

M.Tech. Power Electronics & Drives

M.Tech.



Aims and Objectives

- To expose the students to real-world industry oriented applications and problems in the field of Power Electronics and Drives and get them ready for industry.
- To expose the students to current developments in this area and make them ready to participate in R&D

Academic Curriculum & Courses

The course curriculum, based on credit system, includes core subjects, discipline electives and open electives (from other schools), hands-on laboratory training, mini projects associated with lab and theory courses, industrial visits to related organisations and thesis component, which would enrich students with right skills.

Laboratory core courses are designed so as to go hand-in-hand with theory core courses and to bring in a deeper insight into the concepts learnt in the classroom.

Semester I

Title of the Course	L-T-P-C
➤ Fundamentals of Electrical Drivers	3-0-0-3
➤ Practicum on Electrical Drives	0-0-3-2
➤ Analysis and Design of Power Electronics Converters	3-0-0-3
➤ Practicum on Analysis and Design of Power Electronic Converts.	0-0-3-2
➤ Modeling and Analysis of Electrical Machines.	2-0-2-3
➤ Linear Dynamical Systems	3-0-0-3
➤ Switched Mode Power Conversion	2.5-0.5-0-3
➤ Technical Communication	1-0-0-1
Total Credits	20

Semester II

Title of the Course	L-T-P-C
➤ Advanced Electrical Drives	2.5-0.5-0-3
➤ Practicum on Advanced Electrical Drives	0-0-2-1
➤ Practicum on Digital Control of Power Electronics and Drives	1-0-4-3
➤ Discipline Elective I	3 Credits
➤ Discipline Elective II	3 Credits
➤ Open Elective-I	3 Credits
➤ Open Elective-II	3 Credits
Total Credits	19

Semester III

Title of Course	L-T-P-C
➤ Post Graduate Project I	0-0-30-15
Total Credits	15

Semester IV

Title of Course	L-T-P-C
➤ Post Graduate Project II	0-0-32-16
Total Credits	16

Labs and Facilities Available

- Electronics & Drives
- Electrical Machines Lab
- Real Time Digital Simulator
- Setup of Grid connected Inverters
- DSP based Power Converters
- Installed with Simulation Laboratory Software.
- OPAL-RT Connected to SFIG

Associated Faculty

Course Coordinator :

Narsa Reddy Tummuru

Assistant Professor

Phone: 7807119519

Email: tummuru@iitmandi.ac.in

Faculty Advisor :

Himanshu Misra

Assistant Professor

Phone: 8887861081

Email: himanshumisra@iitmandi.ac.in

Contact us

Dr. Sunny Zafar (Faculty Advisor)

Phone: 01905-267268

Email : advisorcnp@iitmandi.ac.in

Dr .Prem F. Siril (Faculty Co-Advisor)

Phone: 01905-267040

Email: prem@iitmandi.ac.in

Dr. Himanshu Misra (Faculty Co-Advisor)

Phone:01905-267115

Email: himanshumishra@iitmandi.ac.in

Dr. Dericks P Shukla (Faculty Co-Advisor)

Phone: 01905-267147

Email: dericks@iitmandi.ac.in

Dr. Shyam Kumar Masakpalli

(Faculty Co-Advisor)

Phone: 01905-267151

Email: shyam@iitmandi.ac.in

Nimisha N B (CnP Executive)

Phone: 7807625022

E-mail: nimisha@iitmandi.ac.in

Ashutosh Rai (Student Coordinator)

Phone: 8826883256

Email: t19117@students.iitmandi.ac.in

