EEPW 3150	POWER DISTRIBUTION SYSTEMS	3 Credit Hours
Prerequisites	**EEPW 2252**	
Goal	This course shall give an introduction to distribution system, an overview of role of computers in distribution system planning, Load modeling and characteristics. They will also get an insight to the coincidence factor, contribution factor, loss factor etc.	

Objectives	**Outcomes**
This course should enable the student to : 1. Design distributions feeders 2. Locating the substations 3. Voltage drop and power –loss calculations 4. formulate the objective of distribution system protection 5. Coordination of protective devices 6. compensation for power factor improvement	A student who completes the course should be able to: 1. Design radial and loop types of primary feeders, voltage levels, feeder loading, feeder loading; basic design practice of the secondary distribution system. 2. Design ratings of distribution substation; derive benefits through optimal location of substations. 3. Voltage drop and power –loss calculations: Derivation for voltage drop and power loss in lines, manual methods of solution for radial networks, thee phase balanced primary lines. 4. Fault calculations. Protective devices: Principle of operation of Fuses, circuit reclosure, line sectionalizes and circuit breakers. 5. Coordination of protective devices: general Coordination procedure. 6. Capacitive compensation for power factor control. 7. Different types of power capacitors , shunt and series capacitors, effect of shunt capacitors(fixed & switched) 8. Power factor correction, capacitor allocation. Economic justification. Procedure to determine the best capacitor location.