EE 293 Spring 2012
Advanced Topics in Electrical Engineering – Applications of Electromagnetism in Selected Contemporary Topics

Potential Topics:
- Plasmonics for light localization and guiding
- Negative refractive index and metamaterials
- Metal optics and optical antennas
- Near-field optics, NSOM
- THz technology
- GaN based device and circuit design
- Inductive RFID coupling

- Maxwell equations
- Waves and fields
- Dipole radiation
- Scattering and diffraction
- Magnetism
- Waveguides (more on metal and plasmonic)

- Will cover fundamentals EM in class
- Each student will work in depth on a selected topic