

Course Topics – EEE 598 RF Transmitters and Power Amplifiers

Catalog Description: Design principles of RF power amplifier circuits and transmitter architectures with emphasis towards wireless applications. Class A, B, A/B, C, F, and switching mode operation. Doherty and supply modulation architectures. Load pull and high power packaged devices/PAs.

Prerequisites: EEE 433/591 Analog Integrated Circuits, EEE 445/591 Microwave Engineering, and EEE 524 RF Communications Transceiver Design

Course Topics:

- Overview of Transmitters/Power Amplifiers For Wireless Networks
- RF Impedance Matching
- Key Concepts, Definitions, and Figures of Merit (FOM) for PAs
- Brief Introduction to Active Device Models Used In PA Analysis
- Class A Power Amplification
- Class B and A/B Power Amplification
- Class C Power Amplification
- Brief Introduction to Switching Mode Power Amplification
- Class F Power Amplification
- Load Pull & High Power Packaged Devices
- Doherty PA Architecture
- Introduction to Supply Modulation PA Architectures