**Course Topics**

**EEE 524: Communication Transceiver System and Circuits Design**

**Prerequisites:** EEE 433/591 and EEE 445. Basic knowledge in linear systems, analog/digital circuits, and basic communication theory.

**Catalog Course Description:** Communication transceivers and radio frequency system design; fundamentals of receiver circuits including LNA, mixer, and filter design at RF and IF frequencies.

**Course Topics:**

‐ RF integrated circuit (IC) processes and design kits

‐ Circuit Noise

‐ Introduction to Mixers and LNAs

‐ Digital Modulation, Spectral

‐ Intersymbol Interference

‐ Gain Compression, Harmonic Distortion (HD), Intermodulation (IMD)

‐ Efficiency, Constellations

‐ EVM  
- ACLR/ACPR