The MTech programme with Power Electronics and Power Systems (PEPS)

The core theory courses are (6 credits each)

1. Linear Algebra and its applications
2. Embedded systems Design (new course)
3. Probability and applications
4. Multivariable Control Systems

The student has to take at least 3 out of these 4 courses to complete the core theory course requirements.

The core lab courses are (3 credits each)

1. Embedded systems Design lab (new course)
2. VLSI Simulations Lab (new course)

The student has to take at least 1 out of these 2 lab courses to complete the core lab course requirements.

Semester wise credits distribution

<table>
<tr><th>Semester 1</th><th>Semester 2</th><th>Semester 3</th><th>Semester 4</th></tr>
<tr><td>18 core theory credits</td><td rowspan="6">30 credits of electives</td><td rowspan="6">MTech Project I
32 credits</td><td rowspan="6">MTech Project II
32 credits</td></tr>
<tr><td>3 core lab credits</td></tr>
<tr><td>4 credits seminar</td></tr>
<tr><td>12 credits electives</td></tr>
<tr><td>P/NP Communications skills course</td></tr>
</table>

List of electives
Autumn (Odd) semester

Basket: Power electronics and power systems	● Photovoltaic system design (new course) ● Power Systems Dynamics and Control

Spring (Even) semester

Basket: Power electronics and power systems	• Advanced Electric Drives • Design of power converters • Microgrid dynamics and control • System Design of Electronic Products • Power system protection • Smart grid • Power systems operation and control • Modeling and control of renewable energy sources • Electric Vehicles: Systems and Components • Advanced power electronics and drives • Power System Protection (3-0-0-6) • Power System Simulation Lab (0-0-3-3) (new course)