

## **CEEN0934 The final frontier of the electromagnetic spectrum: the Terahertz Gap**

Instructor: Rajind Mendis, Assistant Professor of Engineering

Dates & Time: July 17, 2017 - July 21, 2017; 12:15 PM - 3:05 PM

Lecture: Approximately 1.5 hours, Location Barus & Holley 155

Lab: Approximately 1.5 hours, Location Barus & Holley 031

Reading Material: Handouts will be given. No text book.

Course Schedule:

### Day 1

Lecture: Introduction to scientific research and the Terahertz (THz) Gap.

Lab: Introduction to the THz Science & Technology Laboratory, associated equipment and components.

### Day 2

Lecture: Basic concepts related to electromagnetic-wave theory and signal analysis.

Lab: Start setting-up an experimental THz system.

### Day 3

Lecture: Basic concepts related to the parallel-plate waveguide.

Lab: Complete setting-up the THz system.

### Day 4

Lecture: Basic concepts related to the refractive index and artificial dielectrics.

Lab: Test artificial-dielectric devices using the THz system.

### Day 5

Lab: Continue testing with the THz system.

Lecture: Discuss research articles & quiz.