To apply or for more information, visit our website:

SMconservation.gmu.edu

Application Deadline:

July 8, 2019

Additional Details:

Information about prerequisites, course pricing, and our facilities can be found on our website.

Smithsonian-Mason School of Conservation

1500 Remount Road
Front Royal, VA 22630
SCBItraining@si.edu

Essentials of Spatial Ecology: GIS Analysis in R, QGIS, and Google Earth Engine

What You'll Study:

By the end of this course, participants will be able to:

- Use R to carry out table manipulation, data visualization, and spatial analysis
- Use a range of open source software to create and design maps
- Create and import spatial data in QGIS and R
- Perform database and spatial queries and joins in QGIS
- Understand map projections and project spatial data in QGIS
- Digitize new features using QGIS and its Open Layers plugin
- Create habitat suitability and species distribution models
- Calculate home ranges with different algorithms using animal tracking data
- Conduct unsupervised and supervised habitat classification and forest mapping with satellite images

The course aims to provide graduate students and professionals with an introduction to freely available visual and analytical tools for working with spatial data. The course will focus on the use of R, QGIS, and Google Earth Engine. In addition to gaining practice in these environments using real datasets, participants will be able to learn and problem-solve independently after the course. Through a wide range of lectures and guided hands-on tutorials, the course focuses on training students to be proficient in using these popular open-source GIS and analytical software, particularly R, and to think critically to apply those tools in solving applied problems.

This course is designed and taught by experienced researchers in the Smithsonian Conservation Biology Institute's Conservation GIS Lab.

For more information visit : **SMconservation.gmu.edu**