Geomatics Course Catalog

Course Title	Course Description	Duration (Days)

AutoCAD 2009 Creating and Presenting 3D Models	Using hands-on exercises representing real-world, industry-specific design scenarios, participants explore the fundamental concepts and workflows for creating 3D models using AutoCAD® 2009. Participants learn how to create and modify both solid and surface models. This course also teaches participants how to present their designs while they are still being created, using visualization tools such as visual styles, model walk and fly throughs, materials, and lighting. Participants also learn how to output 3D models from AutoCAD 2009 to either paper or a distributable, electronic version.
	
	Objectives:
	
	The primary objective of this courseware is to teach participants *the fundamental concepts and workflows for creating 3D models using AutoCAD 2009.*
	
	After completing this course, students will be able to:
	• *Represent a design by creating solid primitives, solid or surface models from cross-sectional geometry, or composite models from multiple solid models.*
	• *Complete a solid model design by adding the necessary features to detail, duplicate, and position 3D models.*
	• *Convert 2D objects to 3D objects.*
	• *Document a 3D design by creating 2D drawings for production and visualization.*
	
	Communicate design ideas using visual styles, lights, model walk-through tools, and renderings.
	
	Pre-requisite:
	• *How to create and edit basic AutoCAD objects.*
	• *How to work with layouts.*
	• *A recent version of AutoCAD.*
	
	Course Outline:
	• Chapter 1: 3D Modeling
	  ◦ Introduction to 3D Modeling
	  ◦ Creating Solid Primitives
	  ◦ Creating Models from 2D Profiles
	  ◦ Creating Composite Solids
	  ◦ Working in 3D
	• Chapter 2: Creating Models from Cross Sections
	  ◦ Converting 2D Objects to Solids or Surfaces
	• Chapter 3: Editing Models
	  ◦ Adding Detail to Your Solid Models	

Geomatics Course Catalog

Course Title	*Course Description*	*Duration (Days)*
	• Converting Objects • Editing Solid Models • Extracting Geometry from Solid Models • Changing the Model Position • Duplicating the Model • Getting Information from 3D Objects • Chapter 4: Sectioning a Model and Creating Drawings • Sectioning a Solid Model and Generating 2D Geometry • Creating Drawings from 3D Models • Chapter 5: Visualization • Using Visual Styles • Using Lights • Using Materials • Using the Sun • Rendering • Navigating the Model • Using Cameras and Views	