Overview

Prepare for a career in B. Tech.

The department, established in 1994 has sufficient number of academic and support staff, committed to research and teaching, and well equipped laboratories and library, meeting the requirements of students.It has Power electronics, Electric Machines and Control Systems, Electrical Measurements and Embedded Systems Laboratories in addition to Electrical Workshop. Each laboratory is equipped with instruments and equipments for teaching, learning and research.

The Department of EEE offers B. Tech. in Electrical & Electronics Engineering. The program provides excellent technical knowledge in the emerging areas of Electrical Engineering. The curriculum is updated from time to time as per the recommendations of the Board of Studies. This is done to ensure that students are upto speed with the latest developments in the area. Distinguished Lectures supplement classroom instruction, as invited experts share their knowledge and experience with students.

Curriculum:

Here is the exact order of subjects along with their codes and credits:

Sem 1:

1. **Technical Communication – (23ENC101) – 3 Credits**
2. **Calculus, Matrix Algebra and Ordinary Differential Equations – (23MAT122) – 4 Credits**
3. **Fundamentals of Electrical Engineering – (23EEE101) – 3 Credits**
4. **Engineering Graphics and 3D Modelling – (23MEE102) – 3 Credits**
5. **Engineering Physics — A / Engineering Chemistry — B – (23PHY105 / 23CHY109) – 3 Credits**
6. **Engineering Physics Lab — A / Engineering Chemistry Lab — B – (23PHY185 / 23CHY188) – 2 Credits**
7. **Manufacturing Practice-B – (23MEE182) – 2 Credits**
8. **Foundations of Indian Heritage – (22ADM101) – 2 Credits**
9. **Mastery Over Mind – (22AVP103) – 1 Credit**
10. **Grand Total Credits: 27**

Sem 2:

Here is the exact order including course codes, titles, and credits:

1. **Complex Analysis and Transforms – (23MAT125) – 4 Credits**
2. **Algorithmic Thinking and Computer Programming – (23CSE115) – 4 Credits**
3. **Engineering Physics — A / Engineering Chemistry — B – (23PHY105 / 23CHY109) – 3 Credits**

4. **Electric Circuits – (23EEE111) – 3 Credits**
5. **Electronic Circuits – (23EEE112) – 3 Credits**
6. **Materials for Electrical Engineering – (23PHY185 / 23CHY188) – 2 Credits**
7. **Electric & Electronic Circuits Lab – (23EEE112) – 2 Credits**
8. **Electrical Engineering Practice Lab — B – (23MEE182) – 2 Credits**
9. **Glimpses of Glorious India – (22ADM111) – 1 Credit**

Grand Total Credits: 24

Sem 3:

1. **Statistics and Foundations of Data Science – (23MAT224) – (3-1-0) – 4 Credits**
2. **Fundamentals of Mechanical Engineering – (23MEE206) – (3-0-0) – 3 Credits**
3. **Signals & Systems – (23EEE201) – (3-1-0) – 4 Credits**
4. **Analog Integrated Circuits – (23EEE202) – (3-0-0) – 3 Credits**
5. **Digital Electronics – (23EEE203) – (3-0-0) – 3 Credits**
6. **Electromagnetic Theory – (23EEE204) – (3-0-0) – 3 Credits**
7. **Introduction to Python Programming – (23EEE205) – (1-0-2) – 2 Credits**
8. **Analog & Digital Electronics Lab – (23EEE281) – (0-0-3) – 2 Credits**
9. **Amrita Value Program 1 – (23LSE201) – (1-0-0) – 1 Credit**
10. **Life Skills for Engineers I – (HUM) – (1-0-2) – 2 Credits**

Grand Total Credits: 24

Sem 4:

1. **Electrical Measurements – (23EEE211) – (3-0-2) – 4 Credits**
2. **Electrical Machines I – (23EEE212) – (3-0-0) – 3 Credits**
3. **Introduction to Machine Learning – (23EEE213) – (3-1-0) – 4 Credits**
4. **Microcontrollers and Applications – (23EEE214) – (3-0-2) – 4 Credits**
5. **Control Systems – (23EEE) – (3-0-2) – 4 Credits *(Course code missing, assumed placeholder: 23EEE)***
6. **Electrical Machines I Lab – (23EEE282) – (0-0-3) – 2 Credits**
7. **Life Skills for Engineers II – (23LSE211) – (1-0-2) – 2 Credits**
8. **Amrita Value Program 2 – (HUM) – (1-0-0) – 1 Credit**

Grand Total Credits: 23

Sem 5:

1. **Digital Signal Processing – (23EEE301) – (3-1-0) – 4 Credits**
2. **Power Electronics – (23EEE302) – (3-0-0) – 3 Credits**
3. **Electrical Machines II – (23EEE303) – (3-0-0) – 3 Credits**
4. **Power Systems – (23EEE304) – (3-1-0) – 4 Credits**
5. **Professional Elective I – (23EEE) – (3-0-0) – 3 Credits** ***(Course code missing, assumed placeholder: 23EEE)***
6. **Professional Elective II – (23EEE) – (3-0-0) – 3 Credits** ***(Course code missing, assumed placeholder: 23EEE)***
7. **Power Electronics Lab – (23EEE381) – (0-0-3) – 2 Credits**
8. **Electrical Machines II Lab – (23EEE382) – (0-0-3) – 2 Credits**
9. **Life Skills for Engineers III – (23LSE301) – (1-0-2) – 2 Credits**
10. **Live-In-Lab – (ENCC) – (variable credit) – [3] Credits**

Grand Total Credits: 24 + [3] ***(Depending on Live-In-Lab credits)***

***Sem* 6:**

Here is the exact order including course codes, titles, L-T-P structure, and credits:

1. **Power System Analysis – (23EEE311) – (3-0-0) – 3 Credits**
2. **Electric Drives and Control – (23EEE312) – (3-0-0) – 3 Credits**
3. **Free Elective – (XXXXXXX) – (2-0-0) – 2 Credits** ***(Course code missing, assumed placeholder: XXXXXXX)***
4. **Professional Elective III – (23EEE) – (3-0-0) – 3 Credits** ***(Course code missing, assumed placeholder: 23EEEXXX)***
5. **Professional Elective IV – (23EEE) – (3-0-0) – 3 Credits** ***(Course code missing, assumed placeholder: 23EEEXXX)***
6. **Power Systems Lab – (23EEE383) – (0-0-2) – 2 Credits**
7. **Electric Drives and Control Lab – (23EEE385) – (0-0-2) – 2 Credits**
8. **Open Lab – (23EEE397) – (0-0-3) – [3] Credits**
9. **Life Skills for Engineers IV – (23LSE311) – (1-0-2) – 2 Credits**
10. **Live-In-Lab – (ENCC) – (Variable Credit) – [3] Credits**
11. **Industry Internship – (ENCC) – (Variable Credit)**

Grand Total Credits: 19 + [3] ***(Depending on Open Lab and Live-In-Lab credits)***

Sem 7:

Here is the exact order including course codes, titles, L-T-P structure, and credits:

1. **Smart Grid & IoT – (23EEE401) – (3-0-2) – 4 Credits**
2. **Professional Elective V – (23EEEXXX) – (3-0-0) – 3 Credits** ***(Course code missing, assumed placeholder: 23EEEXXX)***
3. **Project Phase I – (23EEE498) – (0-0-18) – 6 Credits**
4. **Environmental Science – (23ENV300) – (2-0-0) – 2 Credits**
5. **Indian Constitution – (23LAW300) – (2-0-0) – 2 Credits**

Grand Total Credits: 13

Sem 8:

Here is the exact order including course codes, titles, L-T-P structure, and credits:

1. **Professional Elective VI – (23EEEXXX) – (3-0-0) – 3 Credits** ***(Course code missing, assumed placeholder: 23EEEXXX)***
2. **Professional Elective VII – (23EEEXXX) – (3-0-0) – 3 Credits** ***(Course code missing, assumed placeholder: 23EEEXXX)***
3. **Project Phase II – (23EEE499) – (0-0-18) – 6 Credits**

Grand Total Credits for Semester VIII: 12

Grand Total Credits for the Entire Program: 160

Free Electives:

1. **Financial Management – (23MNC331) – (3-0-0) – 3 Credits**
2. **Supply Chain Management – (23MNC332) – (3-0-0) – 3 Credits**
3. **Marketing Management – (23MNC333) – (3-0-0) – 3 Credits**
4. **Project Management – (23MNC334) – (3-0-0) – 3 Credits**
5. **Enterprise Management – (23MNC335) – (3-0-0) – 3 Credits**
6. **Operations Research – (23MNC336) – (3-0-0) – 3 Credits**
7. **Industrial Engineering – (23MEE321) – (3-0-0) – 3 Credits**
8. **Managerial Statistics – (23MEE322) – (3-0-0) – 3 Credits**

9. **Total Quality Management – (23MEFX7.3) – (3-0-0) – 3 Credits**
10. **Lean Manufacturing – (23MEE324) – (3-0-0) – 3 Credits**
11. **Software Project Management – (23CSE321) – (3-0-0) – 3 Credits**
12. **Financial Engineering – (23CSE322) – (3-0-0) – 3 Credits**
13. **Engineering Economic Analysis – (23CSE323) – (3-0-0) – 3 Credits**