EE579-PMP **Spring 2016** **1/25/2016**
Title: Antennas for Modern Wireless Devices

Instructor: Yasuo Kuga 543-0478, ykuga@u.washington.edu
Class time: Monday 6 - 9 pm
Office hours: TBD
TA: TBD
Classroom: TBD

Textbook

Lecture notes and handout
Microstrip and Printed Antenna Design, By Randy Bancroft

References:

Electromagnetic Waves and Antennas, S. J. Orfanidis, 2004 (free, online)
Microwave Engineering, D. Pozar
Antenna theory and design Stutzman and Thiele 2nd ed

Computer Software: Ansoft Designer or HFSS (Remote Access)
Located in Rm351/419

Course Outline:

This course covers the analysis and design of antennas which are often used in modern communication devices and radars. Students will be exposed to the antenna design methods and measurement techniques.

Course materials:

1. Introduction to antennas
   Definitions and radiation patterns
2. Review of TL and cavity resonators
3. Introduction to microstrip antennas (MSA)
4. Green's function technique applied for MSA
5. Circularly polarized MSA
6. Broadband and dual-band MSA
7. Array antennas and feeding network
8. Inverted-F antennas
9. Meanderline dipole and monopole antennas
10. Tapered slot antennas
11. Printed Yagi and bowtie antennas
12. Far- and near-fields antenna measurement techniques

Project and homework:

Several antenna design projects will be assigned.