

# **Curriculum and Syllabi**

## **M. Tech**

in

## **Power System Engineering**



Department of Electrical Engineering, SECS  
IIT Bhubaneswar

## (Power System Engineering)

### SEMESTER 1

Subject Name	Code	L-T-P	Credit	Contact Hour
Power System Analysis and Operation	DC-1	3-1-0	4	
Distribution Systems Engineering	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	
Power System Analysis and Operation Lab	Lab-1	0-0-3	2	
<b>Total</b>			<b>19/22</b>	

### SEMESTER 2

Subject Name	Code	L-T-P	Credit	Contact Hour
Power System protection	DC-3	3-1-0	4	
Power System Stability and Control	DC-4	3-1-0	4	
Elective IV	DE 3	3-0-0/3-1-0	3/4	
Elective V	DE 4	3-0-0/3-1-0	3/4	
Energy Systems Lab	Lab-2	0-0-3	2	
Computer Methods in Power System Lab	Lab-3	1-0-3	3	
Thesis Part-1	MTP 1	-	2	
<b>Total</b>			<b>21/23</b>	

### SEMESTER 3

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

### SEMESTER 4

Subject Name	Code	L-T-P	Credit	Contact Hour
Thesis Part III	MTP-III		14	
<b>Total</b>			<b>14</b>	
<b>Total Credit:</b>			<b>68/73</b>	

Electives (Autumn)	Electives (Spring)
<ol style="list-style-type: none"> <li>1. Scientific and Technical Writing</li> <li>2. Power System Transients</li> <li>3. High Voltage Engineering</li> <li>4. Smart Grid Technology</li> <li>5. HVDC systems</li> <li>6. Electric Vehicle Technology – I</li> <li>7. Applied Probability and Linear Algebra</li> <li>8. Advanced Digital Signal Processing.</li> <li>9. Renewable Energy Systems</li> <li>10. Numerical Mathematics</li> <li>11. FACTS and Power Quality</li> </ol>	<ol style="list-style-type: none"> <li>1. Advanced Controls for Power Systems</li> <li>2. Power Systems Economics</li> <li>3. Pulse Power Engineering</li> <li>4. Industrial Instrumentation</li> <li>5. Wide Area Measurement Systems</li> <li>6. Electric Vehicle Technology – II</li> <li>7. Advanced Machines Theory</li> <li>8. Power System Optimization</li> <li>9. Grid Integration of Renewable Energy Systems</li> <li>10. Power System Modelling and Simulation</li> </ol>