

## Engs 672: Remote Sensing and the Environment

### SCHOOL OF ENGINEERING

This course introduces the fundamental principle and applications of remote sensing of terrestrial and aquatic environments. The course starts with principles of electromagnetic radiation, its interaction with the atmosphere, and its interaction with Earth's surface. Next is an overview of various remote sensing data, including different sensor platforms and data characteristics. There are three separate units that focus on applications of remote sensing of land cover, land use, and aquatic environments. These are followed by a review of methods for transforming and classifying spectral data, including principal components analysis, supervised and unsupervised algorithms, and multispectral and multi-temporal transformations. Next is a discussion of detection of environmental change and a module on accuracy assessment that focuses on how to assess the quality of remote sensing analyses and their results. Finally, the volume concludes with several units on real life case studies around the world and the use of remote sensing to evaluate them.

3 Credits

### **Prerequisites**

- Student must be admitted to Certificate in Geographic Info Systems program.

### **Instruction Type(s)**

- Indiv Based: Individual Based for Engs 672
- Indiv Based: Online Program for Engs 672

### **Subject Areas**

- [Engineering, Other](#)

