

TRAINING SECTION
JUNE 16-27, 2014
STEINMAN HALL ROOM 424

MATLAB Course

Instructor: Ali Zahraee

This short but intense course is designed to introduce environmental oriented students to the basic functionality and programming environment of MATLAB. The MATLAB environment has become an industry standard in science and engineering due its versatility and relatively simple syntax. During these two weeks, students will be exposed to the basic programming tools and how this can be applied to analyze relevant engineering problems. In addition, a strong focus will be made on the development and illustration of basic statistical tools critical for data analysis as well as exposure to different graphics and mapping tools to assist in the visualization and subsequent analysis of problems. Finally, students will have the opportunity to work with real data sets from both ground based and satellite measurements.

GIS Course

Instructor: TBD

This course covers fundamental GIS concepts as well as how to query a GIS database, manipulate tabular data, edit spatial and attribute data, and present data clearly and efficiently using maps and charts. The students will learn the concepts of data sets, map layers, area measurement, scale, and symbology. These concepts, along with the learned knowledge of GIS mapping basics, projections, and layers allows the attendee to utilize GIS tools and make maps in the workplace with confidence.

Remote Sensing Course

Instructor: Brian Vant-Hull

This short course will cover the concepts, vocabulary and methods used in remote sensing. Scattering, absorption, optical depth and thermal radiation will be treated with enough mathematics for back of the envelope calculations. These concepts will be applied to weather radar, sunphotometer, lidar and satellite measurements. Techniques of surface classification will be included.

SCHEDULE

Week 1 (June 16-20)

10:00 AM – 12:00 PM Remote Sensing

1:00 PM – 3:00 PM MATLAB

3:00 PM – 5:00 PM REU (work on research projects/Labs) and ESES (Course project/homework Lab 424)

Week 2 (June 23-27)

10:00 AM – 12:00 PM GIS

1:00 PM – 3:00 PM MATLAB

3:00 PM – 5:00 PM REU (work on research projects/Labs) and ESES (Course project/homework Lab 424)