Bharath Institute of Higher Education and Research Department of Electrical and Electronics Engineering Curriculum Vs PEO's Mapping

| S.NO | O SUBJECT NAME | | THEORY | LAB | PEO1 | PEO2 | PEO3 | PEO4 | PEO5 | | |
|------|---|--------|--------------|--------------|------|------|------|------|------|--|--|
| | | SEMES | TER - I | | | | | | | | |
| 1 | English –I | BEN101 | ✓ | | | | | X | | | |
| 2 | Mathematics-I | BMA101 | ✓ | | X | | | | | | |
| 3 | Engineering Physics-I | BPH101 | ✓ | | X | | | | | | |
| 4 | Engineering Chemistry - I | BCH101 | ✓ | | X | | | | | | |
| 5 | Fundamentals of Computing and Programming | BCS101 | \checkmark | | X | | | | | | |
| 6 | Engineering Graphics | BME102 | ✓ | | X | | | | | | |
| 7 | Basic Electrical and Electronics Engineering | BEE101 | ✓ | | X | X | | | | | |
| 8 | Computer Practice Laboratory | BCS1L1 | | \checkmark | X | | | | | | |
| 9 | Basic Electrical and Electronic Engineering Practices Lab | BEE1L1 | | \checkmark | X | | | | | | |
| 10 | Yoga | BSS1L7 | | | | | Х | X | X | | |
| | SEMESTER - II | | | | | | | | | | |
| 1 | English - II | BEN201 | ✓ | | | | | X | | | |
| 2 | Mathematics - II | BMA201 | ✓ | | X | | | | | | |
| 3 | Engineering Physics - II | BPH201 | \checkmark | | X | | | | | | |
| 4 | Engineering Chemistry - II | BCH201 | ✓ | | X | | | | | | |
| 5 | French | BFR201 | ✓ | | | | | X | | | |
| 6 | German | BGM201 | \checkmark | | | | | X | | | |
| 7 | Japanese | BJP201 | \checkmark | | | | | X | | | |
| 8 | Korean | BKR201 | \checkmark | | | | | X | | | |
| 9 | Chinese | BCN201 | \checkmark | | | | | X | | | |
| 10 | Tamil | BTM201 | ✓ | | | | | X | | | |
| 11 | Personality Development | BSS201 | ✓ | | | | | X | Х | | |
| 12 | Biology for Engineers | BBT202 | \checkmark | | | | | X | | | |
| 13 | Basic Mechanical Engineering | BME203 | \checkmark | | X | | | | | | |
| 14 | Basic Civil Engineering | BCE201 | \checkmark | | X | | | | | | |
| 15 | Basic Civil & Mechanical Engineering Practices Lab | BCM2L1 | | \checkmark | X | | | | | | |
| 16 | Physics and Chemistry Laboratory | BPC2L1 | | \checkmark | X | | | | | | |
| 17 | NCC/NSS/NSO | BSS2L4 | | | | | | Х | Х | | |

| | SEMESTER - III | | | | | | | | | |
|---|------------------------------------|--------|--------------|--------------|---|---|--|--|--|--|
| 1 | Mathematics-III | BMA301 | \checkmark | | Х | | | | | |
| 2 | Circuit Theory | BEE301 | \checkmark | | Х | X | | | | |
| 3 | Electrical machines – I | BEE302 | \checkmark | | Х | X | | | | |
| 4 | Electron Devices | BEE303 | \checkmark | | Х | X | | | | |
| 5 | Electromagnetic Theory | BEE304 | \checkmark | | Х | X | | | | |
| 6 | Digital Electronics | BEE306 | \checkmark | | Х | X | | | | |
| 7 | Electrical Machines Laboratory - I | BEE3L2 | | \checkmark | Х | X | | | | |
| 8 | Electron Devices Laboratory | BEE3L5 | | \checkmark | X | X | | | | |

| | SEMESTER - IV | | | | | | | | | | |
|----|--|----------|--------------|--------------|---|---|---|-------|---|--|--|
| 1 | Applied Probability and Statistics | BMA401 | \checkmark | | X | | | | | | |
| 2 | Electrical Machines - II | BEE401 | \checkmark | | X | X | | | | | |
| 3 | Electrical Network analysis & Synthesis | BEE402 | \checkmark | | X | X | | | | | |
| 4 | Linear Integrated circuits | BEE403 | \checkmark | | X | X | | | | | |
| 5 | Thermal Engineering & Fluid mechanics | BME405 | \checkmark | | X | | | | | | |
| 6 | Environmental Studies | BCE406 | \checkmark | | | | | | X | | |
| 7 | Technical Seminar - 1 | BEE4S1 | | | | X | X | X | | | |
| 8 | Electrical machines Laboratory – II | BEE4L1 | | ✓ | X | X | | | | | |
| 9 | Linear & Digital Integrated Circuits Laboratory | BEE4L2 | | \checkmark | X | X | | | | | |
| 10 | Thermal Engineering & Fluid mechanics Laboratory | BME4L3 | | \checkmark | X | | | | | | |
| | SEMESTER - V | | | | | | | | | | |
| 1 | Numerical methods | BMA502 | \checkmark | | X | | | | | | |
| 2 | Control System | BEE501 | \checkmark | | X | X | | | | | |
| 3 | Power Electronics | BEE502 | \checkmark | | X | X | | | | | |
| 4 | Electrical Machine design | BEE504 | \checkmark | | X | X | | | | | |
| 5 | Power Generation Systems | BEE505 | \checkmark | | X | X | | | | | |
| 6 | Comprehension I | BEE5C1 | | | | X | X | X | | | |
| 7 | Control System Laboratory | BEE5L1 | | \checkmark | X | X | | | | | |
| 8 | Power Electronics Laboratory | BEE5L2 | | \checkmark | X | X | | | | | |
| | | CORE ELE | CTIVE -I | - | - | | - | - | | | |
| 1 | Electrical Special Machines | BEE015 | \checkmark | | | X | | | | | |
| 2 | Distributed generation and Micro grid | BEE051 | \checkmark | | | X | | | | | |
| 3 | Solid State Relays | BEE012 | \checkmark | | | X | | | | | |
| 4 | Power System Protection and Switch Gear | BEE053 | \checkmark | | | X | | | | | |
| 5 | High Voltage Engineering | BEE013 | \checkmark | | | X | | | | | |
| | | SEMEST | ER - VI | | | | | | | | |

| 1 | Transmission and Distribution | BEE601 | \checkmark | | X | X | | | | | |
|-------------------|---|-----------|--------------|-----|---|---|---|---|---|--|--|
| 2 | Microprocessor and Microcontroller | BEE603 | \checkmark | | X | X | | | | | |
| 3 | Digital Signal Processing | BEE604 | \checkmark | | X | X | | | | | |
| 4 | Measurement and Instrumentation | BEE605 | \checkmark | | X | X | | | | | |
| 5 | Value Education & Professional Ethics | BSS601 | \checkmark | | | | X | | X | | |
| 6 | Microprocessor and Microcontroller Laboratory | BEE6L1 | | ✓ | X | X | | | | | |
| 7 | Measurement and Instrumentation Laboratory | BEE6L2 | | ✓ | X | X | | | | | |
| CORE ELECTIVE -II | | | | | | | | | | | |
| 1 | Electrical Machine Modeling and Analysis | BEE052 | \checkmark | | | X | | | | | |
| 2 | Flexible AC Transmission Systems | BEE016 | \checkmark | | | X | | | | | |
| 3 | Renewable Energy Sources | BEE048 | \checkmark | | | X | | | | | |
| 4 | Advanced Control System | BEE003 | \checkmark | | | X | | | | | |
| 5 | High Voltage DC Transmission | BEE011 | \checkmark | | | X | | | | | |
| | NO | N MAJOR | ELECTIVE | -I | • | • | | • | | | |
| 1 | Instrumentation and Control in power Plant Industries | BEE045 | ✓ | | | X | | | | | |
| 2 | Design of Embedded Systems | BEE049 | ✓ | | | X | | | | | |
| 3 | Robotics and Automation | BEE009 | \checkmark | | | X | | | | | |
| 4 | Principles of communication Engineering | BEC612 | \checkmark | | | X | | | | | |
| 5 | Electronic Integrated Circuits | BEE042 | \checkmark | | | X | | | | | |
| | T | SEMEST | ER - VII | 1 | 1 | | 1 | - | | | |
| 1 | Operations Research for Engineers | BMA701 | ✓ | | X | | | | | | |
| 2 | Power System Analysis | BEE701 | ✓ | | | X | | | | | |
| 3 | Electrical Drives and Control | BEE703 | ✓ | | | X | | | | | |
| 4 | Term paper | BEE7P1 | | | | X | X | X | | | |
| 5 | Power System Using PC Laboratory | BEE7L1 | | ✓ | | X | | | | | |
| 6 | Electrical Drives & Control Laboratory | BEE7L3 | | ✓ | | X | | | | | |
| 7 | In plant Training (End of 6 th Sem- 15 days) | BEE7V1 | | | | X | X | | | | |
| | | CORE ELE | CTIVE -III | | • | • | • | • | | | |
| 1 | Power System Operation and Control | BEE047 | \checkmark | | | X | | | | | |
| 2 | Power Quality Management | BEE044 | \checkmark | | | X | | | | | |
| 3 | Smart Grid | BEE019 | \checkmark | | | X | | | | | |
| 4 | Solar Energy Utilization | BEE043 | \checkmark | | | X | | | | | |
| 5 | Electric and Hybrid Vehicles | BEE033 | \checkmark | | | X | | | | | |
| | NO | N MAJOR I | ELECTIVE | -II | | | | | | | |
| 1 | Bio-Medical Instrumentation | BEE007 | \checkmark | | X | | | | | | |
| 2 | Fuzzy Logic and Neutral Network | BEE014 | \checkmark | | | X | | | | | |
| 3 | Micro Controller Based System Design | BEE027 | \checkmark | | | X | | | | | |
| 4 | Biosensors and Transducer | BBM405 | \checkmark | | | X | | | | | |

| 5 | Automotive Electronics | BEC013 | ✓ | | | Х | | | | | |
|-------------------------|---|--------|--------------|--|---|---|---|---|---|--|--|
| OPEN ELECTIVE - I | | | | | | | | | | | |
| 1 | Engineering Economics and Financial accounting | BBA004 | ✓ | | | | Х | X | X | | |
| 2 | Total Quality Management | BBA008 | \checkmark | | | | Х | X | X | | |
| 3 | Principles of Management and Organizational Behaviour | BBA001 | ✓ | | | | Х | X | X | | |
| 4 | Web Design | BEE031 | \checkmark | | Х | | | | | | |
| 5 | Java Programming | BEE046 | ✓ | | Х | | | | | | |
| SEMESTER - VIII | | | | | | | | | | | |
| 1 | Comprehension II | BEE8C1 | | | | Х | Х | X | | | |
| 2 | Project Work | BEE8P1 | | | | Х | Х | X | | | |
| NON MAJOR ELECTIVE -III | | | | | | | | | | | |
| 1 | Virtual Instrumentation | BEI704 | \checkmark | | | Х | | | | | |
| 2 | Micro Electro Mechanical Systems | BEE026 | \checkmark | | | Х | | | | | |
| 3 | Process control Engineering | BEE050 | ✓ | | | Х | | | | | |
| 4 | Fibre Optics and Laser Instrumentation | BEE022 | \checkmark | | | Х | | | | | |
| 5 | Energy Engineering And Management | BBA005 | ✓ | | | Х | | | | | |
| OPEN ELECTIVE - II | | | | | | | | | | | |
| 1 | Engineering Economics and Cost Analysis | BBA007 | ✓ | | | | Х | X | Х | | |
| 2 | Entrepreneurship Development | BBA002 | ✓ | | | | Х | Х | Х | | |
| 3 | Marketing Management | BBA003 | ✓ | | | | Х | Х | Х | | |
| 4 | Cloud Computing | BEE029 | \checkmark | | Х | | | | | | |
| 5 | Cyber Security | BEE030 | \checkmark | | Х | | | | | | |

| | DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING | | | | | | | | | | | |
|---------------------------|---|----|---|---|----|----|----|---|----|--|--|--|
| CURRICULUM Vs PEO's CHART | | | | | | | | | | | | |
| | SEM 1 SEM 2 SEM 3 SEM 4 SEM 5 SEM 6 SEM 7 SEM 8 Total | | | | | | | | | | | |
| PEO1 | 8 | 7 | 8 | 8 | 7 | 6 | 4 | 2 | 50 | | | |
| PEO2 | 1 | 0 | 7 | 6 | 12 | 16 | 15 | 7 | 64 | | | |
| PEO3 | 1 | 0 | 0 | 1 | 1 | 1 | 5 | 5 | 14 | | | |
| PEO4 | 2 | 10 | 0 | 1 | 1 | 0 | 4 | 3 | 21 | | | |
| PEO5 | 1 | 2 | 0 | 1 | 0 | 1 | 3 | 3 | 11 | | | |

