

Curriculum and Syllabi

M. Tech.

in

Power Electronics & Drives



Department of Electrical Engineering, SECS
IIT Bhubaneswar

Curriculum (M.Tech Power Electronics & Drives)

SEMESTER 1

Subject Name	Code	L-T-P	Credit	Contact Hour
Switched Mode Power Conversion	DC-1	3-1-0	4	
Analysis of Electric Drives	DC-2	3-1-0	4	
Elective I	OE 1	3-0-0/3-1-0	3 / 4	
Elective II	DE 1	3-0-0/3-1-0	3 / 4	
Elective III	DE 2	3-0-0/3-1-0	3 / 4	
SMPC Laboratory	Lab-1	0-0-3	2	
Total			19/22	

SEMESTER 2

Subject Name	Code	L-T-P	Credit	Contact Hour
Analysis and Design of Power Converter	DC-3	3-0-0	3	
Advanced Electric Drives	DC-4	3-0-0	3	
Elective IV	DE 3	3-0-0/3-1-0	3 / 4	
Elective V	DE 4	3-0-0/3-1-0	3 / 4	
Electric Drives Laboratory	Lab-3	0-0-3	2	
Power Electronics Systems Laboratory	Lab-2	1-0-3	3	
Thesis Part-1	MTP 1		2	
Total			19/21	

SEMESTER 3

Subject Name	Code	L-T-P	Credit	Contact Hour
Thesis Part II	MTP-II		14	
Total			14	

SEMESTER 4

Subject Name	Code	L-T-P	Credit	Contact Hour
Thesis Part III	MTP-III		14	
Total			14	
Total Credits:			66/71	

Electives (Autumn)	Electives (Spring)
<ol style="list-style-type: none"> 1. Scientific and Technical Writing 2. Modern Control System for Power Engineer 3. Distributed Energy Sources 4. Smart Grid Technology 5. HVDC Transmission System 6. Electric Vehicle Technology – I 7. High Voltage Engineering 8. Applied Probability and Linear Algebra 9. Power System Modelling and Simulation 	<ol style="list-style-type: none"> 1. Intelligent Control System for Power Engineer 2. Pulsed Power Engineering 3. Resonant Converter 4. Modern Digital Signal Processing 5. Industrial Instrumentation 6. Electric Vehicle Technology – II 7. Distribution System Engineering 8. Statistical Signal Processing 9. High Frequency Magnetics 10. Design and Analysis of Electric Machines