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| --- |
| **SEMESTER - 1** |
| **Course****Code** | **Course Title** | **Course****Type** | **Contact Hours** | **Credit** | **Pre-requisites** |
| **L** | **T** | **P** | **C** |
| MA 101 | Differential Calculus and Linear Algebra | Sc/HS | 3 | 1 | 0 | 4 | None |
| ME 101 | Engineering Mechanics | BE | 3 | 0 | 0 | 3 | None |
| CY 101 /PH 101 | Chemistry / Physics | Sc/HS | 2/3 | 1 | 0 | 3/4 | None |
| CE 101 | Engineering Drawing | BE | 1 | 0 | 4 | 3 | None |
| EC101 /EE 101 | Basic Electronics Engineering / Basic Electrical Engineering | BE | 2 | 0 | 0 | 2 | None |
| HS 101 | English Language Skills | Sc/HS | 2 | 0 | 0 | 2 | None |
| HS 151 | English Language Skills Lab | L | 0 | 0 | 2 | 1 | None |
| CY 151 /PH 151 | Chemistry Lab / Physics Lab | L | 0 | 0 | 2 | 1 | None |
| EC151 /EE 151 | Basic Electronics Lab / Basic Electrical Lab | L | 0 | 0 | 2 | 1 | None |
| **Total Contact Hours – Component wise** | **13/14** | **2** | **10** | --- |
| **Total Contact Hours** | **25/26** | **20/21** | --- |

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| **SEMESTER – 2** |
| **Course****Code** | **Course Title** | **Course****Type** | **Contact Hours** | **Credit** | **Pre-requisites** |
| **L** | **T** | **P** | **C** |
| MA 102 | Integral Calculus and Complex Variables | Sc/HS | 3 | 1 | 0 | 4 | None |
| EE 101 /EC 101 | Basic Electrical Engineering / Basic Electronics Engineering | BE | 2 | 0 | 0 | 2 | None |
| PH 101 /CY 101 | Physics / Chemistry | Sc/HS | 3/2 | 1 | 0 | 4/3 | None |
| CY 102 | Environmental Science | Sc/HS | 2 | 0 | 0 | 2 | None |
| CS 102 | Introduction to Computing  | BE | 2 | 1 | 0 | 3 | None |
| ME 152 | Workshop Practice-I | L | 0 | 0 | 4 | 2 | None |
| EE 151 /EC 151 | Basic Electrical Lab / Basic Electronics Lab | L | 0 | 0 | 2 | 1 | None |
| PH151 /CY 101 | Physics Lab / Chemistry Lab | L | 0 | 0 | 2 | 1 | None |
| CS 152 | Computing Lab | L | 0 | 0 | 2 | 1 | None |
| **Total Contact Hours – Component wise** | **12/11** | **3** | **10** | --- |
| **Total Contact Hours** | **25/24** | **20/19** | --- |

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| **SEMESTER – 3** |
| **Course****Code** | **Course Title** | **Course****Type** | **Contact Hours** | **Credit** | **Pre-requisites** |
| **L** | **T** | **P** | **C** |
| MA 201 | Integral Transforms and PDEs | M | 3 | 1 | 0 | 4 | None |
| **Professional Core Courses - 1, 2, 3** |
| CE 201 | Solid Mechanics | PC | 3 | 1 | 0 | 4 | None |
| CE 203 | Surveying | PC | 3 | 1 | 0 | 4 | None |
| CE 205 | Civil Engineering Materials | PC | 3 | 0 | 0 | 3 | None |
| **Special Course – 1** |
| ME 291 | Safety Engineering  | S | 2 | 0 | 0 | 2 | None |
| **Lab Courses - 1, 2, 3** |
| CE 251 | Solid Mechanics Lab | L | 0 | 1 | 2 | 2 | None |
| CE 253 | Surveying Lab | L | 0 | 1 | 2 | 2 | None |
| CE 255 | Civil Engineering Materials Lab | L | 0 | 0 | 2 | 1 | None |
| **Total Contact Hours – Component wise** | **15** | **5** | **6** | --- |
| **Total Contact Hours** | **25** | **22** | --- |

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| **SEMESTER – 4** |
| **Course****Code** | **Course Title** | **Course****Type** | **Contact Hours** | **Credit** | **Pre-requisites** |
| **L** | **T** | **P** | **C** |
| **Professional Core Courses - 4, 5, 6** |
| CE 202 | Environmental Engineering – I | PC | 3 | 0 | 0 | 3 | None |
| CE 204 | Fluid Mechanics | PC | 3 | 0 | 0 | 3 | None |
| CE 206 | Structural Analysis – I | PC | 3 | 1 | 0 | 4 | CE 201 |
| **Professional Elective – 1** |
| CE 212 | Concrete Technology | PE | 3 | 0 | 0 | 3 | None |
| CE 214 | Advance Surveying Techniques | PE | 3 | 0 | 0 | 3 | None |
| CE 216 | Earthquake Engineering | PE | 3 | 0 | 0 | 3 | None |
| **Professional Elective – 2** |
| CE 218 | Building Material and Construction | PE | 3 | 0 | 0 | 3 | None |
| CE 220 | Environmental Impact Assessment  | PE | 3 | 0 | 0 | 3 | None |
| CE 222 | Remote Sensing and GIS | PE | 3 | 0 | 0 | 3 | None |
| **Open Elective – 1** |
| CE 272 | Basic Civil Engineering | OE | 2 | 0 | 0 | 2 | None |
| **Lab Courses - 4, 5, 6** |
| CE 252 | Environmental Engineering – I Lab | L | 0 | 1 | 2 | 2 | None |
| CE 254 | Fluid Mechanics Lab | L | 0 | 1 | 2 | 2 | None |
| CE 256 | Structural Analysis – I Lab | L | 0 | 0 | 2 | 1 | None |
| **Total Contact Hours – Component wise** | 17 | 3 | 6 | --- |
| **Total Contact Hours** | **26** | **23** | --- |

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| **SEMESTER – 5** |
| **Course****Code** | **Course Title** | **Course****Type** | **Contact Hours** | **Credit** | **Pre-requisites** |
| **L** | **T** | **P** | **C** |
| **Professional Core Courses - 7, 8, 9** |
| CE 301 | Geotechnical Engineering-I | PC | 3 | 0 | 0 | 3 | None |
| CE 303 | Transportation Engineering- I | PC | 3 | 0 | 0 | 3 | None |
| CE 305 | Hydrology & Water Resources Engineering | PC | 3 | 1 | 0 | 4 | CE 204 |
| **Professional Elective – 3** |
| CE 311 | Environmental Engineering – II | PE | 3 | 0 | 0 | 3 | None |
| CE 313 | Ground Improvement Technique | PE | 3 | 0 | 0 | 3 | None |
| CE 319 | Composite Materials and Structures | PE | 3 | 0 | 0 | 3 | None |
| **Professional Elective – 4** |
| CE 315 | Structural Analysis- II | PE | 3 | 0 | 0 | 3 | None |
| CE 317 | Computational method in Engineering | PE | 3 | 0 | 0 | 3 | None |
| CE 321 | Matrix method of Structural Analysis | PE | 3 | 0 | 0 | 3 | None |
| **Open Elective – 2** |
| CE 371 | Solid Waste Management | OE | 2 | 0 | 0 | 2 | None |
| **Lab Courses - 7, 8, 9** |
| CE 351 | Geotechnical Engineering Lab – I | L | 0 | 1 | 2 | 2 | None |
| CE 353 | Transportation Engineering Lab – I | L | 0 | 1 | 2 | 2 | None |
| CE 355 | Hydrology & Water Resources Engineering Lab | L | 0 | 0 | 2 | 1 | None |
| **Total Contact Hours – Component wise** | 17 | 3 | 6 | --- |
| **Total Contact Hours** | **26** | **23** | --- |

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| **SEMESTER – 6** |
| **Course****Code** | **Course Title** | **Course****Type** | **Contact Hours** | **Credit** | **Pre-requisites** |
| **L** | **T** | **P** | **C** |
| **Professional Core Courses – 10, 11** |
| CE 302 | Hydraulics & Hydraulic Structures | PC | 3 | 1 | 0 | 4 | CE 305 |
| CE 304 | Geotechnical Engineering-II | PC | 3 | 0 | 0 | 3 | CE 301 |
| **Professional Elective – 5** |
| CE 312 | Reinforced Concrete Design | PE | 3 | 0 | 0 | 3 | None |
| CE 314 | Design of Foundation and Retaining Structure | PE | 3 | 0 | 0 | 3 | None |
| CE 316 | Pavement Design | PE | 3 | 0 | 0 | 3 | None |
| **Professional Elective – 6** |
| CE 318 | Fluid Dynamics and Fluid machines | PE | 3 | 0 | 0 | 3 | None |
| CE 320 | Continuum Mechanics | PE | 3 | 0 | 0 | 3 | None |
| CE 322 | Bridge Engineering | PE | 3 | 0 | 0 | 3 | None |
| **Open Elective – 3** |
| CE 372 | Introduction to Finite Element Method | OE | 2 | 0 | 0 | 2 | None |
| **SpecialCourse – 2** |
| HS 392 | Corporate Communication | S | 2 | 0 | 0 | 2 | None |
| **Lab Courses – 10, 11** |
| CE 352 | Hydraulics & Hydraulic Structures Lab  | L | 0 | 1 | 2 | 2 | None |
| CE 354 | Geotechnical Engineering-II Lab | L | 0 | 1 | 2 | 2 | None |
| CE 382 | Term Paper | T | 0 | 0 | 2 | 1 | None |
| **Total Contact Hours – Component wise** | 16 | 3 | 6 | --- |
| **Total Contact Hours** | **25** | **22** | --- |

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| **SEMESTER – 7** |
| **Course****Code** | **Course Title** | **Course****Type** | **Contact Hours** | **Credit** | **Pre-requisites** |
| **L** | **T** | **P** | **C** |
| CE 401 | Project – I | P | 0 | 0 | 10 | 5 | None  |
| **Professional Elective –7** |
| CE 411 | Transportation Engineering II | PE | 3 | 0 | 0 | 3 | None |
| CE 413 | Model of Air and Water Quality | PE | 3 | 0 | 0 | 3 | None |
| CE 415 | Ground water Hydrology | PE | 3 | 0 | 0 | 3 | None |
| **Professional Elective –8** |
| CE 417 | Design of Steel Structures | PE | 3 | 0 | 0 | 3 | None |
| CE 419 | Dynamics of Soil and Foundation | PE | 3 | 0 | 0 | 3 | None |
| CE 421 | River Engineering | PE | 3 | 0 | 0 | 3 | None |
| **Open Elective –4** |
| CE 471 | Engineering Geology | OE | 2 | 0 | 0 | 2 | None |
| **Special Course –3** |
| CE 491 | Disaster Management | S | 2 | 0 | 0 | 2 | None |
| **Lab Courses – 12** |
| CE 451 | Traffic Engineering (Lab) | L | 0 | 0 | 2 | 2 | None |
|  |  |  |  |  |  |  |  |
| CE 481 | Internship | I | 0 | 0 | 0 | 1 | None |
| **Total Contact Hours – Component wise** | **10** | **0** | **14** | --- |
| **Total Contact Hours** | **18** | **18** | --- |

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| **SEMESTER –8** |
| **Course****Code** | **Course Title** | **Course****Type** | **Contact Hours** | **Credit** | **Pre-requisites** |
| **L** | **T** | **P** | **C** |
| CE 402 | Project – II | P | 0 | 0 | 18 | 9 | None  |
| **Professional Elective –9** |
| CE 412 | Pre stressed Concrete and industrial structures | PE | 3 | 0 | 0 | 3 | None |
| CE 414 | Industrial Pollution Prevention | PE | 3 | 0 | 0 | 3 | None |
| CE 416 | Estimation, Costing & Valuation | PE | 3 | 0 | 0 | 3 | None |
| **Professional Elective –10** |
| CE 418 | Dynamics of Structure | PE | 3 | 0 | 0 | 3 | None |
| CE 420 | Traffic Engineering | PE | 3 | 0 | 0 | 3 | None |
| CE 422 | Irrigation Engineering | PE | 3 | 0 | 0 | 3 | None |
| **Special Course –4** |
| HS 492 | Entrepreneurship  | S | 2 | 0 | 0 | 2 | None |
| **Total Contact Hours – Component wise** | **8** | **0** | **18** | --- |
| **Total Contact Hours** | **26** | **17** | --- |