|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Course Code** | **Course Category** | **Subject Title** | | **Periods per week** | | | **C** | **Scheme of ExaminationMaximum Marks** | | |
| **L** | **T** | **P** | **Int.** | **Ext.** | **Total** |
| **1** | **19199101** | **BSC** | **Mathematics-I** | | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **2** | **19199102** | **HSMC** | **Communicative English-I** | | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **3** | **19199103** | **BSC** | **Engineering Physics** | | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **4** | **19195104** | **ESC** | **Problem Solving & Programming in C** | | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **5** | **19193175** | **ESC** | **Engineering Graphics** | | **1** | **0** | **3** | **2.5** | **30** | **70** | **100** |
| **6** | **19199196** | **MC** | **Environmental Studies** | | **2** | **0** | **0** | **0** | **30\*** | **-** | **-** |
| **7** | **19199111** | **HSMC** | **Communicative English Laboratory-I** | | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **8** | **19199112** | **BSC** | **Engineering Physics Laboratory** | | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **9** | **19195113** | **ESC** | **Problem Solving & Programming**  **Laboratory with C** | | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **TOTAL** | | | | | **15** | **0** | **12** | **19** | **300** | **500** | **800** |
| **BSC 7.5** | **HSMC**  **4.5** | | **ESC**  **7** | **MC**  **0** |  |  |  |  |  |  |  |

**I YEARI SEMESTER**

**I YEAR II SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **CourseCode** | **Course Category** | **Subject Title** | **Periods per week** | | | **C** | **Scheme of ExaminationMaximum Marks** | | |
| **L** | **T** | **P** | **Int.** | **Ext.** | **Total** |
| **1** | **19199201a** | **BSC** | **Mathematics-II** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **2** | **19199202** | **HSMC** | **Communicative English-II** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **3** | **19199203** | **BSC** | **Applied Chemistry** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **4** | **19192204** | **ESC** | **Basic Electrical &Electronics Engineering** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **5** | **19195205** | **ESC** | **Python Programming** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **6** | **19199296b** | **MC** | **Professional Ethics &Human Values** | **2** | **0** | **0** | **0** | **30\*** | **-** | **-** |
| **7** | **19199211** | **HSMC** | **Communicative English Laboratory-II** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **8** | **19199212** | **ESC** | **Basic Electrical &Electronics Engineering Laboratory** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **9** | **19195213** | **ESC** | **Python Programming Laboratory** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **10** | **19199214** | **BSC** | **Engineering Chemistry Laboratory** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **TOTAL** | | | | **17** | **0** | **12** | **21** | **350** | **550** | **900** |
| **BSC 7.5** | **HSMC**  **4.5** | **ESC**  **9** | **MC**  **0** |  |  |  |  |  |  |  |

**II YEAR I SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Course Code** | **Course Category** | **Subject Title** | **Periods per week** | | | **C** | **Scheme of Examination**  **Maximum Marks** | | |
| **L** | **T** | **P** | **Int.** | **Ext.** | **Total** |
| **1** | **19149301** | **BSC** | **Complex Variables& Transform Techniques** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **2** | **19142302** | **ESC** | **Network Analysis** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **3** | **19140303** | **PCC** | **Electronic Devices &Circuits** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **4** | **19140304** | **PCC** | **Switching Theory & Logic Design** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **5** | **19140305** | **PCC** | **Signals and Systems** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **6** | **19140306** | **PCC** | **Electromagnetic Waves & Transmission Lines** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **7** | **19140387** | **MC** | **Design Thinking & Product Innovation** | **2** | **0** | **0** | **0** | **30\*** | **-** | **-** |
| **8** | **19142311** | **ESC** | **Network Analysis Laboratory** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **9** | **19140312** | **PCC** | **Electronic Devices &Circuits Laboratory** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **TOTAL** | | | | **20** | **0** | **6** | **21** | **280** | **520** | **800** |
| **BSC**  **3** | **PCC**  **13.5** | **ESC**  **4.5** |  |  |  |  |  |  |  |  |

**II YEAR II SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Course**  **Code** | **Course Category** | **SubjectTitle** | **Periods per week** | | | **C** | **Scheme of Examination**  **Maximum Marks** | | |
| **L** | **T** | **P** | **Int.** | **Ext.** | **Total** |
| **1** | **19149401** | **BSC** | **Random variable and stochastic process** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **2** | **19143462**  **19145462**  **1914246219144462**  **19141462**  **19147462**  **19146462** | **OEC** | **Open Elective-I**   * **Robotics** * **Fundamentals of Operating Systems** * **Utilization of Electrical Energy** * **Internet of Things** * **Environmental Pollution & Control** * **Basic Automobile Engineering** * **Elements of Mining Technology** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **3** | **19140403** | **PCC** | **Electronic Circuit Analysis** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **4** | **19140404** | **PCC** | **Analog Communications** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **5** | **19140405** | **PCC** | **Pulse and Digital Circuits** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **6** | **19140411** | **PCC** | **Electronic Circuit Analysis Lab** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **7** | **19140412** | **PCC** | **Pulse and Digital Circuits Lab** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **8** | **19140413** | **PCC** | **Analog CommunicationLab** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **9** | **19140421** | **PR** | **Community Service Oriented Project** | **0** | **0** | **1** | **0.5** | **100** | **-** | **100** |
| **TOTAL** | | | | **15** | **0** | **10** | **20** | **400** | **500** | **900** |
| **BSC**  **3** | **PCC**  **13.5** | **PR**  **0.5** | **OEC**  **3** |  |  |  |  |  |  |  |

**III YEAR I SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Course Code** | **Course Category** | **Subject Title** | **Periods per week** | | | **C** | **Scheme of ExaminationMaximum Marks** | | |
| **L** | **T** | **P** | **Int.** | **Ext.** | **Total** |
| **1** | **19149501** | **HSMC** | **Soft Skills** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **2** | **19143562**  **19145562**  **19142562**  **19144562**  **19141562**  **19147562**  **19146562** | **OEC** | **Open Elective-II**   * **MEMS** * **Information Security** * **Energy Management** * **Digital Image Processing** * **Solid Waste Management** * **Hybrid and Electrical Vehicles** * **Disasters Management in Mining** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **3** | **19140503** | **PCC** | **Linear & Digital IC Applications** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **4** | **19140504** | **PCC** | **Digital Communication** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **5** | **19140505** | **PCC** | **Antenna and Wave Propagation** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **6** | **19140566A**  **19140566B**  **19140566C**  **19140566D** | **PEC** | **Professional Elective-I**   * **Electronic Measurement and Instrumentation** * **Computer Architecture and Organization** * **Information Theory and Coding** * **Artificial Neural Networks and Fuzzy Logic** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |

**III YEAR I SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Course Code** | | **Course Category** | | **Subject Title** | | **Periods per week** | | | **C** | **Scheme of Examination Maximum Marks** | | |
| **L** | **T** | **P** |  | **Int.** | **Ext.** | **Total** |
| **7** | **19149507** | | **MC** | | **Constitution of India** | | **2** | **0** | **0** | **0** | **30\*** | **-** | **-** |
| **8** | **19140511** | | **PCC** | | **Linear IC Applications Laboratory** | | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **9** | **19140512** | | **PCC** | | **DSD& Digital IC Applications Laboratory** | | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **10** | **19140513** | | **PCC** | | **Digital Communications Laboratory** | | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **11** | **19140521/**  **19140581** | | **PR** | | **Mini Project – 1/Study Project/Internship** | | **0** | **0** | **0** | **2** | **100** | **-** | **100** |
| **TOTAL** | | | | | | | **17** | **0** | **12** | **23** | **450** | **550** | **1000** |
| **OEC**  **3** | **PCC**  **13.5** | **PR**  **2** | | **HSMC**  **1.5** | | **PEC**  **3** |  |  |  |  |  |  |  |

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**III YEAR II SEMESTER**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Course**  **Code** | **Course Category** | **Subject Title** | **Periods per week** | | | **C** | **Scheme of Examination**  **Maximum Marks** | | |
| **L** | **T** | **P** | **Int.** | **Ext.** | **Total** |
| **1** |  | **OEC** | **Open Elective - III** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **19143661** | * **Nano Technology** |
| **19145661** | * **Human Computer Interaction** |
| **19142661** | * **Renewable Energy Resources** |
| **19144661** | * **Data Communication** |
| **19141661** | * **Global Environment:**   **Problems &Policies** |
| **19147661** | * **Modern Vehicle Technology** |
| **19146661** | * **Remote Sensing & GIS in Mining** |
| **2** | **19144602** | **PCC** | **Computer Networks** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **3** | **19144603** | **PCC** | **Microprocessors and Microcontrollers** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **4** | **19144604** | **PCC** | **Digital Signal Processing** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **5** | **19144605** | **PCC** | **Microwave Engineering** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |

**III YEAR II SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Course**  **Code** | **Course Category** | **Subject Title** | **Periods per week** | | | **C** | **Scheme of Examination**  **Maximum Marks** | | |
| **L** | **T** | **P** | **Int.** | **Ext.** | **Total** |
| **6** | **19140665A**  **19140665B**  **19140665C**  **19140665D** | **PEC** | **Professional Elective - II**   * **Wireless and Mobile Communication** * **Digital System Design Using Verilog** * **Control Systems** * **Telecommunication Switching Systems and Networks** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **7** | **19140611** | **PCC** | **Digital Signal Processing**  **Laboratory** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **8** | **19140612** | **PCC** | **Microprocessors and Microcontrollers**  **Laboratory** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **TOTAL** | | | | **18** | **0** | **6** | **21** | **280** | **520** | **800** |
| **OEC**  **3** | **PCC**  **15** | **PEC**  **3** |  |  |  |  |  |  |  |  |

**IV YEAR I SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Course Code** | **Course Category** | **Subject Title** | **Periods per week** | | | **C** | **Scheme of Examination**  **Maximum Marks** | | |
| **L** | **T** | **P** | **Int.** | **Ext.** | **Total** |
| **1** | **19149701a**  **19149701b**  **19149701c**  **19149701d**  **19149701e**  **19149701f**  **19149701g**  **19149701h**  **19149701i** | **OEC** | **Open Elective - IV**   * **MEFA** * **Entrepreneurship Qualities for Engineers** * **Principles of Management** * **Financial Management for Engineers** * **Operation Management** * **Digital Marketing** * **Total Quality Management** * **Organizational Behavior** * **Human Resource Management** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **2** | **19140702** | **PCC** | **VLSI Design** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **3** | **19140703** | **PCC** | **Optical Communication** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **4** | **19140704** | **PCC** | **Digital Image Processing** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **5** | **19149795** | **MC** | **Intellectual Property Rights and Patents** | **2** | **0** | **0** | **0** | **30\*** | **-** | **-** |

**IV YEAR I SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Course Code** | **Course Category** | **Subject Title** | **Periods per week** | | | **C** | **Scheme of Examination**  **Maximum Marks** | | |
| **L** | **T** | **P** | **Int.** | **Ext.** | **Total** |
| **6** | **19140706A**  **19140706B**  **19140706C**  **19140706D** | **PEC** | **Professional Elective - III**   * **Bio Medical Instrumentation** * **Embedded System Design** * **Digital Signal Processors and Architecture** * **Wireless Sensor Networks** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **7** | **19140711** | **PCC** | **Microwave Engineering and Optical Communication Laboratory** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **8** | **19140712** | **PCC** | **VLSI Laboratory** | **0** | **0** | **3** | **1.5** | **50** | **50** | **100** |
| **9** | **19140721/**  **19140781** | **PR** | **Mini Project – 2/Internship** | **0** | **0** | **0** | **2** | **100** | **-** | **100** |
| **TOTAL** | | | | **17** | **0** | **6** | **20** | **350** | **450** | **800** |
| **OEC 3** | **PCC**  **12** | **PR**  **2** | **PEC**  **3** |  |  |  |  |  |  |  |

**IV YEAR II SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Course**  **Code** | **Course Category** | **Subject Title** | **Periods per week** | | | **C** | **Scheme of Examination**  **Maximum Marks** | | |
| **L** | **T** | **P** | **Int.** | **Ext.** | **Total** |
| **1** | **19140801A**  **19140801B**  **19140801C**  **19140801D** | **PEC** | **Professional Elective - IV**   * **EMI & EMC** * **Digital IC Design** * **Speech Processing** * **Network Security and Cryptography** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **2** | **19140802A**  **19140802B**  **19140802C**  **19140802D** | **PEC** | **Professional Elective - V**   * **Radar System Engineering** * **Low Power VLSI Design** * **Multimedia Communication** * **Internet of Things** | **3** | **0** | **0** | **3** | **30** | **70** | **100** |
| **3** | **19140841** | **PR** | **Project** | **0** | **0** | **18** | **9** | **80** | **120** | **200** |
| **TOTAL** | | | | **6** | **0** | **18** | **15** | **140** | **260** | **400** |

**PROFESSIONAL ELECTIVES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Professional Electives** | **Communication** | **VLSI & Embedded Systems** | **Signal Processing** | **Networking** |
| **Elective - I** | **Electronic Measurement and Instrumentation** | **Computer Architecture & Organization** | **Information theory and Coding** | **Artificial Neural Networks and Fuzzy Logic** |
| **Elective - II** | **Wireless and Mobile Communication** | **Digital system design using Verilog** | **Control Systems** | **Telecommunication Switching Systems and Networks** |
| **Elective - III** | **Bio Medical Instrumentation** | **Embedded System Design** | **Digital Signal Processors and Architecture** | **Wireless SensorNetworks** |
| **Elective - IV** | **EMI & EMC** | **Digital IC Design** | **Speech Processing** | **Network Security and Cryptography** |
| **Elective - V** | **Radar system Engineering** | **Low Power VLSI Design** | **Multimedia Communication** | **Internet of Things** |

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| --- | --- | --- | --- |
| **OPEN ELECTIVE-I** | **OPEN ELECTIVE-II** | **OPEN ELECTIVE-III** | **OPEN ELECTIVE-IV** |
| **Mech:**  **Robotics** | **Mech:**  **MEMS** | **Mech:**  **Nano Technology** | **MEFA** |
| **CSE:**  **Operating Systems** | **CSE:**  **Information Security** | **CSE:**  **Human Computer Interaction** | **Entrepreneurship Qualities for Engineers** |
| **EEE:**  **Utilization of Electrical Energy** | **EEE:**  **Energy Management** | **EEE:**  **Renewable Energy Resources** | **Principles of Management** |
| **ECE:**  **Internet of Things** | **ECE:**  **Digital Image Processing** | **ECE:**  **Data Communication** | **Financial Management for Engineers** |
| **CE:**  **Environmental Pollution & Control** | **CE:**  **Solid Waste Management** | **CE:**  **Global Environment: Problems & Policies** | **Operations management** |
| **AME:**  **Basic Automobile Engineering** | **AME:**  **Hybrid and Electric Vehicles** | **AME:**  **Modern Vehicle Technology** | **Digital Marketing** |
| **Mining:**  **Elements of Mining Technology** | **Mining:**  **Disaster Management in Mining** | **Mining:**  **Remote Sensing & GIS in Mining** | **Total Quality Management** |
|  |  |  | **Organizational Behavior** |
|  |  |  | **Human Resource Management** |

|  |  |  |  |
| --- | --- | --- | --- |
| **CATEGORY** | **ECE DEPARTMENT ALLOCATED CREDITS** | **AICTE** | **APSCHE** |
| BSC | 21 | 25 | 24 |
| HSMC | 10.5 | 12 | 13 |
| PCC | 67.5 | 48 | 59 |
| ESC | 20.5 | 24 | 24 |
| MC | 0 | 0 | 0 |
| OEC | 12 | 18 | 12 |
| PEC | 15 | 18 | 12 |
| PR | 13.5 | 15 | 13 |
| LC | - | - | 03 |
|  | 160 | 160 | 160 |