



العدد :

التاريخ : / / ٢٠

Course number and name	EE 3600: Antennas and Wave Propagation
Credits and contact hours	3 credits and 4 hours
Course coordinator	
Textbook	W. H. Hayt, Jr. and J. A. Buck, Engineering Electromagnetics. McGraw Hill, Eighth Edition (2012)
Course Information	a. Prerequisites: EE 2600 & EE2610 Electromagnetic Fields I&II b. Selective Elective
Topics to be covered	-Plane electromagnetic waves, Lossless and lossy TEM waves - Polarizations, Normal and oblique incidence at PEC and dielectric boundaries -Total reflection and total transmission with applications in fiber optics -Transmission Lines, Single lossless and lossy transmission lines (frequency domain),-Transient analysis on transmission lines (time domain), Smith chart, Transmission line matching: single stub match, lambda/4 transformer, Coupled multi-transmission lines, -Matrix-vector telegrapher's equations -Waveguides and Resonators, TM and TE modes, Dielectric waveguides, Rectangular cavity resonators: modes and quality factor -Antennas and Radiation systems, Hertz electric and magnetic dipoles, Linear antennas, Aperture antennas, Antenna parameters: near-field, measurements, Antenna arrays -Transmit-receive system -Radar equation