**Course structure for 4 year B. Tech. program [Effective from 2013-14]**

# Year I, Semester-I

Branch: Electronics Engineering

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S. No. | Course Code | Subject | Periods | | | Evaluation Scheme | | | | **Subject Total** | **Credit** |
| Sessional | | | Examination |
|  |  | **Theory** | L | T | P | CT | TA | Total | ESE |  |  |
| 1. | IMA101 | Mathematics I | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 2. | IPH101 | Physics | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 3. | IEE101 | Electrical Engineering | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 4. | IME101 | Engineering Mechanics | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 5. | IHU101 | Professional Communication | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 6. | IHU102 | Remedial English | 2 | 0 | 0 |  |  |  | 50 | 50 | Audit |
|  |  | **Practical /Design/Drawing** |  |  |  |  |  |  |  |  |  |
| 7. | IPH151 | Physics | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
| 8. | IHU151 | Language Lab | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
| 9. | IEE151 | Electrical Engineering | 0 | 1 | 3 | 30 | 20 | 50 | 50 | 100 | 2 |
| 10. | IGP101 | General Proficiency | - | - | - | - | - | 50 | - | 50 |  |
|  |  |  |  |  |  |  |  |  |  | 1000 |  |

TA- Teachers assessment ESE- End semester examination CT- cumulative test

Note- Duration of ESE shall be 3 (Three) hours for subjects carrying 100 marks and 2 (Two) hours for those carrying 50 marks

# Year I, Semester-II

Branch: Electronics Engineering

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S. No. | Course Code | Subject | Periods | | | Evaluation Scheme | | | | **Subject Total** | **Credit** |
| Sessional | | | Examination |  |
|  |  | **Theory** | L | T | P | CT | TA | Total | ESE |  |  |
| 1. | IMA 201 | Mathematics II | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 2. | ICY 201 | Chemistry | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 3. | IET 201 | Electronics and Instrumentation Engineering | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 4. | ICS 201 | Concepts of Computer and C programming | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 5. | ICE 201 | Engineering Graphics | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 6. | ICE 201 | Environment and Ecology | 2 | 0 | 0 |  |  |  | 50 | 50 | Audit |
|  |  | **Practical /Design/Drawing** |  |  |  |  |  |  |  |  |  |
| 7. | ICY 251 | Chemistry | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
| 8. | ICS 251 | Computer Lab | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
| 9. | IWS 251 | Workshop Practice | 0 | 1 | 3 | 30 | 20 | 50 | 50 | 100 | 2 |
| 10. | IGP 201 | General Proficiency | - | - | - | - | - | 50 | - | 50 |  |
| 11. |  |  |  |  |  | - | - | - | - | 1000 |  |

TA- Teachers assessment ESE- End semester examination CT- cumulative test

Note- Duration of ESE shall be 3 (Three) hours for subjects carrying 100 marks and 2 (Two) hours for those carrying 50 marks

# Year II, Semester-III

Branch: Electronics Engineering

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S. No. | Course Code | Subject | Periods | | | Evaluation Scheme | | | | **Subject Total** |  |
| Sessional Exam | | | ESE | **Credit** |
|  |  | **Theory** | L | T | P | CT | TA | Total | ESE |  |  |
| 1. | IMA 302 | Computer Oriented Numerical and Statistical Techniques | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 2. | IEE 303 | Networks Analysis and Synthesis | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 3. | IEE 302 | Electrical Measurements and Measuring Instruments | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 4. | IET 301 | Solid State Devices And Circuits | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 5. | IET 302 | Digital Electronics | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
|  |  | **Practical/Training/Project** |  |  |  |  |  |  |  |  |  |
| 6. | IEE 353 | Network Lab | 0 | 0 | 2 | 15 | 10 | 25 | 25 | 50 | 1 |
| 7. | IMA 352 | Numerical Techniques Lab | 0 | 0 | 2 | 15 | 10 | 25 | 25 | 50 | 1 |
| 8. | IET 351 | Solid State Devices and Circuits Lab | 0 | 0 | 2X2 | 30 | 20 | 50 | 50 | 100 | 2 |
| 9. | IGP 301 | General Proficiency | - | - | - | - | - | 50 | - | 50 |  |
|  |  | Total | 15 | 5 | 8 | - | - | - | - | 1000 |  |

# Year II, Semester-IV

Branch: Electronics Engineering

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S. No. | Course Code | Subject | Periods | | | Evaluation Scheme | | | | **Subject Total** |  |
| Sessional | | | Examination | **Credit** |
|  |  | **Theory** | L | T | P | CT | TA | Total | ESE |  |  |
| 1. | ICS 407 | Data Structures | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 2. | IEE 405 | Electrical Machines | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 3. | IET 401 | Electromagnetic Field Theory | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 4. | IET 402 | Signals and Systems | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 5. | IPH 401 | Solid State Physics | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
|  |  | **Practical/Training/Project** |  |  |  |  |  |  |  |  |  |
| 7. | ICS 455 | Data Structures Lab | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
| 8. | IEE 455 | Electrical Machines Lab | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
| 9. | IET 451 | Electronic Workshop and PCB Lab | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
| 10. | IET 452 | Digital Electronics Lab | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
|  | IGP 501 | General Proficiency | - | - | - | - | - | 50 | - | 50 |  |
|  |  | Total | 15 | 5 | 12 | - | - | - | - | 1000 |  |

# Year III, Semester-V

Branch: Electronics Engineering

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S. No. | Course Code | Subject | Periods | | | Evaluation Scheme | | | | **Subject Total** |  |
| Sessional | | | Examination | **Credit** |
|  |  | **Theory** | L | T | P | CT | TA | Total | ESE |  |  |
| 1. | IHU 501 | Industrial Economics and Principle of Management | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 2. | IEE | Automatic Control System | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 3. | IET 501 | Analog Communication | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 4. | IET 502 | Antenna and Microwaves | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 5. | IET 503 | Microprocessors | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
|  |  | **Practical/Training/Project** |  |  |  |  |  |  |  |  |  |
| 6. | IET 551 | Analog Communication Lab | 0 | 0 | 2X2 | 30 | 20 | 50 | 50 | 100 | 2 |
| 7. | IET 552 | Microprocessor Lab | 0 | 0 | 2X2 | 30 | 20 | 50 | 50 | 100 | 2 |
| 8. | IGP 501 | General Proficiency | - | - | - | - | - | 50 | - | 50 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Total | 15 | 5 | 8 | - | - | - | - | 1000 |  |

# Year III, Semester-VI

Branch: Electronics Engineering

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S. No. | Course Code | Subject | Periods | | | Evaluation Scheme | | | | **Subject Total** |  |
| Sessional | | | Examination | **Credit** |
|  |  | **Theory** | L | T | P | CT | TA | Total | ESE |  |  |
| 1. | IEE 603 | Power Electronics | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 2. | IET 601 | Analog Integrated Circuits | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 3. | IET 602 | Digital Communication | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 4. | IET 603 | Advanced Instrumentation | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 5. | IET 604 | VLSI Design | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
|  |  | **Practical/Training/Project** |  |  |  |  |  |  |  |  |  |
| 6. | IEE 653 | Power Electronics Lab | 0 | 0 | 2 | 10 | 10 | 20 | 30 | 50 | 1 |
| 7. | IET 651 | Analog Integrated Circuits Lab | 0 | 0 | 2X2 | 30 | 20 | 50 | 50 | 100 | 2 |
| 8. | IET 652 | VLSI Design Lab | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
| 9. | IGP 601 | General Proficiency | - | - | - | - | - | 50 | - | 50 |  |
|  |  | Total | 15 | 5 | 10 | - | - | - | - | 1000 |  |

Note- 4 to 6 Weeks Industrial Interaction after VI semester exam to be evaluated in VII semester

# Year IV, Semester-VII

Branch: Electronics Engineering

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S. No. | Course Code | Subject | Periods | | | Evaluation Scheme | | | | **Subject Total** |  |
| Sessional | | | Examination | **Credit** |
|  |  | **Theory** | L | T | P | CT | TA | Total | ESE |  |  |
| 1. |  | Open Elective | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 2. | ICS | Computer Network | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 3. | IET 701 | Digital Signal Processing | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 4. | IET 702 | Wireless Communications | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 5. | IET | Elective-I | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
|  |  | **Practical/Training/Project** |  |  |  |  |  |  |  |  |  |
| 6. | IET 751 | Digital Signal Processing Lab | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
| 7. | IET 752 | Project | 0 | 0 | 6 | - | - |  |  | 100 | 2 |
| 8. | IET 753 | Industrial / Practical Training and Report Presentation | 0 | 0 | 3 | - | 50 | 50 | - | 50 | 1 |
| 9. | IGP 701 | General Proficiency | - | - | - | - | - | 50 | - | 50 |  |
|  |  | Total | 15 | 5 | 12 | - | - | - | - | 1000 |  |

# Year IV, Semester-VIII

Branch: Electronics Engineering

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S. No. | Course Code | Subject | Periods | | | Evaluation Scheme | | | | **Subject Total** |  |
| Sessional | | | Examination | **Credit** |
|  |  | **Theory** | L | T | P | CT | TA | Total | ESE |  |  |
| 1. | IHU 801 | Engineering Economics and Management | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 2. | IET | Elective-II | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 3. | IET | Elective-III | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
| 4. | IET 801 | Optical Communication | 3 | 1 | 0 | 30 | 20 | 50 | 100 | 150 | 4 |
|  |  | **Practical/Training/Project** |  |  |  |  |  |  |  |  |  |
| 5. | IET 851 | Seminar | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
| 6. | IET 852 | Communication Lab | 0 | 0 | 3 | 15 | 10 | 25 | 25 | 50 | 1 |
|  | IET 853 | Project |  |  | 10 |  |  |  | 250 | 250 | 4 |
| 7. | IGP 801 | General Proficiency | - | - | - | - | - | 50 | - | 50 |  |
|  |  | Total | 12 | 4 | 16 | - | - | - | - | 1000 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Elective I** |  | **Elective II** |  | **Elective III** |
| IET 711 | Satellite Communications | IET 821 | Telecommunication Switching | IET 831 | Information Theory and Coding |
| IET 712 | VLSI Technology | IET 822 | Digital System Design Using VHDL | IET 832 | Embedded Systems |
| IET 713 | [Optoelectronics](#oe) | IET 823 | VLSI system Design | IET 833 | Architecture and Application of Digital Signal Processors |
| IET 714 | Radar Engineering | IET 824 | Image Processing | IET 834 | Optical Networks |
| IET 715 | Fuzzy Logic with Electronics Engineering Applications | IET 825 | Advanced Semiconductor Devices | IET 835 | Bio Medical Signal Processing |

# List of Open Electives

**1. Fuzzy Logic with Electronics Engineering Applications**

**2. Biomedical Electronics**

**3. Digital Signal Processing**

**4. Mobile Communication**

**5. VLSI System Design**

**6. Satellite Communications**

**7. Image Processing**