

MS AND MSE STUDENT COURSE GUIDE
ELECTRICAL POWER and ENERGY SYSTEMS

CORE COURSES

- **MSE students shall select at least 3 courses this list,**
- **MS students shall select at least 3 courses from this list,**

Note: EEE 591 courses cannot be included in this list, they are undergraduate courses included in the Extension Courses.

1. **EEE 562 – Nuclear Reactor Theory and design**
2. **EEE 563 – Nuclear Reactor System Dynamics and Diagnostic**
3. **EEE 564 – Nuclear Power Operation**
4. **EEE 571 – Power System Transients**
5. **EEE 572 – Advanced Power Electronics**
6. **EEE 573 – Electric Power Quality**
7. **EEE 574 – Comp Solution of Power System**
8. **EEE 575 – Power System Stability**
9. **EEE 576 – Power System Dynamics**
10. **EEE 577 – Power System Operation and Planning**
11. **EEE 579 – Transmission and Distribution**
12. **EEE 598_1 – Renewable Electric Energy Systems**
13. **EEE 598_2 – Electric Energy Markets**
14. **EEE 598_3 – Power Plant Control and Monitoring**
15. **EEE 598_5 – Cyber Security and Privacy in Smart Grid**
16. **EEE 598_6 – Operations Research Applied to Electric Power Systems**

EXTENSION CLASSES

- **MSE students can select at most 2 courses from this list,**
- **MS students can select at most 2 courses from this list,**

1. **EEE 460 – Nuclear Power Engineering**
2. **EEE 463 – Electrical Power Plants.**
3. **EEE 470 – Electric Power Devices.**
4. **EEE 471 – Power System Analysis.**
5. **EEE 472 – Power Electronics & Power Management**
6. **EEE 473 – Electrical Machinery**

OUT OF POWER AREA CLASSES

- **MSE students can select at most 2 courses from this list,**
- **MS students can select at most 2 courses from this list,**

Note: StudentS can select other 400 or 500 level classes with the permission of their supervisor. These are recommended classes for Electric Power and Energy Area students:

1. **IEE 511 – Analysis of Decision Process**
2. **IEE 572 – Design of Engineering Experience**
3. **IEE 574 – Applied Deterministic Operations Research**
4. **IEE 575 – Applied Stochastic Operation Research**
5. **APM 523 – Optimization**
6. **EEE 582 – Linear Systems Theory**
7. **EEE 686 – Nonlinear control**
8. **EEE 587 – Optimal control**
9. **MSE 565 – Structural Materials in Nuclear Power Systems**
10. **Mathematics, Recommended area: Numerical analysis, Statistics and probability and Optimization**

READING AND CONFERENCE CLASSES

- **Both MS and MSE students can take at most one 1 Reading and Conference (EEE 590) or FSE 500-level course.**