

# Maulana Abul Kalam Azad University of Technology, West Bengal

(Formerly West Bengal University of Technology)

## Syllabus for B. Tech in Electrical Engineering

(Applicable from the academic session 2018-2019)

Name of the course	POWER SYSTEM-I LABORATORY
Course Code: PC-EE 592	Semester: 5 <sup>th</sup>
Duration: 6 months	Maximum marks:100
Teaching Scheme	Examination scheme:
Theory: 0 hr/week	Continuous Internal Assessment:40
Tutorial: 0 hr/week	External Assessment: 60
Practical: 2 hrs/week	
Credit Points:1	
<b>Laboratory Experiments:</b>	
1.	Determination of the generalized constants A,B, C, D of long transmission line and regulation of a 3- $\Phi$ transmission line model
2.	Study of distribution system by network analyzer.
3.	Measurement of earth resistance by earth tester.
4.	Determination of dielectric strength of insulating oil.
5.	Determination of breakdown strength of solid insulating material
6.	Determination of parameter of 3- $\Phi$ transmission line model by power circle diagram
7.	Study of different types of insulator.
8.	Study of active and reactive power control of alternator.
9.	Study and analysis of an electrical transmission line circuit with the help of software
10.	Determination of dielectric constant, tan delta, resistivity of transformer oil.

**Institute may develop experiments based on the theory taught in addition to experiments mentioned.**

**Course outcome:** After completion of this course, the learners will be able to

1. identify appropriate equipment and instruments for the experiment.
2. test the instrument for application to the experiment.
3. construct circuits with appropriate instruments and safety precautions.
4. validate different characteristics of transmission line.
5. determine earth resistance, dielectric strength of insulating oil, breakdown strength of solid insulating material and dielectric constant of transformer oil.
6. analyze an electrical transmission line circuit with the help of software
7. work effectively in a team

**Special Remarks:** The above-mentioned outcomes are not limited. Institute may redefine outcomes based their program educational objective.