

Course Title Microwave Engineering

Course Number LE333

Credit Hours 45 hours/ 1 semester

Prerequisites LE220 (Electromagnetic Theory)

Instructor Dr. Pongsak Mahachoklertwattana

Title Lecturer

Office Location Research Building 418-5

Email mpongsak@engr.tu.ac.th

Course Descriptions Microwave transmission lines; s-parameters; microwave network analysis; microwave resonators; power dividers and directional couplers; microwave filters; microwave systems and applications; microwave measurement.

Course Schedule

WEEK	Contents
1	Introduction, Review of Electromagnetic Theory
2,3	Transmission Line Theory
4,5	Transmission Lines and Waveguides
6,7	Microwave Network Analysis
8	MIDTERM EXAM
9,10	Impedance Matching and Tuning
11	Microwave Resonators
12,13	Power Dividers and Directional Couplers
14,15	Microwave Filters
16	Introduction to Microwave Systems and Microwave Measurement

Textbook and Reference

[1] **David M. Pozar.**, "*Microwave Engineering*," 4th Ed., John Wiley & Sons, Inc., 2012

[2] **Robert E. Collin**, "*Foundations for Microwave Engineering*," 2nd Ed., Wiley-IEEE Press, 2000

[3] **Peter A. Rizzi**, "*Microwave Engineering Passive Circuits*," Prentice-Hall, 1988.

[4] Lecture Notes

Grading

Assignments / Project	10%	Class Attendance	10%
Midterm	40%	Comprehensive Final	40%

Course URL: <http://www.pongsak.ece.engr.tu.ac.th/le333/>