SEMESTER	***DEPARTMENT***	***COURSE TITLE***
Sixth	*Telecommunications Engineering*	*Transmission Lines Lab.*
COURSE CODE	***HOURS*** 3	***COURSE SPECIFICATIONS***
ET610	***UNITS*** 1	*Practical Content*

1. ***Two-wire and coaxial transmission lines:***

- Resistance, Capacitance, Inductance, and Conductance per unit length measurements.
- Calculation of characteristic impedance for different values of operation frequency.
- Attenuation and dispersion measurements for different lengths of a transmission line.
- Attenuation versus frequency measurements.
- SWR measurement for different values of load termination.
- Reflection coefficient measurement for different values of load termination.
- Voltage and current distribution measurements for different values of load termination.
- Wavelength measurement.
- Phase velocity and phase delay calculations.
- Properties of $n\lambda/2$ lines.

2. ***Microstrip transmission lines:***

- Measurement of reflection coefficient and SWR.
- Return loss, insertion loss, and line loss measurements.
- Measurement of effective dielectric constant.