# CE - B.Tech. in Civil Engineering
# 2015 Batch

## Semester 1

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | MA1101 | Functions of Several Variables | 3 | 1 | 0 | 0 | 6 | 10 | S |
| 2 | PH1010 | Physics. I | 3 | 1 | 0 | 0 | 6 | 10 | S |
| 3 | PH1030 | Physics Lab.1 | 0 | 0 | 0 | 3 | 1 | 4 | S |
| 4 | CE1010 | Introduction to Civil Engg | 2 | 1 | 1 | 0 | 4 | 8 | P |
| 5 | CS1100 | Introduction to Programming | 3 | 0 | 0 | 3 | 6 | 12 | E |
| 6 | ME1120 | Engg. Drawing | 0 | 1 | 0 | 3 | 3 | 7 | E |
| 7 | GN1100 | Life Skills | 0 | 0 | 0 | 0 | 3 | 0 | |
| | | NCC/ NSS/ NSO | 0 | 0 | 0 | 0 | 2 | 0 | |
| | | **Total Credits :** | | | | | | **51** | |

## Winter

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | WS1010 | Workshop I | 0 | 0 | 0 | 3 | 0 | 3 | E |

## Semester 2

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | MA1102 | Series and Matrices | 3 | 1 | 0 | 0 | 6 | 10 | S |
| 2 | PH1020 | Physics. II | 3 | 1 | 0 | 0 | 6 | 10 | S |
| 3 | AM1100 | Engg. Mechanics | 3 | 1 | 0 | 0 | 6 | 10 | E |
| 4 | CY1001 | Chemistry I | 3 | 1 | 0 | 0 | 6 | 10 | S |
| 5 | CY1002 | Chemistry Lab | 0 | 0 | 0 | 3 | 0 | 3 | S |
| 6 | CE2330 | CE Materials and Construction | 3 | 0 | 0 | 0 | 6 | 9 | P |
| 7 | ID1200 | Ecology and Environment | 0 | 0 | 0 | 0 | 2 | 0 | |
| 8 | | NCC/ NSS/ NSO | 0 | 0 | 0 | 0 | 3 | 0 | |
| | | **Total Credits :** | | | | | | **52** | |

## Summer

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | WS1020 | Workshop II | 0 | 0 | 0 | 3 | 0 | 3 | E |

## Semester 3

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Math. 3 | 3 | 0 | 0 | 0 | 6 | 9 | S |
| 2 | CE2310 | Mechanics of Materials | 3 | 1 | 1 | 0 | 6 | 11 | E |
| 3 | CE3010 | Transportation Engineering - 1 | 3 | 0 | 0 | 0 | 6 | 9 | P |
| 4 | CE2040 | Hydraulic Engineering | 3 | 1 | 1 | 0 | 6 | 11 | P |
| 5 | CE2080 | Surveying | 2 | 1 | 0 | 3 | 4 | 10 | P |
| 6 | | **Total Credits** | | | | | | **50** | |

## Semester 4

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | CE2020 | Structural Analysis | 3 | 1 | 1 | 0 | 6 | 11 | P |
| 2 | CE2060 | Geotechnical Engineering - 1 | 3 | 1 | 1 | 0 | 6 | 11 | P |
| 3 | CE3020 | Transportation Engineering - 2 | 3 | 0 | 0 | 0 | 6 | 9 | P |
| 4 | CE3040 | Environmental Engineering | 3 | 1 | 0 | 0 | 6 | 10 | P |
| 5 | | Science Elective (Maths/Physics/Chemistry) | 3 | 0 | 0 | 0 | 6 | 9 | S |
| 6 | | Humanities Elec. 1 | 3 | 0 | 0 | 0 | 6 | 9 | H |
| | | **Total Credits** | | | | | | **59** | |

## Semester 5

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | BT1010 | Life Sciences | 3 | 0 | 0 | 0 | 6 | 9 | S |
| 2 | CE3350 | Geotechnical Engineering - 2 | 3 | 1 | 1 | 0 | 6 | 11 | P |
| 3 | CE3030 | Water Resources Engineering | 4 | 0 | 0 | 0 | 8 | 12 | P |
| 4 | CE3060 | Basic RC Design | 3 | 1 | 1 | 0 | 6 | 11 | P |
| 5 | CE4030 | Hydraulic & Environ. Engg. Lab | 0 | 0 | 0 | 3 | 1 | 4 | P |
| 6 | CE3410 | Construction Material Lab | 0 | 0 | 0 | 3 | 1 | 4 | P |
| | | **Total Credits** | | | | | | **51** | |

## Semester 6

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | CE3100 | Structural Engg. Lab | 0 | 0 | 0 | 3 | 1 | 4 | P |
| 2 | CE3050 | Basic Steel Design | 3 | 1 | 1 | 0 | 6 | 11 | P |
| 3 | CE4010 | Construction Project Mgmt. | 3 | 1 | 0 | 0 | 6 | 10 | P |
| 4 | | Humanities Elec. 2 | 3 | 0 | 0 | 0 | 6 | 9 | H |
| 5 | | **Total Credits** | **9** | **2** | **1** | **3** | **19** | **34** | |

## Summer

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| | | **Summer Internship** | 0 | 0 | 0 | 0 | 20 | **0** | |

## Semester 7

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Humanities Elec. 3 | 3 | 0 | 0 | 0 | 6 | 9 | H |
| 2 | | **Total Credits** | **3** | **0** | **0** | **0** | **6** | **9** | |

## Semester 8

| S.No | Course No | Course Name | L | T | E | P | O | C | Cat |
|---|---|---|---|---|---|---|---|---|---|
| 2 | HS3050 | Professional Ethics | 2 | 0 | 0 | 0 | 0 | 0 | H |
| | | **Total** | | | | | | **9** | |

| Semester | I | II | III | IV | V | VI | VII | VIII | Total |
|---|---|---|---|---|---|---|---|---|---|
| Credits | 51 | 52+6 | 50* | 59* | 51* | 34* | 9* | * | 432 |

***Please note that the indicated credits are only for core program.**

- The students are required to take **120 credits of electives in semesters III-VIII, of which at least 30 credits should be in Civil Engg**. The remaining credits can be from any department including Civil Engineering
- Electives can be taken in semesters III-VIII, limiting to about 60 credits per semester.
- An optional B.Tech. project can be taken in lieu of 27 elective credits. Please note that such project credits will not be counted against the 18 Civil Engineering credits. Project can be taken in any department including Civil Engineering.

| Category | Engineering (E) | Professional (P) | Humanities (H) | Sciences (S) | Others | Total |
|---|---|---|---|---|---|---|
| Credits | 46 | 155 | 27 | 84 | 120 | 432 |

**B.Tech (Honours):** (Total credit requirement: 432 + 27 = **459)**

- ***Eligibility***: minimum CGPA of 8.5 at the end of 5th sem without U or W grade in any course.
- The students are required to take **120 + 27 credits of electives in semesters III-VIII, of which at least 57 credits should be in Civil Engg**. The remaining credits can be from any department including Civil Engineering
- 27 elective credits to be taken in CE courses at 5000-level or higher.
- Honours student should carry out a B.Tech. project worth 13 credits in VII and 14 credits in VIII semester in department including Civil Engineering.