

Indian Institute of Technology Palakkad

Curriculum



IIT PALAKKAD

Program : Master of Technology
Stream : Power Electronics and Power Systems
Year : 2024 Onwards

In the modern power system, power electronics is a key enabling technology, and understanding of diverse disciplines like power converters, control theory, power conversion techniques and their application in power systems, etc., are therefore essential to all power engineers.

Vision: "Develop and maintain a high-quality teaching and research environment in Power Electronics and Power Systems and to emerge as a centre of excellence for contributing towards society."

The credit requirement of the program is as follows:

Credit requirements :

Category of the course	Credits
Program Major Core (PMC)	21
Program Major Electives (PME)	6
Project Based Courses	23
Open Electives (OE)	6
Humanities and Social Sciences Elective (HSE)	0
Communication Skills	1
Technical Writing	1
Total	58

The list of PMC's with their credits is below :

To guide the students towards arriving at a feasible ordering of courses, a course plan is proposed below. It is not mandatory to follow this plan. Multiple variations of this plan may be possible. However, students need to ensure that the credit requirements as mentioned in the table above are met. While this system allows flexibility for students to take courses in an order different from that mentioned below, the constraint that prerequisites for each course have to be cleared in advance to be able to take it, necessitates a judicious choice to complete the program within the expected time frame.

Semester I

No.	Course code	Course Title	L	T	P	C	Category
1	EE5021	Power Converter Analysis and Design	3	0	0	3	PMC
2	EE5017	Power System Analysis And Operation	3	0	0	3	PMC
3	EE5019	Modelling and Analysis of Electrical Machines	3	0	0	3	PMC
4	EE5022	Synthesis of control	3	0	0	3	PMC
5	EE5xxx	Elective-1	3	0	0	3	PME/OE
6	xxxx	Communication Skills	1	0	0	1	
7	xxxx	Technical Writing	1	0	0	1	
		Semester Total	17	0	0	17	

Semester II

No.	Course code	Course Title	L	T	P	C	Category
1	EE5015	Power Converter modulation, control, and applications	3	0	0	3	PMC
2	EE5103	Power converters design lab	0	0	3	2	PMC
3	EE5105	Power electronics simulation lab	0	0	3	2	PMC
4	EE5101	Power systems simulation lab	0	0	3	2	PMC
5	EE5xxx	Elective-2	3	0	0	3	PME/OE
6	EE5xxx	Elective-3	3	0	0	3	PME/OE
7	EE5xxx	Elective-4	3	0	0	3	PME/OE
		Semester Total	12	0	9	18	

SUMMER TERM

No.	Course code	Course Title	L	T	P	C	Category
1	PE5190	*Internship/Mini-project	-	-	-	0	Project Based Courses
		Semester Total	-	-	-	0	

*PE5190 (Internship/Miniproject) has pass-fail evaluation.

Semester III

No.	Course code	Course Title	L	T	P	C	Category
1	PE5110	Professional Major Project Phase -1	-	-	-	11	Project Based Courses
		Semester Total	-	-	-	11	

Semester IV

No.	Course code	Course Title	L	T	P	C	Category
1	PE5120	Professional Major Project Phase -2	-	-	-	12	Project Based Courses
		Semester Total	-	-	-	12	

A list of approved PME's can be found here.

https://docs.google.com/document/d/1GcluNYxttKcFX2vSAmzhw_5SrOOa22T5ubV9yoBWP3w/edit?usp=sharing