

COURSE STRUCTURE

for

M. Tech. DEGREE

in

POWER SYSTEMS

(Applicable from the academic session 2024-2025)



Dr. B. C. Roy Engineering College, Durgapur
(An Autonomous Institute)

Approved by: All India Council of Technical Education

Affiliated to: Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly known as: WBUT)

Jemua Road, Durgapur, West Bengal, India, 713206

The BOS of M.Tech (Power Systems) in its first meeting (held in the department of EE (Electrical Engineering) on 6th of November, 2024 has unanimously accepted and approved the two year course structure of M.Tech (Power Systems).

Susanta Datta

Signature of the BoS Chairman

Head
Dept. Electrical Engineering
Dr. B. C. Roy Engineering College
Durgapur



Dr. B. C. Roy Engineering College, Durgapur
An Autonomous Institute
(approved by AICTE & affiliated to MAKAUT)

Programme Code: 133

Programme : M.Tech in Power Systems Engineering

Year (Semester) : 1st Year (1st Semester)

Sl. No.	Broad Category	Course Type	Course Code	Course Name	Contact Hours/Week				Credits
					L	T	P	Total	
A. Theory									
1	ENGG	PC	PSM-101	Advanced Power System	3	1	0	4	4
2	ENGG	PC	PSM-102	High Voltage Engineering	4	0	0	4	4
3	ENGG	PC	PSM-103	HVDC Transmission and Converters	4	0	0	4	4
4	ENGG	PE	PSM-104	Power System Planning and Reliability	4	0	0	4	4
			PSM-105	Power System Apparatus					
			PSM-106	Power Quality and Audit					
5	ENGG	PE	PSM-114	Soft Computing Techniques	4	0	0	4	4
			PSM-115	Smart Grid Technology					
			PSM-116	Condition Monitoring and Power Apparatus					
TOTAL Theory					19	1	0	20	20
B. Practical/Sessional									
1	ENGG	PC	PSM-191	Power System Hardware Lab-I	0	0	3	3	2
2	ENGG	PC	PSM-192	Power System Software Lab-I	0	0	3	3	2
3	ENGG	PC	PSM-193	Seminar-I	0	0	3	3	2
TOTAL Practical/Sessional					0	0	9	9	6
Total of Semester					19	1	9	29	26



Dr. B. C. Roy Engineering College, Durgapur
An Autonomous Institute
(approved by AICTE & affiliated to MAKAUT)

Programme Code: 133

Programme : M.Tech in Power Systems Engineering

Year (Semester) : 1st Year (2nd Semester)

Sl. No.	Broad Category	Course Type	Course Code	Course Name	Contact Hours/Week				Credits
					L	T	P	Total	
A. Theory									
1	ENGG	PC	PSM-201	Power System Operation and Control	3	1	0	4	4
2	ENGG	PC	PSM-202	Power System Instrumentation	4	0	0	4	4
3	ENGG	PC	PSM-203	Advanced Power System Protection	4	0	0	4	4
4	ENGG	PE	PSM-204	Power System Transient	4	0	0	4	4
			PSM-205	Flexible AC Transmission System					
5	ENGG	PE	PSM-214	Advanced Control System	4	0	0	4	4
			PSM-215	Power System Modelling and Simulation					
TOTAL Theory					19	1	0	20	20
B. Practical									
1	ENGG	PC	PSM-291	Power System Hardware Lab-II	0	0	3	3	2
2	ENGG	PC	PSM-292	Power System Software Lab-II	0	0	3	3	2
3	ENGG	PC	PSM-293	Seminar-II	0	0	3	3	2
TOTAL Practical/Sessional					0	0	9	9	6
Total of Semester					19	1	9	29	26



Dr. B. C. Roy Engineering College, Durgapur
An Autonomous Institute
(approved by AICTE & affiliated to MAKAUT)

Programme Code: 133

Programme : M.Tech in Power Systems Engineering

Year (Semester) : 2nd Year (1st Semester)

Sl. No.	Broad Category	Course Type	Course Code	Course Name	Contact Hours/Week				Credits
					L	T	P	Total	
A. Theory									
1	HUM	PC	PSM-301	Introduction to Management	4	0	0	4	4
2	ENGG	PE	PSM-302	Non-Conventional Energy	4	0	0	4	4
			PSM-303	Energy Management					
TOTAL Theory					8	0	0	8	8
B. Practical/Sessional									
1	ENGG	PC	PSM-381	Pre-Submission Defense of Dissertation	0	0	0	0	4
2	ENGG	PC	PSM-382	Dissertation Part-I	0	0	0	0	10
TOTAL Practical/Sessional					0	0	0	0	14
Total of Semester					8	0	0	8	22



Dr. B. C. Roy Engineering College, Durgapur
An Autonomous Institute
(approved by AICTE & affiliated to MAKAUT)

Programme Code: 133

Programme : M.Tech in Power Systems Engineering

Year (Semester) : 2nd Year (2nd Semester)

Sl. No.	Broad Category	Course Category	Course Code	Course Name	Contact Hours/Week				Credits
					L	T	P	Total	
A. Practical/Sessional									
1	ENGG	Major	PSM-481	Dissertation (Completion)	0	0	0	0	14
2	ENGG	Major	PSM-482	Post-Submission Defense of Dissertation	0	0	0	0	8
3	ENGG	Major	PSM-483	Comprehensive Viva-Voce	0	0	0	0	4
TOTAL Practical/Sessional					0	0	0	0	26
Total of Semester					0	0	0	0	26