

EE M.Tech Curriculum
Specialization: Power & Energy Systems

(2022 Batch Onward)

| Course No. | Course Title | Contact Hour | | | Credit | Prerequisite |
|--|--|--------------|---|---|--------|--------------|
| | | L | T | P | | |
| Semester-I | | | | | | |
| EE501 | Core Course-I | 3 | 0 | 0 | 3 | |
| | Power System Interconnection & Control | | | | | |
| EE503 | Core Course-II | 3 | 0 | 0 | 3 | |
| | Advance Power Converter | | | | | |
| MA701 | Core Course-III (Math course) | 3 | 0 | 0 | 3 | |
| | Advanced Engineering Mathematics | | | | | |
| EE5XX | Elective Course-I | 3 | 0 | 0 | 3 | |
| EE5XX | Elective Course-II | 3 | 0 | 0 | 3 | |
| EE551 | Core course Lab | 0 | 0 | 2 | 1 | |
| | Power System Interconnection & Control Lab | | | | | |
| EE5XX | Elective course Lab | 0 | 0 | 2 | 1 | |
| | Any one Lab corresponds to Elective Course-I | | | | | |
| EE555 | Soft Computing Lab (Computing Lab) | 0 | 0 | 2 | 1 | |
| EE505 | Seminar & Technical report writing | 0 | 0 | 2 | 1 | |
| | | 15 | 0 | 8 | | |
| | | 23 | | | 19 | |
| List of Elective Courses for 1st Semester | | | | | | |
| Course No. | Course Title | Contact Hour | | | Credit | Prerequisite |
| | | L | T | P | | |
| Elective Course-I (with Lab) | | | | | | |
| EE511 | Advanced Relaying & Protection | 3 | 0 | 0 | 3 | |
| EE513 | Smart Grid Technology | 3 | 0 | 0 | 3 | |
| EE515 | Computer-Aided Power Systems | 3 | 0 | 0 | 3 | |
| EE517 | Non-Linear Systems & Chaos | 3 | 0 | 0 | 3 | |
| Elective Course-II | | | | | | |
| EE519 | Power System Dynamics | 3 | 0 | 0 | 3 | |
| EE521 | Instrumentation & Control in Energy Systems | 3 | 0 | 0 | 3 | |
| EE523 | FACTS Controller | 3 | 0 | 0 | 3 | |

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|--|---|--------------|---|----|--------|--------------|
| | | L | T | P | | |
| Semester-II | | | | | | |
| EE502 | Core Course-IV | 3 | 0 | 0 | 3 | |
| | Wide area Monitoring System | | | | | |
| EE504 | Core Course-V | 3 | 0 | 0 | 3 | |
| | Renewable & Distributed Energy Systems | | | | | |
| EE5XX | Elective Course-III | 3 | 0 | 0 | 3 | |
| EE5XX | Elective Course-IV | 3 | 0 | 0 | 3 | |
| EE552 | Core course Lab | 0 | 0 | 2 | 1 | |
| | Wide area Monitoring System Lab | | | | | |
| EE5XX | Elective course Lab | 0 | 0 | 2 | 1 | |
| | Any one Lab corresponds to Elective Course-III | | | | | |
| EE556 | Optimization Technique Lab (Computing Lab) | 0 | 0 | 2 | 1 | |
| EE506 | Seminar & Technical report writing | 0 | 0 | 2 | 1 | |
| EE508 | Review work for project | 0 | 0 | 4 | 2 | |
| | | 12 | 0 | 12 | | |
| | | 24 | | | 18 | |
| Non-Credit Compulsory Course: Internship/Mini Project | | | | | | |
| List of Elective Courses for 2nd Semester | | | | | | |
| Course No. | Course Title | Contact Hour | | | Credit | Prerequisite |
| | | L | T | P | | |
| Elective Course-III (With Lab) | | | | | | |
| EE510 | Advanced Control Systems | 3 | 0 | 0 | 3 | |
| EE512 | Advanced Digital Signal Processing | 3 | 0 | 0 | 3 | |
| EE514 | Power Quality Assessment & Remedial Measures | 3 | 0 | 0 | 3 | |
| Elective Course-IV | | | | | | |
| EE516 | Restructured Power System | 3 | 0 | 0 | 3 | |
| EE518 | Power System Reliability | 3 | 0 | 0 | 3 | |
| EE520 | Power System Transients | 3 | 0 | 0 | 3 | |
| EE522 | Smart Grid: Planning, Operation & Security | 3 | 0 | 0 | 3 | |

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|---------------------|--|--------------|---|----|--------|--------------|
| | | L | T | P | | |
| Semester-III | | | | | | |
| EE603 | Technical Report and presentation on mini project/internship work | 0 | 0 | 4 | 2 | |
| EE601 | Project-I | 0 | 0 | 22 | 11 | |
| | | 0 | 0 | 26 | 13 | |
| | | 26 | | | 13 | |
| Semester-IV | | | | | | |
| EE602 | Project-II | 0 | 0 | 28 | 14 | |
| | | | | | | |
| | | 0 | 0 | 28 | 14 | |
| | | 28 | | | 14 | |