

# **SARALA BIRLA UNIVERSITY RANCHI**



Established under the Sarala Birla University Act 2017 Govt. of Jharkhand as per Section 2(f) of UGC Act. 1956

## **CURRICULUM FOR**

**B.Tech**

**in  
Civil Engineering**

**(Based on UGC & AICTE- CBCS)**

**Effective from 2019-20**

## **DEFINITION OF CREDIT**

1 Hr. Lecture (L) per week	1 credit
1 Hr. Tutorial (T) per week	1 credit
1 Hr. Practical (P) per week	0.5 credit
2 Hours Practical (Lab)/week	1 credit
4 Hours Practical (Lab)/week	2 credits

## **COURSE CODE AND DEFINITION**

<b>Course Code</b>	<b>Definition</b>
<b>BSC</b>	Basic Science courses
<b>ESC</b>	Engineering Science courses
<b>HSMC</b>	Humanities and Social Sciences including Management courses
<b>PCC-CE</b>	Professional core courses
<b>PEC-CE</b>	Professional Elective courses
<b>OEC</b>	Open Elective Courses
<b>MC</b>	Mandatory Courses
<b>CE-P1</b>	Project stage-I
<b>CE-P2</b>	Project stage-II
<b>CE-P3</b>	Project stage-III

## **Structure of Civil Engineering (B.TECH.)**

### **(Break up of Credits)**

<b>S.No</b>	<b>Category</b>	<b>Credit Breakup</b>
1	Humanities and Social Sciences including Management courses	14
2	Basic Science courses	23
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc	28
4	Professional Core courses	45
5	Professional Elective courses relevant to chosen specialization/branch	21
6	Open subjects – Electives from other technical and /or emerging subjects	12
7	Mandatory Courses[Environmental Sciences]	4
8	Project work, seminar and internship in industry or elsewhere	16
	<b>Total Credits</b>	<b>163</b>



**CREDITS DISTRIBUTION (SEMESTER-WISE AND COURSE-WISE )**

<b>Semester</b>	<b>HSMC</b>	<b>BSC</b>	<b>ESC</b>	<b>PCC</b>	<b>PEC</b>	<b>OEC</b>	<b>PROJECT</b>	<b>MC</b>	<b>Total Credit Semester-wise</b>
<b>1st</b>	0	9.5	8	0	0	0	0	0	17.5
<b>2nd</b>	3	9.5	8	0	0	0	0	0	20.5
<b>3rd</b>	3	4	8	6	0	0	0	0	21
<b>4th</b>	0	0	4	10	0	0	0	4	18
<b>5th</b>	2	0	0	15	0	3	0	0	20
<b>6th</b>	4	0	0	6	6	3	2	0	21
<b>7th</b>	2	0	0	8	6	3	5	0	24
<b>8th</b>	0	0	0	0	9	3	9	0	21
<b>Total Credit Course-wise</b>	14	23	28	45	21	12	16	4	163
<b>Total Credit</b>									163

## BASIC SCIENCE COURSES

Sl. No.	Course Code	Course Title	Hours per week			Credits	Preferred Semester
			L	T	P		
1	BSC-101	Physics	3	1	0	4	I
2	BSC-102	Physics Lab	0	0	3	1.5	I
3	BSC-103	Chemistry	3	1	0	4	II
4	BSC-104	Chemistry Lab	0	0	3	1.5	II
5	BSC-105	Mathematics-I	3	1	0	4	I
6	BSC-106	Mathematics-II	3	1	0	4	II
7	BSC-107	Mathematics-III	3	1	0	4	III
<b>Total Credits:</b>						<b>23</b>	

## ENGINEERING SCIENCE COURSES

Sl. No.	Course Code	Course Title	Hours per week			Credits	Preferred Semester
			L	T	P		
1	ESC-101	Basic Electrical & Electronics Engineering	3	1	0	4	I
2	ESC-102	Basic Electrical & Electronics Engineering Lab	0	0	2	1	I
3	ESC-103	Engineering Graphics & Design	1	0	4	3	I
4	ESC-104	Programming for Problem Solving	3	0	0	3	II
5	ESC-105	Programming for Problem Solving Lab	0	0	4	2	II
6	ESC-106	Workshop/ Manufacturing Practices	1	0	4	3	II
7	ESC-107	Engineering Mechanics	3	1	0	4	III
9	ESC-108	Electronics Devices	3	0	0	3	III
10	ESC-109	Electronics Devices Lab	0	0	2	1	III
11	ESC-110	Digital Electronics	3	0	0	3	IV
12	ESC-111	Digital Electronics Lab	0	0	2	1	IV
<b>Total</b>						<b>28</b>	





## HUMANITIES & SOCIAL SCIENCES INCLUDING MANAGEMENT COURSE

Sl. No.	Course Code	Course Title	Hours per week			Credits	Preferred Semester
			L	T	P		
1	HSMC-101	English	3	0	0	3	II
2	HSMC-102	Technical Communication	2	0	0	2	III
3	HSMC-103	Technical Communication Lab	0	0	2	1	III
4	HSMC-104	Organisational Behaviour	2	0	0	2	VI
5	HSMC-105	French Through Communicative Approach-I	2	0	0	2	V
6	HSMC-106	French Through Communicative Approach-II	2	0	0	2	VI
7	HSMC-107	Professional Practice, Law & Ethics	2	0	0	2	VII
<b>Total Credits:</b>						<b>14</b>	

## MANDATORY COURSES

Sl. No.	Course Code	Course Title	Hours per week			Credits	Preferred Semester
			L	T	P		
1	MC-101	Induction Program	0	0	0	0	I
2	MC-102	Environmental Science	2	0	0	2	IV
3	MC-103	Values & Ethics	2	0	0	2	IV
<b>Total Credits:</b>						<b>4</b>	

## PROFESSIONAL CORE COURSES (Sem III & IV)

**Branch: Civil Engineering**

Sl. No.	Course Code	Course Title	Hours			Credit	Semester
			L	T	P		
1	PCC-CE-201	Strength Of Material	2	0	0	2	III
2	PCC-CE-202	Strength Of Material Lab	0	0	2	1	III
3	PCC-CE-203	Surveying and Geomatics	1	1	0	2	III
4	PCC-CE-204	Surveying and Geomatics Lab	0	0	2	1	III
5	PCC-CE-205	Disaster Preparedness & Planning Management	1	1	0	2	IV
6	PCC-CE-206	Engineering Geology	2	0	0	2	IV
7	PCC-CE-207	Introduction to Fluid Mechanics	2	0	0	2	IV
8	PCC-CE-208	Fluid Mechanics Lab	0	0	2	1	IV
9	PCC-CE-209	Materials Testing and Evaluation	1	1	0	2	IV
10	PCC-CE-210	Materials Testing and Evaluation Lab	0	0	2	1	IV

**Total Credit: 16**

## PROFESSIONAL CORE COURSES (Sem V & VI)

Sl. No.	Course Code	Course Title	Hours			Credit	Semester
			L	T	P		
1	PCC-CE-301	Structural Analysis-I	2	1	0	3	V
2	PCC-CE-302	Geotechnical Engineering-I	2	0	0	2	V
3	PCC-CE-303	Geotechnical Engineering Lab-I	0	0	2	1	V
4	PCC-CE-304	Environmental Engineering	2	1	0	3	V
5	PCC-CE-305	Hydraulic Engineering	2	0	0	2	V
6	PCC-CE-306	Hydraulic Engineering Lab	0	0	2	1	V
7	PCC-CE-307	Transportation Engineering	2	0	0	2	V
8	PCC-CE-308	Transportation Engineering Lab	0	0	2	1	V
9	PCC-CE-309	Design of Concrete Structures-I	3	0	0	3	VI
10	PCC-CE-310	Engineering Economics, Estimation & Costing	2	1	0	3	VI

**Total Credit 21**

## PROFESSIONAL CORE COURSES (Sem VII & VIII)

Sl. No.	Course Code	Course Title	Hours			Credit	Semester
			L	T	P		
1	PCC-CE-401	Construction Engineering & Management	2	1	0	3	VII
2	PCC-CE-402	Hydrology & Water Resources Engineering	2	1	0	3	VII
3	PCC-CE-403	Concrete Structure Lab	0	0	2	1	VII
4	PCC-CE-404	Computer Aided Civil Engg. Drawing.	0	0	2	1	VII
<b>Total Credit</b>						<b>8</b>	

## PROFESSIONAL ELECTIVE COURSES (Sem V & VI)

Branch: Civil Engineering

SL No.	Course Code	Course Title	Hrs./ Week L: T: P	Credits	Preferred Semester
1	PEC-CE-301	Structural Analysis -II	02:00:00	2	V/VI
2	PEC-CE-302	Structural Engineering Lab	00:00:02	1	V/VI
3	PEC-CE-303	Geotechnical Engineering-II	02:00:00	2	V/VI
4	PEC-CE-304	Geotechnical Engineering Lab-II	00:00:02	1	V/VI
5	PEC-CE-305	Instrumentation & Sensor Technologies for Civil Engineering Applications	03:00:00	3	V/VI
6	PEC-CE-306	Design of Concrete Structures-I	03:00:00	3	V/VI
7	PEC-CE-307	Railway Engineering	03:00:00	3	V/VI
8	PEC-CE-308	Open Chanel Flow	03:00:00	3	V/VI
9	PEC-CE-309	Physico-Chemical Processes for Water and Wastewater Treatment	03:00:00	3	V/VI

## PROFESSIONAL ELECTIVE COURSES (Sem VII & VIII)

Branch: Civil Engineering

1	PEC-CE-401	Design of Concrete Structures-II	03:00:00	3	VII/VIII
2	PEC-CE-402	Industrial Structures	03:00:00	3	VII/VIII
3	PEC-CE-403	Design of Steel Structures	03:00:00	3	VII/VIII
4	PEC-CE-404	Structural Analysis-III	03:00:00	3	VII/VIII
5	PEC-CE-405	Foundation Engineering & Geotechnical Design	03:00:00	3	VII/VIII
6	PEC-CE-406	Port and Harbour Engineering	03:00:00	3	VII/VIII
7	PEC-CE-407	Prestressed Concrete	03:00:00	3	VII/VIII
8	PEC-CE-408	Bridge Engineering	03:00:00	3	VII/VIII
9	PEC-CE-409	Advanced Structural Analysis	03:00:00	3	VII/VIII
10	PEC-CE-410	Design of Hydraulic Structure	03:00:00	3	VII/VIII

11	PEC-CE-411	Traffic Engineering and Management	03:00:00	3	VII/VIII
12	PEC-CE-412	Solid and Hazardous Waste Management	03:00:00	3	VII/VIII
13	PEC-CE-413	Earthquake Engineering	03:00:00	3	VII/VIII
14	PEC-CE-414	Structural Dynamics	03:00:00	3	VII/VIII
15	PEC-CE-415	Water and Air Quality Modelling	03:00:00	3	VII/VIII
16	PEC-CE-416	Air and Noise Pollution and Control	03:00:00	3	VII/VIII
17	PEC-CE-417	Irrigation Engineering	03:00:00	3	VII/VIII
18	PEC-CE-418	River Engineering	03:00:00	3	VII/VIII
19	PEC-CE-419	Masonry Structures	03:00:00	3	VII/VIII
20	PEC-CE-420	Production & Operation Management	03:00:00	3	VII/VIII

## **OPEN ELECTIVE COURSES**

**Branch: Civil Engineering**

<b>Sl. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Credits</b>
1	OEC-CSE-303	Artificial Intelligence	3
2	OEC-CSE-305	Machine Learning	3
3	OEC-ME-408	Wind and Solar Energy Systems	3
4	OEC-EEE-412	Operation Research	3
<b>Total Credit:</b>			<b>12</b>

# PROJECT

**Branch: Civil Engineering**

<b>Sl. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Hrs. /Week L: T: P</b>	<b>Credits</b>	<b>Preferred Semester</b>
<b>1</b>	CE-P1	Project Stage-I( Mini Project/ Industrial Training)	00:00:04	2	VI
<b>2</b>	CE-P2	Project Stage-II(Minor Project Work)	00:00:10	5	VII
<b>3</b>	CE-P3	Project Stage-III(Major Project Work & Dissertation)	00:00:18	9	VIII
<b>Total Credit</b>				<b>16</b>	





# COURSE STRUCTURE

**SEMESTER I (FIRST YEAR]**

**Branch: Civil Engineering**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Basic Science Course	BSC-101	Physics	3	1	0	4	30	70	100
2	Basic Science Course	BSC-105	Mathematics – I	3	1	0	4	30	70	100
3	Engineering Science Course	ESC-101	Basic Electrical & Electronics Engineering	3	1	0	4	30	70	100
<b>Total(A)</b>							<b>12</b>	<b>90</b>	<b>210</b>	<b>300</b>
<b>Practical/Drawing/Design</b>										
1	Engineering Science Course	ESC-103	Engineering Graphics & Design	1	0	4	3	30	20	50
2	Basic Science Course	BSC-102	Physics Lab	0	0	3	1.5	30	20	50
3	Engineering Science Course	ESC-102	Basic Electrical & Electronics Engineering Lab	0	0	2	1	30	20	50
<b>Total(B)</b>							<b>5.5</b>	<b>90</b>	<b>60</b>	<b>150</b>
<b>Grand Total (A+B)</b>							<b>17.5</b>	<b>180</b>	<b>270</b>	<b>450</b>

**L-Lecture, T-Tutorial, P-Practical**

**IA- Internal Assessment, ESE-End Semester Examination**

# COURSE STRUCTURE

**SEMESTER II (FIRST YEAR]**

**Branch: Civil Engineering**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
<b>1</b>	Basic Science Course	BSC-103	Chemistry	3	1	0	4	30	70	100
<b>2</b>	Basic Science Course	BSC-106	Mathematics –II	3	1	0	4	30	70	100
<b>3</b>	Engineering Science Course	ESC-104	Programming for Problem Solving	3	0	0	3	30	70	100
<b>4</b>	Humanities and Social Sciences including Management Courses	HSMC-101	English	3	0	0	3	30	70	100
<b>Total(A)</b>							<b>14</b>	<b>120</b>	<b>280</b>	<b>400</b>
<b>Practical/Drawing/Design</b>										
<b>1</b>	Engineering Science Course	ESC-106	Workshop/ Manufacturing Practices	1	0	4	3	30	20	50
<b>2</b>	Basic Science Course	BSC-104	Chemistry Lab	0	0	3	1.5	30	20	50
<b>3</b>	Engineering Science Course	ESC-105	Programming for Problem Solving Lab	0	0	4	2	30	20	50
<b>Total(B)</b>							<b>5.5</b>	<b>90</b>	<b>60</b>	<b>150</b>
<b>Grand Total (A+B)</b>							<b>20.5</b>	<b>210</b>	<b>340</b>	<b>550</b>
<b>L-Lecture, T-Tutorial, P-Practical</b> <b>IA- Internal Assessment, ESE-End Semester Examination</b>										

# COURSE STRUCTURE

**SEMESTER III (SECOND YEAR]**

**Branch: Civil Engineering**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Basic Science Course	BSC-107	Mathematics-III	3	1	0	4	30	70	100
2	Engineering Science Courses	ESC-108	Electronic Devices	3	0	0	3	30	70	100
3	Humanities and Social Sciences including Management Courses	HSMC-102	Technical Communication	2	0	0	2	30	70	100
4	Professional Core Courses	PCC-CE-201	Strength Of Material	2	0	0	2	30	70	100
5	Engineering Science Courses	ESC-107	Engineering Mechanics	3	1	0	4	30	70	100
6	Professional Core Courses	PCC-CE-203	Surveying and Geomatics	1	1	0	2	30	70	100
<b>Total(A)</b>							<b>17</b>	<b>180</b>	<b>420</b>	<b>600</b>
<b>Practical/Drawing/Design</b>										
1	Engineering Science Courses	ESC-109	Electronic Devices Lab	0	0	2	1	30	20	50
2	Professional Core Courses	PCC-CE-202	Strength Of Material Lab	0	0	2	1	30	20	50
3	Professional Core Courses	PCC-CE-204	Surveying and Geomatics Lab	0	0	2	1	30	20	50
4	Humanities and Social Sciences including Management Courses	HSMC-103	Technical Communication Lab	0	0	2	1	30	20	50
<b>Total(B)</b>							<b>4</b>	<b>120</b>	<b>80</b>	<b>200</b>
<b>Grand Total (A+B)</b>							<b>21</b>	<b>300</b>	<b>500</b>	<b>800</b>
<p><b>L-Lecture, T-Tutorial, P-Practical</b>  <b>IA- Internal Assessment, ESE-End Semester Examination</b></p>										

# COURSE STRUCTURE

**SEMESTER IV (SECOND YEAR]**

**Branch: Civil Engineering**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Engineering Science Courses	ESC-110	Digital Electronics	3	0	0	3	30	70	100
2	Professional Core Courses	PCC-CE-205	Disaster Preparedness & Planning Management	1	1	0	2	30	70	100
3	Professional Core Courses	PCC-CE-206	Engineering Geology	2	0	0	2	30	70	100
4	Professional Core Courses	PCC-CE-207	Introduction to Fluid Mechanics	2	0	0	2	30	70	100
5	Professional Core Courses	PCC-CE-209	Materials Testing and Evaluation	1	1	0	2	30	70	100
6	Mandatory Courses	MC-102	Environmental Science	2	0	0	2	30	70	100
7	Mandatory Courses	MC-103	Values & Ethics	2	0	0	2	30	70	100
<b>Total(A)</b>							<b>15</b>	<b>240</b>	<b>560</b>	<b>800</b>
1	Engineering Science Courses	ESC-111	Digital Electronics Lab	0	0	2	1	30	20	50
2	Professional Core Courses	PCC-CE-208	Fluid Mechanics Lab	0	0	2	1	30	20	50
3	Professional Core Courses	PCC-CE-210	Materials Testing and Evaluation Lab	0	0	2	1	30	20	50
<b>Total(B)</b>							<b>3</b>	<b>90</b>	<b>60</b>	<b>150</b>
<b>Grand Total (A+B)</b>							<b>18</b>	<b>330</b>	<b>620</b>	<b>950</b>

**L-Lecture, T-Tutorial, P-Practical**

**ESE-End Semester Examination**

# COURSE STRUCTURE

SEMESTER V (THIRD YEAR)

Branch: Civil Engineering

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Professional Core Courses	PCC-CE-301	Structural Analysis -I	2	1	0	3	30	70	100
2	Professional Core Courses	PCC-CE-302	Geotechnical Engineering-I	2	0	0	2	30	70	100
3	Professional Core Courses	PCC-CE-304	Environmental Engineering	2	1	0	3	30	70	100
4	Professional Core Courses	PCC-CE-305	Hydraulic Engineering	2	0	0	2	30	70	100
5	Professional Core Courses	PCC-CE-307	Transportation Engineering	2	0	0	2	30	70	100
6	Open Elective Courses	OEC-CSE-303	Open Elective-I/Artificial Intelligence	3	0	0	3	30	70	100
7	Humanities and Social Sciences including Management Courses	HSMC-105	French Through Communicative Approach I	2	0	0	2	30	70	100
<b>Total(A)</b>							<b>17</b>	<b>210</b>	<b>490</b>	<b>700</b>
<b>Practical/Drawing/Design</b>										
1	Professional Core Courses	PCC-CE-303	Geotechnical Engineering Lab-I	0	0	2	1	30	20	50
2	Professional Core Courses	PCC-CE-306	Hydraulic Engineering Lab	0	0	2	1	30	20	50
3	Professional Core Courses	PCC-CE-308	Transportation Engineering Lab	0	0	2	1	30	20	50
<b>Total(B)</b>							<b>3</b>	<b>90</b>	<b>60</b>	<b>150</b>
<b>Grand Total (A+B)</b>							<b>20</b>	<b>300</b>	<b>550</b>	<b>850</b>

L-Lecture, T-Tutorial, P-Practical

ESE-End Semester Examination

# COURSE STRUCTURE

**SEMESTER VI (THIRD YEAR]**

**Branch: Civil Engineering**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Professional Elective courses	PEC-CE-301	Professional Elective courses -I /Structural Analysis -II	2	0	0	2	30	70	100
2	Professional Elective courses	PEC-CE-303	Professional Elective courses -II/ Geotechnical Engineering-II	2	0	0	2	30	70	100
3	Professional Core courses	PCC-CE-309	Design of Concrete Structures-I	3	0	0	3	30	70	100
4	Professional Core courses	PCC-CE-310	Engineering Economics,Estimation & Costing	2	1	0	3	30	70	100
5	Open Elective Courses	OEC-CSE-305	Machine Learning	3	0	0	3	30	70	100
6	Humanities and Social Sciences including Management Courses	HSMC-104	Organisational Behavior	2	0	0	2	30	70	100
7	Humanities and Social Sciences including Management Courses	HSMC-106	French Through Communicative Approach-II	2	0	0	2	30	70	100
<b>Total(A)</b>							<b>17</b>	<b>210</b>	<b>490</b>	<b>700</b>
<b>Practical/Drawing/Design</b>										
1	Professional Elective courses	PEC-CE-302	Structural Engineering Lab	0	0	2	1	30	20	50
2	Professional Elective courses	PEC-CE-304	Geotechnical Engineering Lab -II	0	0	2	1	30	20	50
3	Project Stage-I	CE-P1	Mini Project/ Industrial Training	0	0	4	2	75	25	100
<b>Total(B)</b>							<b>4</b>	<b>135</b>	<b>65</b>	<b>200</b>
<b>Grand Total (A+B)</b>							<b>21</b>	<b>345</b>	<b>555</b>	<b>900</b>

**L-Lecture, T-Tutorial, P-Practical**

ent, ESE-End Semester Examination

# COURSE STRUCTURE

SEMESTER VII (FOURTH YEAR)

Branch: Civil Engineering

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
1	Professional Core courses	PCC-CE-401	Construction Engineering & Management	2	1	0	3	30	70	100
2	Professional Core courses	PCC-CE-402	Hydrology & Water Resources Engineering	2	1	0	3	30	70	100
3	Professional Elective courses	PEC-CE-404	Structural analysis-III	2	1	0	3	30	70	100
4	Professional Elective courses	PEC-CE-401	Design of Concrete Structures-II	2	1	0	3	30	70	100
5	Humanities and Social Sciences including Management Courses	HSMC-107	Professional Practice, Law & Ethics	2	0	0	2	30	70	100
6	Open Elective Courses	OEC-ME-408	Wind and Solar Energy Systems	3	0	0	3	30	70	100
<b>Total(A)</b>							<b>17</b>	<b>150</b>	<b>350</b>	<b>500</b>

### Practical/Drawing/Design

1	Professional Core courses	PCC-CE-403	Concrete Structure Lab	0	0	2	1	30	20	50
2	Professional Core courses	PCC-CE-404	Computer aided Civil Engineering Drawing	0	0	2	1	30	20	50
3	Project Stage II	CE-P2	Minor Project Work	0	0	10	5	75	25	100
<b>Total(B)</b>							<b>7</b>	<b>135</b>	<b>65</b>	<b>200</b>
<b>Grand Total (A+B)</b>							<b>24</b>	<b>285</b>	<b>415</b>	<b>700</b>

T-Tutorial, P-Practical  
at, ESE-End Semester Examination



**SEMESTER VIII (FOURTH YEAR]****Branch: Civil Engineering**

<b>Theory</b>										
<b>1</b>	Professional Elective courses	PEC-CE-413	Earthquake Engineering	3	0	0	3	30	70	100
<b>2</b>	Professional Elective courses	PEC-CE-411	Traffic Engineering and Management	3	0	0	3	30	70	100
<b>3</b>	Professional Elective courses	PEC-CE-407	Prestressed Concrete	3	0	0	3	30	70	100
<b>4</b>	Open Elective Courses	OEC-EEE-412	Operation Research	3	0	0	3	30	70	100
<b>Total(A)</b>							<b>12</b>	<b>120</b>	<b>280</b>	<b>400</b>
<b>Practical/Drawing/Design</b>										
<b>1</b>	Project Stage-III	CE-P3	Project Work & Dissertation	0	0	18	9	75	25	100
<b>Total(B)</b>							<b>9</b>	<b>75</b>	<b>25</b>	<b>100</b>
<b>Grand Total (A+B)</b>							<b>21</b>	<b>195</b>	<b>305</b>	<b>500</b>
<b>L-Lecture, T-Tutorial, P-Practical</b>										
<b>CSE-End Semester Examination</b>										