

# Raster Analysis

Level: Advanced

Duration: 27 h

## LESSONS

### [Spatial Interpolation with ArcGIS Pro | Esri Training Seminar](#)

- Duration: 1hr

### [Extracting Raster Surfaces from Lidar Data in ArcGIS Pro | Esri Training Video](#)

- Duration: 6mins
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## EXERCISES

### [Calculate impervious surfaces from spectral imagery | Learn ArcGIS](#)

- Duration: 1h 30mins
- Requirements: ArcGIS Pro 3.1, Spatial Analyst

### [Terrain Analysis Using ArcGIS Pro | Esri Training Web Course](#)

- Duration: 2hrs 45min
- About: This course teaches how to use ArcGIS Pro and ArcGIS Spatial Analyst tools to derive new raster data from an elevation raster. The results can be used to model and visualize the earth's surface, perform analysis, and support decision making for a variety of applications.
- Requirements: ArcGIS Pro 3.1, Spatial Analyst

### [Geostatistical Interpolation: Introduction | Esri Training Web Course](#)

- Duration: 1h 40min
- About: In this course, you will be introduced to geostatistical interpolation and associated key data assumptions. You will also discover how to identify methods that apply to a given analysis goal.
- Requirements: ArcGIS Pro 3.1, ArcGIS Geostatistical Analyst

### [Geostatistical Interpolation: Using Empirical Bayesian Kriging and EBK Regression Prediction | Esri Training Web Course](#)

- Duration: 3hrs 45min
- About: In this course, you will learn how to interpolate 2D point datasets using EBK and EBK regression prediction.
- Requirements: ArcGIS Pro 3.1, ArcGIS Geostatistical Analyst, ArcGIS Spatial Analyst

### [Geostatistical Interpolation: Reaggregating Data Using Areal Interpolation | Esri Training Web Course](#)

- Duration: 3hrs 45min
- About: In this course, you will learn the two main use cases of areal interpolation: downscaling a source polygon dataset from a coarse scale to a fine scale and using the prediction surface to fill in missing polygon data.
- Requirements: ArcGIS Pro 3.1, ArcGIS Geostatistical Analyst

### [Geostatistical Interpolation: Creating a 3D Prediction Surface | Esri Training Web Course](#)

- Duration: 3hrs 20mins
- About: In this course, you will learn how to interpolate 3D point datasets using EBK 3D.
- Requirements: ArcGIS Pro 3.1, ArcGIS Geostatistical Analyst

### [Model water quality using interpolation | Learn ArcGIS](#)

- Duration: 1h 20mins
- Requirements: ArcGIS Pro 3.0, ArcGIS Geostatistical Analyst

### [Performing Viewshed Analysis in ArcGIS Pro | Esri Training Web Course](#)

- Duration: 1h
- About: In this course, you will learn how to adjust the tool for your analysis.
- Requirements: ArcGIS Pro 3.1, 3D Analyst, Spatial Analyst

### [Introduction to Image Classification | Esri Training Web Course](#)

- Duration: 1 h 15mins
- About: This course introduces options for creating thematic classified rasters in ArcGIS.

### [Performing Unsupervised Pixel-Based Image Classification | Esri Training Web Course](#)

- Duration: 55mins
- About: This course introduces the unsupervised pixel-based image classification technique for creating thematic classified rasters in ArcGIS.
- Requirements: ArcGIS Pro 3.1, Spatial Analyst

### [Performing Supervised Object-Based Image Classification | Esri Training Web Course](#)

- Duration: 1h 15mins
- Requirements: ArcGIS Pro 3.1, Spatial Analyst

### [Performing Supervised Pixel-Based Image Classification | Esri Training Web Course](#)

- Duration: 1h 10mins
- About: In this course, you will learn about the workflow to use supervised object-based image classification, and you will understand the limitations and benefits of the technique.
- Requirements: ArcGIS Pro 3.1, Spatial Analyst

### [Performing Accuracy Assessment for Image Classification | Esri Training Web Course](#)

- Duration: 50mins
- About: This course introduces the accuracy assessment technique for testing thematic classified rasters in ArcGIS.
- Requirements: ArcGIS Pro 3.1, Spatial Analyst

### [Suitability Modeling: Introduction | Esri Training Web Course](#)

- Duration: 2 hrs 40 mins
- About: In this course, you will discover the types of real-world problems that can be addressed with a suitability model.
- Requirements: ArcGIS Pro 3.1, Spatial Analyst

### [Suitability Modeling: Creating a Weighted Suitability Model | Esri Training Web Course](#)

- Duration: 4hrs 15mins
- About: In this course, you will learn how to create a weighted suitability model, which adds science and expert opinion to the suitability modeling process.
- Requirements: ArcGIS Pro 3.1, Spatial Analyst

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## OTHER MATERIALS

Document: [Getting to Know ArcGIS Image Analyst | Esri Training Document](#)

Additional exercises:

### [Interpolate 3D oxygen measurements in Monterey Bay | Learn ArcGIS](#)

- Duration 2hrs
- Requirements: ArcGIS Pro 3.0, ArcGIS Geostatistical Analyst, ArcGIS 3D Analyst extension

### [Classify land cover to measure shrinking lakes | Learn ArcGIS](#)

- Duration: 1h 15mins
- Requirements: ArcGIS Pro 3.1, Spatial Analyst

### [Analyze urban heat using kriging | Learn ArcGIS](#)

- Duration: 1h 30min
- Requirements: ArcGIS Pro 3.1, Geostatistical Analyst

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