

Course Title Antenna Engineering

Course Number LE428

Credit Hours 45 hours/ 1 semester

Prerequisites LE220

Instructor Dr. Pongsak Mahachoklertwattana

Title Lecturer

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Course Descriptions Basic definitions and theorems; isotropic point source; power and field patterns; directivity and gain; radiation impedance; wave polarization; radiation from current elements; radiation properties of wire antenna; linear array antenna; Uda-Yagi antenna and log-periodic antenna; aperture antenna; microstrip antenna; antenna measurement.

Tentative Course Schedule Course overview (1 week) Fundamental Parameters of Antennas (2) Basic antenna analysis procedure (1) Wire antenna (2) Loop antenna (1) —**MIDTERM EXAM**— Linear array antenna (2) Antenna Synthesis (1) Aperture antennas (1) Horn Antennas (1) Microstrip antennas & miscellaneous antennas (1) Antenna measurement (1) Presentations (1)

Textbook and Reference

[1] Balanis, Constantine A. *Antenna Theory* THIRD EDITION, John Wiley & Sons, Inc., 2005

[2] Kraus, John D. *Antennas* SECOND EDITION, McGraw-Hill, 1988

[3] Stutzman, Warren L., Thiele, Gary A. *Antenna Theory and Design* THIRD EDITION, John Wiley & Sons, Inc., 2013

[4] Lecture Slides

Grading

Attendance & Assignments	10%
Midterm	40%
Comprehensive Final	40%
Self-Study and Presentation	10%
Total	100%