Wireless Propagation and Remote Sensing

ECE 5010

Credit Hours:
3.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate (5000-8000 level)

Course Components:
Lecture

Course Description:
Practical methods for predicting tropospheric, groundwave, and ionospheric propagation, including refraction, reflection, and extinction effects. Study of remote sensing systems and their applications.

Prerequisites and Co-requisites:
Prereq: 3010, or Grad standing in Engineering, Biological Sciences, or Math and Physical Sciences.

Course Goals / Objectives:
- Master analytical and empirical methods for predicting the propagation of electromagnetic waves over a wide range of frequencies
- Be competent in basic remote sensing concepts

Course Topics:
- Review of electrodynamics
- Direct transmission and satellite communications
- Propagation through reflection and refraction
- Propagation over irregular terrain
- Groundwave propagation
- Ionospheric effects on propagation
- Remote sensing systems and applications
Designation:
Elective