



International Master's Program in Telecommunication Engineering

## **Course Name: Electromagnetic Theory 電磁理論**

### **Course Objects:**

To strength students' further understanding of electromagnetic wave propagations. Theories and theorems are introduced to the solving of problems such as antenna radiation and scattering. Electromagnetic fields are expanded in terms of wave functions, depending on the coordinate system, to facilitate the numerical solutions of the radiation and scattering problems.

### **Course Syllabus:**

1. Introduction
2. Basic Concepts of Electromagnetics
3. Plane Wave Propagation
4. Fundamental Theorems
6. Plane Wave Functions
7. Cylindrical Wave Functions
8. Spherical Wave Functions