

## Geomatics Course Catalog

<b>Course Title</b>	<b>Course Description</b>	<b>Duration (Days)</b>
<b>Working with 3D Analyst</b>	<p>This course will provide participants means to produce both surface and vector data in 3D model. It is designed for those who want to apply three-dimensional-visualization and analysis techniques to their spatial data. They will create realistic models by draping aerial photographs over surfaces and displaying ordinary 2-D features such as rivers, roads and buildings in 3 dimensions. They will also perform 3-D geographic analysis such as finding steepest path, determining inter-visibility between locations on surfaces and calculating volumes.</p> <p><i>Objectives: After completion of the course, participants will be able to:</i></p> <ol style="list-style-type: none"> <li>1. Understand surfaces, shapes and models</li> <li>2. Create raster surfaces from points using interpolation, TIN surfaces from vector data.</li> <li>3. Create contour lines from raster and TINs.</li> <li>4. Understand and calculate slope, aspect, visibility, line of sight, viewshed, and 3D profile.</li> <li>5. Browse and display 3D Data through ArcCatalog and ArcScene</li> <li>6. Drape Image on 3D model using ArcScene.</li> <li>7. Reset the 3D visualization model through 3D analyst functions to exaggerate the terrain, extrude feature, set feature and raster base height</li> <li>8. Select features in 3D model using ArcScene.</li> </ol> <p><i>Pre-requisite: Working with Desktop ArcGIS</i></p> <p>Course Outline:</p> <p><b>Chapter 1: Arcgis 3D Analyst</b></p> <ol style="list-style-type: none"> <li>1.Introduction</li> <li>2.Surfaces and surface models</li> <li>3.Creating raster surfaces from point</li> <li>4.What is interpolation?</li> <li>5.Creating TIN surfaces from vector data</li> <li>6.Understanding the shape of a surface</li> <li>7.Slope and aspect in rasters and TINs</li> <li>8.Why map contours?</li> <li>9.Analyzing visibility</li> <li>10.What is the viewshed?</li> </ol> <p><b>Chapter 2: Arcgis 3D Analyst Exercises</b></p> <ol style="list-style-type: none"> <li>1.Browsing 3D Data Through Arccatalog</li> <li>2.Wells and Plum Relationship</li> <li>3.3D Point Features</li> </ol>	<p style="text-align: center;">2</p>

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	4.Selecting features by attribute 5.Create TIN 6.3D Profile	