FALL PROGRAM
8/22/22-12/9/22

Module 1 Lesson 1: Conservation in the West

Topics (Week of 8/22)

- Public Lands and the Tonto National Forest
- Conservation
- Natural Resource Management
- Riparian Areas: Importance in the Southwest
- Lower Salt River Restoration Project

Module 1 Lesson 2: How Can Technology Aid in Conservation Efforts

Topics (Week of 9/5)

- Adaptive Management- Monitoring
- Geographic Information Systems
- GIS/Drones as a Data Collection Tool
- Onsite vs Offsite Observation-Remote Sensing
- GIS and Remote Sensing on the LSRRP

Module 2 Lesson 1: Utilizing GIS Technology

Topics (Week of 9/19)

- Geographic Information Systems
- Raster vs Vector Data
- Points, Lines and Polygons
- Data Attributes and Queries
- Ways to Access GIS

Module 2 Lesson 2: ArcGIS Mobile Data Collection

Topics (Week of 10/3)

- Mobile Data Collection
- Designing a Data Collection Project
- Building a Geodatabase
- Best Practices for Efficient Data Collection
- Making a Thematic Map

Module 3 Lesson 1: Intro to UAS Technology

Topics (Week of 10/17)

- What is a UAS?
- Varying UAS Platforms
- Mechanics of flight
- Recreational vs Commercial Use
- Preparing for a Flight

Module 3 Lesson 2: Outputs of UAS Collected Data

Topics (Week of 10/31)

- Drone Imagery
- Point Clouds
- Orthomosaics
- Digital Elevation Models
- How are all of these used in LSRRP/Green Drone?

Module 4 Lesson 1: Intro to Remote Sensing

Topics (Week of 11/14)

- What is Remote Sensing?
- Uses of Remote Sensing
- Basics of Aerial Imagery
- Characteristics of Imagery
- UAS vs Satellite Imagery

Module 4 Lesson 2: LiDAR and Photogrammetry

Topics (Week of 11/28)

- LiDAR
- Photogrammetry
- Where Drones Come Into the Picture
- Point Clouds and Digital Elevation Models
- Working with 3D Data

SPRING PROGRAM
1/16/23-5/5/23

Module 1 Lesson 1: Conservation in the West

Topics (Week of 1/16)

- Public Lands and the Tonto National Forest
- Conservation
- Natural Resource Management
- Riparian Areas: Importance in the Southwest
- Lower Salt River Restoration Project

Module 1 Lesson 2: How Can Technology Aid in Conservation Efforts

Topics (Week of 1/30

- Adaptive Management- Monitoring
- Geographic Information Systems
- GIS/Drones as a Data Collection Tool
- Onsite vs Offsite Observation-Remote Sensing
- GIS and Remote Sensing on the LSRRP

Module 2 Lesson 1: Utilizing GIS Technology

Topics (Week of 2/13)

- Geographic Information Systems
- Raster vs Vector Data
- Points, Lines and Polygons
- Data Attributes and Queries
- Ways to Access GIS

Module 2 Lesson 2: ArcGIS Mobile Data Collection

Topics (Week of 2/27)

- Mobile Data Collection
- Designing a Data Collection Project
- Building a Geodatabase
- Best Practices for Efficient Data Collection
- Making a Thematic Map

Module 3 Lesson 1: Intro to UAS Technology

Topics (Week of 3/13)

- What is a UAS?
- Varying UAS Platforms
- Mechanics of flight
- Recreational vs Commercial Use
- Preparing for a Flight

Module 3 Lesson 2: Outputs of UAS Collected Data

Topics (Week of 3/27)

- Drone Imagery
- Point Clouds
- Orthomosaics
- Digital Elevation Models
- How are all of these used in LSRRP/Green Drone?

Module 4 Lesson 1: Intro to Remote Sensing

Topics (Week of 4/10)

- What is Remote Sensing?
- Uses of Remote Sensing
- Basics of Aerial Imagery
- Characteristics of Imagery
- UAS vs Satellite Imagery

Module 4 Lesson 2: LiDAR and Photogrammetry

Topics (Week of 4/24)

- LiDAR
- Photogrammetry
- Where Drones Come Into the Picture
- Point Clouds and Digital Elevation Models
- Working with 3D Data