

## **Advanced Webinar: Land Cover Classification with Satellite Imagery**

Tuesdays, January 31 and February 7, 2017

12:00 – 4:00 p.m. EST (UTC-5)

Land classification is an important first step to assessing land cover and land use. This advanced webinar will provide lectures and hands-on activities focused on using satellite imagery for land cover classification. In two, four hour sessions, attendees will learn how to acquire Landsat imagery, display it in an open-source Geographic Information System (GIS), analyze spectral signatures of land cover types, and conduct a supervised land cover classification. Both sessions will feature a lecture, followed by time for participants to complete hands-on exercises. Instructors will remain online to answer questions and provide guidance and feedback. In addition to the exercises, there will be one online homework assignment. Completion of the homework and live attendance at both lectures are required to receive a certificate of completion.

### **Prerequisites:**

- Complete Sessions 1 & 2A of [Fundamentals of Remote Sensing](#), or equivalent experience
- [Download and install QGIS](#) and all accompanying software
  - This advanced training will use QGIS software, and although previous experience with this software is not required, some experience with geospatial software will be helpful. We **strongly** recommend you open QGIS and ensure the software is working prior to starting the webinar
  - Download and install the QGIS Plugin Semi-Automatic Classification Plugin
  - Complete the *Introduction to QGIS* exercise or have equivalent experience
- Complete the *Downloading Landsat Imagery* exercise

### **Session One: Introduction to Land Cover Classification and QGIS**

January 31, 2017

- Overview of Land Cover Classification (Lecture)
- Converting Landsat Imagery from Digital Numbers to Reference Values (Exercise)
- Creating a Supervised Land Cover Classification (Exercise)

### **Session Two: Improving a Supervised Land Cover Classification**

February 7, 2017

- Improving a Supervised Land Cover Classification (Lecture)
- Analyzing Training Sites to Improve the Supervised Classifications (Exercise)
- Creating an Improved Supervised Land Cover Classification (Exercise)

- Comparing Unsupervised and Supervised Classification (Discussion)