**Syllabus to be implemented from the Academic Year 2014-15**

**Electrical Engineering**

**First Year First Semester**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A. THEORY** | | | | | | | | |  |
| Sl. No. | Course Code | Theory | Contact Hours/Week | | | | Credit  Points | |
| L | T | P | Total |
| 1 | HU101 | English Language  & Technical  Communication-I | 2 | 0 | 0 | 2 | 2 | |
| 2 | PH101 | Physics-I | 3 | 1 | 0 | 4 | 3 | |
| 3 | M101 | Mathematics-I | 3 | 1 | 0 | 4 | 3 | |
| 4 | ES101 | Basic Electrical &  Electronic Engineering-I | 3 | 0 | 0 | 3 | 4 | |
| 5 | ME101 | Engineering Mechanics | 3 | 0 | 0 | 3 | 3 | |
| 6 | CS101 | Basic Computation &  Principles of Computer  Programming-I | 3 | 0 | 0 | 3 | 3 | |
| Total of Theory | | |  |  |  | 19 | 18 | |
| **B. PRACTICAL** | | | | | | | | |
| 7 | PH191 | Physics-I Lab | 0 | 0 | 3 | 3 | 2 | |
| 8 | ES191 | Basic Electrical &  Electronic Engineering-I Lab | 0 | 0 | 3 | 3 | 2 | |
| 9 | ME191 | Engineering Drawing &  Computer Graphics Lab | 1 | 0 | 3 | 4 | 3 | |
| 10 | CS191 | Basic Computation &  Principles of Computer  Programming-I Lab | 0 | 0 | 3 | 3 | 2 | |
| Total of Practical | | |  |  |  | 13 | 9 | |
| **C. SESSIONAL** | | | | | | | | |
| 11 | HU181 | Language Laboratory-I | 0 | 0 | 2 | 2 | | 2 |  |
| 12 | XC181 | Extra Curricular  Activities(NSS/NCC/NSO  etc) | 0 | 0 | 2 | 2 | | 1 |  |
| Total of Sessional | | | | | | 4 | | 3 |  |
| Total of Semester | | | | | | 36 | | 30 |  |

**Electrical Engineering**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A. THEORY** | | | | | | | | |  |
| Sl. No. | Course Code | Theory | Contact Hours/Week | | | | Credit  Points | |
| L | T | P | Total |
| 1 | CS201 | Principles of Computer  Programming-(C++) | 3 | 1 | 0 | 4 | 4 | |
| 2 | PH201 | Physics-II | 3 | 1 | 0 | 4 | 3 | |
| 3 | M201 | Mathematics-II | 3 | 1 | 0 | 4 | 3 | |
| 4 | ES201 | Basic Electrical &  Electronic Engineering-II | 3 | 1 | 0 | 4 | 4 | |
| 5 | ME201 | Engineering  Thermodynamics & Fluid  Mechanics | 3 | 1 | 0 | 4 | 3 | |
| 6 | HU201 | English Language  & Technical Communication-II | 2 | 0 | 0 | 2 | 2 | |
| Total of Theory | | |  |  |  | 22 | 19 | |
| **B. PRACTICAL** | | | | | | | | |
| 7 | CS291 | Principles of Computer  Programming-II Lab | 0 | 0 | 3 | 3 | 2 | |
| 8 | PH291 | Physics-II Lab | 0 | 0 | 3 | 3 | 2 | |
| 9 | ES291 | Basic Electrical &  Electronic Engineering-II Lab | 0 | 0 | 3 | 3 | 2 | |
| 10 | ME291 | Workshop Practice Lab | 1 | 0 | 3 | 4 | 3 | |
| Total of Practical | | |  |  |  | 13 | 9 | |
| **C. SESSIONAL** | | | | | | | | |
| 11 | HU281 | Language Laboratory-II | 0 | 0 | 2 | 2 | | 2 |  |
| Total of Sessional | | | | | | 2 | | 2 |  |
| Total of Semester | | | | | | 37 | | 30 |  |

**First Year Second Semester**

**Electrical Engineering**

**Second Year Third Semester**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **THEORY** | | | | | | | |
| Sl. No. | Course  Code | Theory | Contacts/periods Per week | | | | Credits |
| L | T | P | Total |
| 1 | HU 301 | Values & Ethics in Profession | 3 | 1 | 0 | 4 | 3 |
| 2 | M(CS)301 | Numerical Methods | 2 | 1 | 0 | 3 | 2 |
| 3 | EC(EE)301 | Analog Electronic circuits | 3 | 0 | 0 | 3 | 3 |
| 4 | EC(EE)302 | Digital Electronic circuit | 3 | 0 | 0 | 3 | 3 |
| 5 | EE-301 | Electric Circuit theory | 3 | 1 | 0 | 4 | 4 |
| 6 | EE-302 | Field theory | 3 | 1 | 0 | 4 | 4 |
| Total of Theory | | |  |  |  | 21 | 19 |
| 1. **PRACTICAL** | | | | | | | |
| 7 | EC(EE)391 | Analog & Digital Electronic Circuit Lab | 0 | 0 | 3 | 3 | 2 |
| 8 | M(CS)391 | Numerical Methods Lab | 0 | 0 | 3 | 3 | 2 |
| 9 | EE-391 | Electric Circuit Theory Lab | 0 | 0 | 3 | 3 | 2 |
| 10 | HU-381 | Technical Report Writing & Language Laboratory Practice | 0 | 0 | 3 | 3 | 2 |
| Total of Practical | | |  |  |  | 12 | 8 |
| TOTAL OF SEMESTER | | |  |  |  | 33 | 27 |

**Second Year- Fourth Semester\_EE**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **THEORY** | | | | | | | | | |
| Sl. No. | Course  Code | Theory | | | Contacts/periods Per week | | | | Credits |
| L | T | P | Total |
| 1 | M 401 | Mathematics-III | | | 3 | 1 | 0 | 4 | 4 |
| 2 | CH 401 | Basic Environmental Engineering | | | 2 | 1 | 0 | 3 | 3 |
| 3 | CS(EE)401 | Data Structure & Algorithm | | | 3 | 1 | 0 | 4 | 3 |
| 4 | ME(EE)401 | Thermal Power Engineering | | | 3 | 0 | 0 | 3 | 3 |
| 5 | EE-401 | Electric Machine-I | | | 3 | 1 | 0 | 4 | 4 |
| 6 | EE-402 | Electrical & Electronic measurement | | | 3 | 0 | 0 | 3 | 3 |
| Total of Theory | | | | |  |  |  | 21 | 20 |
| 1. **PRACTICAL** | | | | | | | | | |
| 7 | CS(EE)-491 | | Data Structure & Algorithm Lab | 0 | | 0 | 3 | 3 | 2 |
| 8 | ME(EE)481 | | Thermal power Engineering Lab | 0 | | 0 | 3 | 3 | 2 |
| 9 | EE-491 | | Electric Machine-I Lab | 0 | | 0 | 3 | 3 | 2 |
| 10 | EE-492 | | Electrical & Electronic Measurement Lab | 0 | | 0 | 3 | 3 | 2 |
| Total of Practical | | | |  | |  |  | 12 | 8 |
| Total of Semester | | | |  | |  |  | 33 | 28 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **THEORY** | | | | | | | | |
| Sl. No. | Course Code | | Theory | Contacts/periods Per week | | | | Credits |
| L | T | P | Total |
| 1 | HU-501 | | Economics for Engineers | 3 | 0 | 0 | 3 | 3 |
| 2 | EE-501 | | Electric machine-II | 3 | 1 | 0 | 4 | 4 |
| 3 | EE-502 | | Power system-I | 3 | 1 | 0 | 4 | 4 |
| 4 | EE-503 | | Control system-I | 3 | 1 | 0 | 4 | 4 |
| 5 | F.E  EE-504 | | A. Advanced OOPs Using C++  B. Computer Organization  C. Micro-Processor & Microcontroller | 3 | 0 | 0 | 3 | 3 |
| Total of Theory | | | |  |  |  | 18 | 18 |
| 1. **PRACTICAL** | | | | | | | | |
| 6 | EE-591 | Electric Machine-II Lab | | 0 | 0 | 3 | 3 | 2 |
| 7 | EE-592 | Power System-I Lab | | 0 | 0 | 3 | 3 | 2 |
| 8 | EE-593 | Control System-I Lab | | 0 | 0 | 3 | 3 | 2 |
| 9 | EE-594 | A.OOPs Using C++ Lab  B. Computer Organization Lab  C. Microprocessor and Microcontroller Lab | | 0 | 0 | 3 | 3 | 2 |
| 10 | HU581 | Group Discussion | |  |  |  |  | 2 |
| Total of Practical | | | |  |  |  | 12 | 10 |
| Total of Semester | | | |  |  |  | 30 | 28 |
|  | | | | | | | | |

**Electrical Engineering**

**Third Year Fifth Semester**

**Electrical Engineering**

**Third Year Sixth Semester**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **THEORY** | | | | | | | |
| Sl. No. | Course Code | Paper | Contact/periods Per week | | | | Credits |
| L | T | P | Total |
| 1 | HU-601 | Principle of Management | 2 | 0 | 0 | 2 | 2 |
| 2 | EE-601 | Control System-II | 3 | 1 | 0 | 4 | 4 |
| 3 | EE-602 | Power System-II | 3 | 1 | 0 | 4 | 4 |
| 4 | EE-603 | Power Electronics | 3 | 1 | 0 | 4 | 4 |
| 5 | F.E  EE-604 | A. Software Engineering  B. Database Management System  C. OOPs Using Java  D. VLSI & Microelectronics | 3 | 0 | 0 | 3 | 3 |
| 6 | P.E  EE-605 | A. Embedded Systems.  B. Communication Engineering.  C. Digital Signal Processing | 3 | 0 | 0 | 3 | 3 |
| Total of Theory | | |  |  |  | 20 | 20 |
| 1. **PRACTICAL** | | | | | | | |
| 1 | EE-691 | Control System-II Lab | 0 | 0 | 3 | 3 | 2 |
| 2 | EE-692 | Power System-II Lab | 0 | 0 | 3 | 3 | 2 |
| 3 | EE-693 | Power Electronics Lab | 0 | 0 | 3 | 3 | 2 |
| 4 | EE-694 | A. Software Engineering Lab  B. Database Management System Lab  C. OOPs Using Java Lab  D. VLSI & Microelectronics Lab | 0 | 0 | 3 | 3 | 2 |
| Total of Practical | | |  |  |  | 12 | 8 |
| Total of Semester | | |  |  |  | 32 | 28 |

Industrial training conducted after 6th Semester.

**Electrical Engineering**

**Fourth Year Seventh Semester**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **THEORY** | | | | | | | | | | |
| Sl. No. | | Course Code | | Theory | Contacts/periods Per week | | | | Credits | |
| L | T | P | Total |
| 1 | | EE-701 | | Electric drive | 4 | 0 | 0 | 4 | 4 | |
| 2 | | EE-702 | | Utilization of Electric power | 3 | 1 | 0 | 4 | 4 | |
| 3 | | EE-703 | | A. Power system-III  B. Control system-III  C. Electric Machine-III | 3 | 0 | 0 | 3 | 3 | |
| 4 | | P.E  EE-704 | | A. High voltage Engineering  B. Power Plant Engineering  C. Power generation and economics  D. Renewable & Nonconventional Energy | 3 | 0 | 0 | 3 | 3 | |
| 5 | | F.E  EE-705 | | A. Computer Network  B. AI & Soft Computing  C. Digital Communication  D. Electric System Design | 3 | 0 | 0 | 3 | 3 | |
| Total of Theory | | | | |  |  |  | 17 | 17 | |
| 1. **PRACTICAL** | | | | | | | | | | |
| 6 | EE-791 | | Electric Drive Lab | | 0 | 0 | 3 | 3 | | 2 |
| 7 | EE-795 | | Electrical System design-I Lab | | 0 | 0 | 3 | 3 | | 2 |
| 8 | EE-781 | | Seminar on Industrial Training | | 4 wks during 6th -7th  During Semester Break | | | | | 2 |
| 9 | EE-782 | | Project Part-I | |  |  | 6 | 6 | | 4 |
| Total of Practical | | | | |  |  |  | 12 | | 10 |
| Total of Semester | | | | |  |  |  | 29 | | 27 |

**Electrical Engineering**

**Fourth Year Eighth Semester**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **THEORY** | | | | | | | |
| Sl. No. | Course Code | Theory | Contacts/periods Per week | | | | Credits |
| L | T | P | Total |
| 1 | HU-801 | Organizational Behavior/Project Management | 2 | 0 | 0 | 2 | 2 |
| 2 | P.E  EE-801 | A.HVDC transmission  B. Illumination Engineering  C. Energy Management & audit  D. Digital Speech Signal Processing | 3 | 0 | 0 | 3 | 3 |
| 3 | F.E  EE-802 | A. Power Plant Instrumentation & Control  B. Sensors & Transducers  C. Biomedical Instrumentation  D. Process control | 3 | 0 | 0 | 3 | 3 |
|  |  | TOTAL |  |  |  | 8 | 8 |
| 1. **PRACTICAL** | | | | | | | |
| 4 | EE-891 | Professional Elective Lab | 0 | 0 | 3 | 3 | 3 |
| 5 | EE-881 | Grand Viva | 0 | 0 | 0 | 3 | 4 |
| 6 | EE-882 | Project Part-II | 0 | 0 | 12 | 12 | 6 |
|  |  | Total of Practical |  |  |  | 18 | 13 |
|  |  | Total of Semester |  |  |  | 26 | 21 |