

# EEE 6374 RF Devices and Circuits

**Credits:** 3 credits

**Textbook, Title, Author, and Year:** RF Circuit Design: Theory and Application, 2nd ed., Ludwig & Bogdanov, Prentice Hall, 2009

**Reference Materials:** RF Circuit Design: Theory and Application, 2nd ed., Ludwig & Bogdanov, Prentice Hall, RF Devices & Circuits Class-Notes, Rev. '13, J. Bagby, available on Blackboard

## **Specific Course Information**

**Catalog Description:** RF filter design, active RF components and modeling, matching and biasing networks, RF oscillators and mixers, use of RF CAD software for system simulation.

**Prerequisites:** Prerequisites: EEL 3470 Electromagnetic Fields & Waves

**Specific Goals for the Course:** RF filter design, active RF components and modeling, matching and biasing networks, RF oscillators and mixers, use of RF CAD software for system simulation.

## **Brief list of topics to be covered:**

1. Transmission line analysis and the Smith chart
2. Single- and multi-port RF networks
3. RF filter design
4. Active RF components and modeling
5. Matching and biasing networks
6. Oscillators, mixers, and frequency synthesizers
7. CAD simulation of RF devices and circuits