



National Institute of Technology Meghalaya
An Institute of National Importance

CURRICULUM

Programme	Master of Technology in Power & Energy Systems	Year of Regulation	2018-19
Department	Electrical Engineering	Semester	I
Course Code	Course Name	Pre-Requisite	Credit Structure
			L T P C
EE 551	Power System Interconnection & Control Lab	---	0 0 2 1
			Marks Distribution
			Continuous Exam Total
			70 30 100

SYLLABUS

No.	Content	Hours
I	STUDY AND ANALYSIS OF 3 -PHASE FAULT ANALYSIS OF LONG TRANSMISSION LINES	02
II	STUDY AND ANALYSIS OF 3 -PHASE FAULT ANALYSIS OF SHORT / MEDIUM TRANSMISSION LINES	02
III	STUDY AND ANALYSIS OF 3 -PHASE FAULT ANALYSIS OF TRANSMISSION LINES	02
IV	STUDY AND ANALYSIS OF POWER TRANSMISSION LINES WITH STATIC VAR COMPENSATOR	02
V	DETERMINATION OF NEGATIVE SEQUENCE / POSITIVE SEQUENCE IMPEDANCE OF ALTERNATOR	02
VI	DETERMINATION OF SUBTRANSIENT DIRECT AXIS (X_d'') AND QUADRATURE AXIS (X_q'') SYNCHRONOUS REACTANCE	02
VII	STUDY OF HVDC TRANSMISSION LINE	02
VIII	SYMMETRICAL AND ASYMMETRIC FAULTS IN TRANSMISSION LINE	02
IX	CALCULATION OF ZERO SEQUENCE IMPEDANCE OF ALTERNATOR	02
X	MODELING OF 2-AGC SYSTEM AND STUDY THE DYNAMIC RESPONSE	02
Total Hours		20

Essential Readings

1. D P Kothari, I J Nagrath, "Modern Power System Analysis", McGraw Hill, 1st Edition, 1998.
2. P Kundur, "Power System Stability and Control", Tata McGraw-Hill, 2006.

Supplementary Readings

1. A J Wood, B F Wollenberg, "Power Generation, Operation and Control", 3rd Edition, John Wiley, 2013