



## Course Syllabus

### *Section 1*

#### *Getting Started: Let's Get Mapping*

Consider the value and purpose of cartography as science and art. Get set up with ArcGIS Pro, ArcGIS Online, and exercise data. Use ArcGIS Pro to design a small-format, multiscale topographic map, using generalization tools and scale-dependent symbology. Use layouts for composition. Add contextual detail, insets, legends, and marginalia.

### *Section 3*

#### *Language of Graphics*

See how generalization, symbology, and color affect your story. Explore generalization techniques that reduce feature complexity for smaller-scale displays. Create a variety of thematic maps, including choropleth, proportional symbol, value-by-alpha, and multivariate maps. Change symbology and use transparency in creative ways.

### *Section 5*

#### *Mapping in 3D*

Consider how to best use the z dimension to represent data for both reference and thematic maps. Use 3D symbology and develop a sense of when 3D adds value to your map. Build 3D web scenes and vary the way features are represented using attributes and dynamic symbology.

### *Section 2*

#### *Math for Mapmakers*

Explore how coordinate systems, transformations, and projections affect your map's message. Deal with the effects of projections and data classification methods on thematic maps. Design and publish a custom basemap in a nonstandard projection to support thematic data. Build attribute-driven symbology. Publish a multiscale web map and app.

### *Section 4*

#### *Labels and Composition*

Learn a little about typography, label placement, and map composition. Set up a palette of label styles for different features and explore options for positioning them around other map details. Create a layout that includes a range of marginalia. Use ArcGIS expressions to define labels in innovative ways.

### *Section 6*

#### *Mapping Change*

Use the time-aware and animation controls in ArcGIS Pro to design maps that show temporal change. Direct an animated movie to map change; add captions and dynamic overlay information; and publish in a range of popular, shareable formats. Create a display of small multiples for an infographic poster.