**Credit Definition**

|  |  |  |
| --- | --- | --- |
| **Type** | **Duration**  **(in Hour)** | **Credit** |
| Lecture (L) | 1 | 1 |
| Tutorial (T) | 1 | 1 |
| Practical (P) | 2 | 1 |

**Total Credit**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Semester** | **hrs./Week** | **Credit** |
| 1st | 1st | 28 | 23 |
| 2nd | 28 | 23 |
| 2nd | 3rd | 25 | 23 |
| 4th | 23 | 23 |
| 3rd | 5th | 24 | 23 |
| 6th | 22 | 22 |
| 4th | 7th | 23 | 18 |
| 8th | 18 | 17 |
| **Total** | | | **172** |

**Category Codification with Credit Break up**

|  |  |  |  |
| --- | --- | --- | --- |
| **Definition of Category** | **Code** | **No** | **Credit** |
| Basic Science | BS | 1 | 25 |
| Engineering Science | ES | 2 | 24 |
| Professional Core | PC | 3 | 48 |
| Professional Elective (Discipline Specific) | PE | 4 | 17 |
| Open Elective (General Elective) | OE | 5 | 16 |
| Humanities & Social Science including Management | HSM | 6 | 10 |
| Project Work / Seminar / Internship / Entrepreneurship | PSE | 7 | 20 |
| Mandatory / University Specified (Environmental Sc. / Induction Training / Indian Constitution / Foreign language) | MUS | 8 | 12 |
| **Total** | | | **172** |

**Category wise Credit Distribution**

**Subject Codification**

Department Code

Course No

Type

Semester (1..8)

X

X

X

X

X

X

X

If “Type” = 3, then 1 – Seminar, 2 – project, 3 – Internship/Entrepreneurship, 4 - Viva

1 – L/L+T, 2 – L+P, 3 – Sessional, 4 – P/Workshop

Category

Degree

1 – BS, 2 – ES, 3 – PC, 4 – PE, 5 – OE, 6 – HSM, 7 – PSE, 8 – MUS

1 – B.Tech (CSE), 2 – M.Tech (CSE), 3 – B.Tech (CSBS), 4 – Diploma, 5 – PhD

**SEMESTER: I**

**Mandatory Induction Program – Duration 3 weeks**

* Physical Activity
* Creative Arts
* Universal Human Values
* Literary
* Proficiency Modules
* Lectures by Eminent People
* Visits to Local Areas
* Familiarization to Department/Branch & Innovations

| **Sl No** | **Course Title** | **Code** | **Credit** | **Type** | | |
| --- | --- | --- | --- | --- | --- | --- |
| **L** | **T** | **P** |
| 1 | Engineering Mathematics – I | 1191111 | 3 | 3 | 0 | 0 |
| 2 | Engineering Physics | 1171112 | 3 | 3 | 0 | 0 |
| 3 | Engineering Drawing | 1102111 | 2 | 2 | 0 | 0 |
| 4 | Fundamentals of Computer Sc. & Problem-Solving | 1112112 | 3 | 3 | 0 | 0 |
| 5 | Principles of Electrical Engineering | 1132113 | 3 | 3 | 0 | 0 |
| 6 | Communicative English - I | 1216111 | 2 | 2 | 0 | 0 |
| 7 | Environmental Science | 1158111 | 2 | 2 | 0 | 0 |
| 8 | Engineering Physics Lab | 1171212 | 1 | 0 | 0 | 2 |
| 9 | Engineering Drawing | 1102211 | 1 | 0 | 0 | 2 |
| 10 | Python Lab | 1112212 | 2 | 0 | 0 | 4 |
| 11 | Principles of Electrical Engineering Lab | 1132213 | 1 | 0 | 0 | 2 |
| **Total Credit (BS: 07, ES: 12, HSM: 02, MUS: 02)** | | | **23** | **28 (hrs./Week)** | | |

**SEMESTER: II**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl No** | **Course Title** | **Code** | **Credit** | **Type** | | |
| **L** | **T** | **P** |
| 1 | Engineering Mathematics – II | 1191121 | 3 | 3 | 0 | 0 |
| 2 | Engineering Chemistry | 1161122 | 3 | 3 | 0 | 0 |
| 3 | Introduction to Manufacturing Processes | 1102121 | 2 | 2 | 0 | 0 |
| 4 | Principles of Computer Programming | 1112122 | 3 | 3 | 0 | 0 |
| 5 | Analog and Digital Electronics | 1122123 | 3 | 3 | 0 | 0 |
| 6 | Biology for Engineers | 1151123 | 2 | 2 | 0 | 0 |
| 7 | Communicative English - II | 1216121 | 2 | 2 | 0 | 0 |
| 8 | Engineering Chemistry Lab | 1161222 | 1 | 0 | 0 | 2 |
| 9 | Introduction to Manufacturing Processes Lab | 1102221 | 1 | 0 | 0 | 2 |
| 10 | C Programming Lab | 1112222 | 2 | 0 | 0 | 4 |
| 11 | Analog and Digital Electronics Lab | 1122223 | 1 | 0 | 0 | 2 |
| **Total Credit (BS: 09, ES: 12, HSM: 02)** | | | **23** | **28 (hrs./Week)** | | |

**SEMESTER: III**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl No** | **Course Title** | **Code** | **Credit** | **Type** | | |
| **L** | **T** | **P** |
| 1 | Engineering Mathematics – III | 1191131 | 3 | 3 | 0 | 0 |
| 2 | Data Structure & Algorithm | 1113131 | 4 | 3 | 1 | 0 |
| 3 | Object-Oriented Programming | 1113132 | 3 | 3 | 0 | 0 |
| 4 | Computer Organization and Architecture | 1113133 | 4 | 3 | 1 | 0 |
| 5 | Formal Language and Automata Theory | 1113134 | 3 | 3 | 0 | 0 |
| 6 | Foreign Language - I | 1278131 | 2 | 2 | 0 | 0 |
| 7 | Mentored Seminar – I | 1117331 | 1 |  | | |
| 8 | Data Structure & Algorithm Lab | 1113231 | 1 | 0 | 0 | 2 |
| 9 | JAVA Lab | 1113232 | 1 | 0 | 0 | 2 |
| 10 | Computer Organization and Architecture Lab | 1113233 | 1 | 0 | 0 | 2 |
| **Total Credit (BS: 03, PC: 17, PSE: 01, MUS: 02)** | | | **23** | **25 ( hrs./Week)** | | |

**SEMESTER: IV**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl No** | **Course Title** | **Code** | **Credit** | **Type** | | |
| **L** | **T** | **P** |
| 1 | Engineering Mathematics – IV | 1191141 | 3 | 3 | 0 | 0 |
| 2 | Operating Systems | 1113141 | 3 | 3 | 0 | 0 |
| 3 | Design and Analysis of Algorithm | 1113142 | 4 | 3 | 1 | 0 |
| 4 | Database Management System | 1113143 | 4 | 3 | 1 | 0 |
| 5 | Financial Management & Economics for Engineers | 1246141 | 3 | 3 | 0 | 0 |
| 6 | Foreign Language - II | 1278141 | 2 | 2 | 0 | 0 |
| 7 | Mentored Seminar – II | 1117341 | 1 |  | | |
| 8 | Operating Systems Lab | 1113241 | 1 | 0 | 0 | 2 |
| 9 | Design and Analysis of Algorithm Lab | 1113242 | 1 | 0 | 0 | 2 |
| 10 | Database Management System Lab | 1113243 | 1 | 0 | 0 | 2 |
| **Total Credit (BS: 03, PC: 14, PSE: 01, MUS: 02, HSE: 03)** | | | **23** | **26 ( hrs./Week)** | | |

**SEMESTER: V**

| **Sl No** | **Course Title** | **Code** | **Credit** | **Type** | | |
| --- | --- | --- | --- | --- | --- | --- |
| **L** | **T** | **P** |
| 1 | Engineering Mathematics – V | 1191151 | 3 | 3 | 0 | 0 |
| 2 | Artificial Intelligence | 1113151 | 3 | 3 | 0 | 0 |
| 3 | Software Engineering | 1113152 | 4 | 3 | 1 | 0 |
| 4 | Compiler Design | 1113153 | 3 | 3 | 0 | 0 |
| 5 | Elective-I (Open) | 1\*\*5151 | 4 | 3 | 1 | 0 |
| 6 | Foreign Language - III | 1278151 | 2 | 2 | 0 | 0 |
| 7 | Mentored Seminar – III | 1117351 | 1 |  | | |
| 8 | Artificial Intelligence Lab | 1113251 | 1 | 0 | 0 | 2 |
| 9 | Software Engineering Lab | 1113252 | 1 | 0 | 0 | 2 |
| 10 | Compiler Design Lab | 1113253 | 1 | 0 | 0 | 2 |
| **Total Credit (BS:03, PC: 13, OE: 04, PSE: 01, MUS: 02)** | | | **23** | **24 ( hrs./Week)** | | |

|  |  |  |
| --- | --- | --- |
| **Elective I (Open)** | | |
| **Sl No.** | **Paper Code** | **Paper Name** |
|  | 1\*\*5151A | Microprocessor and Microcontroller |
|  | 1\*\*5151B | Analog and Digital Communication |

**SEMESTER: VI**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl No** | **Course Title** | **Code** | **Credit** | **Type** | | |
| **L** | **T** | **P** |
| 1 | Project Management and Entrepreneurship Skill | 1246161 | 3 | 3 | 0 | 0 |
| 2 | Computer Networks | 1113161 | 3 | 3 | 0 | 0 |
| 3 | Elective – II (Open) | 1\*\*5161 | 4 | 3 | 1 | 0 |
| 4 | Elective – I (Professional) | 1114161 | 3 | 3 | 0 | 0 |
| 5 | Elective – II (Professional) | 1114162 | 3 | 3 | 0 | 0 |
| 6 | Foreign Language - IV | 1278161 | 2 | 2 | 0 | 0 |
| 7 | Mentored Seminar – IV | 1117361 | 2 |  | | |
| 8 | Computer Networks Lab | 1113261 | 1 | 0 | 0 | 2 |
| 9 | Elective – II (Professional) Lab | 1114262 | 1 | 0 | 0 | 2 |
| **Total Credit (HSM:03, PC: 04, PE: 07, OE: 04, PSE: 02 MUS: 02)** | | | **22** | **22 ( hrs./Week)** | | |

|  |  |  |
| --- | --- | --- |
| **Elective II (Open)** | | |
| **Sl No.** | **Paper Code** | **Paper Name** |
|  | 1\*\*5161A | Fuzzy Set Theory And Decision Making |
|  | 1\*\*5161B | Robotics |
| **Elective – I (Professional)** | | |
| **Sl No.** | **Paper Code** | **Paper Name** |
|  | 1114161A | Agile Development Methodologies |
|  | 1114161B | Cryptography and Network Security |
|  | 1114161C | Advanced Architecture |
|  | 1114161D | Artificial Neural Network |
| **Elective – II (Professional)** | | |
|  | 1114162A | Digital Image Processing |
|  | 1114162B | Embedded System |
|  | 1114162C | Machine Learning |

**SEMESTER: VII**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl No** | **Course Title** | **Code** | **Credit** | **Type** | | |
| **L** | **T** | **P** |
| 1 | Elective-III (Open) | 1\*\*5171 | 4 | 3 | 1 | 0 |
| 2 | Elective- III (Professional) | 1114171 | 3 | 3 | 0 | 0 |
| 3 | Elective- IV (Professional) | 1114172 | 3 | 3 | 0 | 0 |
| 4 | Project – I | 1117372 | 3 | 0 | 0 | 6 |
| 5 | Constitution of India | 1238171 | 2 | 2 | 0 | 0 |
| 6 | Elective- IV (Professional) Lab | 1114272 | 1 | 0 | 0 | 2 |
| 7 | Summer Training | 1117373 | 2 |  | | |
| **Total Credit (PE: 07, OE: 04, PSE: 05, MUS:02)** | | | **18** | **20 ( hrs./Week)** | | |

|  |  |  |
| --- | --- | --- |
| **Elective III (Open)** | | |
| **Sl No.** | **Paper Code** | **Paper Name** |
|  | 1\*\*5171A | Predictive Analytics |
|  | 1\*\*5171B | Cyber Law |
|  | 1\*\*5171C | Web Technology with REST API +Node JS |
| **Elective – III (Professional)** | | |
| **Sl No.** | **Paper Code** | **Paper Name** |
|  | 1114171A | Bioinformatics |
|  | 1114171B | Cloud Application Developer |
|  | 1114171C | Microservice |
|  | 1114171D | Internet of Things |
| **Elective – IV (Professional)** | | |
|  | 1114172A | Soft Computing |
|  | 1114172B | Natural Language Processing |
|  | 1114172C | Distributed System |

**SEMESTER: VIII**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl No** | **Course Title** | **Code** | **Credit** | **Type** | | |
| **L** | **T** | **P** |
| 1 | Elective- IV (Open) | 1\*\*5181 | 4 | 3 | 1 | 0 |
| 2 | Elective- V (Professional) | 1114181 | 3 | 3 | 0 | 0 |
| 3 | Project-II | 1117382 | 6 | 0 | 0 | 12 |
| 4 | Comprehensive Viva | 1117384 | 4 |  | | |
| **Total Credit (PE: 03, OE: 04, PSE: 10)** | | | **17** | **18 ( hrs./Week)** | | |

|  |  |  |
| --- | --- | --- |
| **Elective IV (Open)** | | |
| **Sl No.** | **Paper Code** | **Paper Name** |
|  | 1\*\*5181A | Business Intelligence |
|  | 1\*\*5181B | Sectoral Analytics |
| **Elective- V (Professional)** | | |
| **Sl No.** | **Paper Code** | **Paper Name** |
|  | 1114181A | Data Science |
|  | 1114181B | Wireless and Sensor Network |
|  | 1114181C | Mobile Computing |
|  | 1114181D | Block Chain and Crypto Currency |