waste Water Treatment
15ECVE403	FEM Analysis	15ECVE406	Construction Quality Management	15ECVE409	Air Pollution

VIII Semester B.E.

No.	Code	Course		Category	L-T-P	Credits	Contact Hours	ISA Marks	ESA Marks	Total Marks	Exam Duration
1	15ECVE4**	Program Elective -6	Industry Internship 0-0-6	PE	3-0-0	3	3	50	50	100	3 hours
2	15ECVO4**	Open Elective - 2		OE	3-0-0	3	3	50	50	100	3 hours
5	15ECVW402	Project		PW	0-0-14	14	3	50	50	100	3 hours
		Total			6-0-14	20					

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Open Elective – 2

15ECVO402- Optimization Techniques	15ECVO403-Scientific Computing using Python
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Program Electives -5 and 6

Vertical 1 - Structural Engineering		Vertical 2 - Construction Engineering & Management		Vertical 3 - Environmental Engineering	
15ECVE401	Design of Sub-structures	15ECVE404	Horizontal and Vertical Construction Methods	15ECVE407	Solid Waste Management
15ECVE402	Advanced RCC	15ECVE405	Construction Economics & Management	15ECVE408	Advanced Waste Water Treatment
15ECVE403	FEM Analysis	15ECVE406	Construction Quality Management	15ECVE409	Air Pollution

B.E. (Civil Engineering)
Curriculum Structure
2016 – 20 Batch
(2016-17 Admission)

II Year Bachelor of Engineering (Civil Engineering)**Curriculum Structure – 2016 Scheme****III Semester B.E.**

No.	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA Marks	ESA Marks	Total Marks	Exam Duration
1	15EMAB202	Statistics and Integral transforms	BS	4-0-0	4	4	50	50	100	3 hours
2	15ECVC201	Building Technology & Services	PC	3-0-0	3	3	50	50	100	3 hours
3	15ECVC202	Surveying	PC	4-0-0	4	4	50	50	100	3 hours
4	15ECVF201	Mechanics of Fluids	ES	4-0-0	4	4	50	50	100	3 hours
5	15ECVF202	Mechanics of Materials	ES	4-0-0	4	4	50	50	100	3 hours
6	16ECVF203	Engineering Geology	ES	2-0-0	2	2	50	50	100	3 hours
7	15ECVP201	Survey Practice I	PC	0-0-1	1	2	80	20	100	3 hours
8	15ECVP202	Building Engineering Drawing	PC	0-0-2	2	2	80	20	100	3 hours
9	15ECVP203	Engineering Geology Laboratory	ES	0-0-1	1	2	80	20	100	3 hours
Total				21-0-4	25					

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IV Semester B.E.

No.	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA Marks	ESA Marks	Total Marks	Exam Duration
1	15EMAB207	Numerical methods and Partial differential equations	BS	4-0-0	4	3	50	50	100	3 hours
2	15ECVC203	Structural Analysis-I	PC	3-0-0	3	3	50	50	100	3 hours
3	15ECVC204	Environmental Engineering	PC	4-0-0	4	3	50	50	100	3 hours
4	15ECVC205	Concrete Technology	PC	3-0-0	3	3	50	50	100	3 hours
5	15ECVC206	Construction Project Management	PC	3-0-0	3	3	50	50	100	3 hours
6	15ECVC207	Hydrology & Irrigation Engineering	PC	3-0-0	3	3	50	50	100	3 hours
7	15ECVP204	Survey Practice - II	PC	0-0-1	1	2	80	20	100	3 hours
8	15ECVP205	Material Testing Laboratory	PC	0-0-2	2	4	80	20	100	3 hours
9	15ECVP206	Fluid Mechanics Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
Total				20-0-4	24					

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III Year Bachelor of Engineering (Civil Engineering)**Curriculum Structure – 2016 Scheme****V Semester B.E.**

No.	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA Marks	ESA Marks	Total Marks	Exam Duration
1	15ECVC301	Structural Analysis-II	PC	3-0-0	3	3	50	50	100	3 hours
2	15ECVC302	Geotechnical Engineering	PC	3-0-0	3	3	50	50	100	3 hours
3	15ECVC303	Design of RCC Structures	PC	4-0-0	4	4	50	50	100	4 hours
4	15ECVC304	Transportation Engineering	PC	4-0-0	4	4	50	50	100	3 hours
5	15ECVC305	Advanced Project Management	PC	3-0-0	3	3	50	50	100	3 hours
6	15ECVP301	Highway Engineering Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
7	15ECVP302	Environmental Engineering Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
8	15ECVP303	Engineering Computation Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
9	15ECVW301	Mini Project	PW	0-0-3	3	3	50	50	100	3 hours
Total				17-0-6	23					

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1	15ECVC306	Advanced Geotechnical Engineering	PC	3-0-0	3	3	50	50	100	3 hours
2	15ECVC307	Estimation and Costing	PC	3-0-0	3	3	50	50	100	3 hours
3	15ECVE3**	Program Elective -1	PE	3-0-0	3	3	50	50	100	3 hours
4	15EHSC301	Professional Aptitude & Logical Reasoning	HS	3-0-0	3	3	50	50	100	3 hours
5	15ECVP304	Geotechnical Engineering Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
6	15ECVP305	Computer Aided Design Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
7	15ECVP306	Construction Engineering & Management Laboratory	PC	0-0-1	1	2	80	20	100	3 hours
8	15ECVW302	Minor Project	PW	0-0-6	6	6	50	50	100	3 hours
Total				15-0-9	21					

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Program Elective -1:

1	16ECVE301	Pre Stressed Concrete		3	15ECVE303	Pavement Engineering
2	15ECVE302	Traffic Engineering		4	15ECVE304	Design of Hydraulic Structures

IV Year Bachelor of Engineering (Civil Engineering)
Curriculum Structure – 2016 Scheme
VII Semester B.E.

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1	15ECVC401	Design of Steel Structures	PC	3-0-0	3	3	50	50	100	3 hours
2	15ECVE4**	Program Elective -1	PE	3-0-0	3	3	50	50	100	3 hours
3	15ECVE4**	Program Elective -2	PE	3-0-0	3	3	50	50	100	3 hours
4	15ECVE4**	Program Elective -3	PE	3-0-0	3	3	50	50	100	3 hours
5	15ECVE401	Open Elective- 1	OE	3-0-0	3	3	50	50	100	3 hours
6	15ECVP401	Design Studio - Steel and RC Structures	PC	0-0-2	2	3	50	50	100	3 hours
7	15ECVW401	Project	PW	0-0-3	3	3	50	50	100	3 hours
Total				15-0-5	20					

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Program Electives -2, 3 and 4

Vertical 1 - Structural Engineering		Vertical 2 - Construction Engineering & Management		Vertical 3 - Environmental Engineering	
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15ECVE402	Advanced RCC	15ECVE405	Construction Economics & Management	15ECVE408	Advanced Waste Water Treatment
15ECVE403	FEM Analysis	15ECVE406	Construction Quality Management	15ECVE409	Air Pollution

VIII Semester B.E.

No.	Code	Course	Category	L-T-P	Credits	Contact Hours	ISA Marks	ESA Marks	Total Marks	Exam Duration
1	15ECVE4**	Program Elective -5	PE	3-0-0	3	3	50	50	100	3 hours
2	15ECVE4**	Program Elective -6	PE	3-0-0	3	3	50	50	100	3 hours
3	15ECVE4**	Open Elective - 2	OE	3-0-0	3	3	50	50	100	3 hours
4	15EHSC401	Accounting & Financial Management	HS	3-0-0	3	3	50	50	100	3 hours
5	15EHSN401	Constitution of India, Professional Ethics & Environmental Studies	HS	-	Audit	3	50	50	100	3 hours
6	15ECVW402	Project	PW	0-0-8	8	3	50	50	100	3 hours
		Total		12-0-8	20					

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Open Elective – 2

15ECVO402- Optimization Techniques

15ECVO403-Scientific Computing using Python

Program Electives -5 and 6

Vertical 1 - Structural Engineering		Vertical 2 - Construction Engineering & Management		Vertical 3 - Environmental Engineering	
15ECVE401	Design of sub-structures	15ECVE404	Horizontal and Vertical Construction Methods	15ECVE407	Solid Waste Management
15ECVE402	Advanced RCC	15ECVE405	Construction Economics & Management	15ECVE408	Advanced Waste Water Treatment
15ECVE403	FEM Analysis	15ECVE406	Construction Quality Management	15ECVE409	Air Pollution