AUTODESK UNIVERSITY 2006

Are you Certifiable?

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and Philip Koneman, Ph.D. (Co-Speaker)

ED12-2 The optimum choice for benchmarking an employee's skills is an industry or software maker's end user certification program. Now that Autodesk is offering end user certification via the Autodesk Test Delivery Network, how should one prepare? This course offers tips and available resource options to help prepare for these exams, including various strategies for preparation across all industry and end user technical expertise levels.

About the Speaker:

Nancy is a program manager for the Authorized Training Center team at Autodesk. She has a vast background in corporate as well as ATC training. She came to Autodesk as an ATC manager and Certified Instructor. She has held multiple PSE exams in the past and has a B.B.A. degree in Business Management.

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Dr. Koneman has experience in creating, developing, and launching global certification programs. Prior to joining Autodesk Dr. Koneman led the Certification efforts of JD Edwards and PeopleSoft. Dr. Koneman has also authored several text books for Microsoft products, and has consulted with numerous companies on assessment and curriculum development. His Ph.D. is from the University of Colorado in Education Leadership and Innovation, focused specifically on Instructional Technology and Research, Evaluation, and Measurement.

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Authorized Certification Centers

Autodesk Authorized Certification Center

Autodesk certification examinations are available at Authorized Autodesk Certification Centers conducted through designated sites in the Autodesk® Authorized Training Center Channel. All examinations are computer-delivered in a proctored environment. While taking the exam, you may not use calculators, books, or other electronic equipment. You can use Autodesk Inventor 11 software and the help system only. A calculator is available on line. At the time you complete your examination you must consent to the Autodesk Certification Program Agreement. You may view this document on http://www.autodesk.com/certification.

Authorized Training Centers are listed on a searchable locator at www.autodesk.com/atc

Questions and Answers about Autodesk Certification:

A Q&A to guide you through the Autodesk® Certification Exam process:

1. What is the Autodesk Certification Program?
The Autodesk Certification program enables experienced users to receive special recognition for their knowledge of a specific Autodesk software application. Autodesk provides an end-to-end certification solution; a pre-assessment of application proficiency, Autodesk Authorized Certification Courseware for reviewing the knowledge and skills covered on a certification examination and Certified User and Certified Expert examinations for validating your knowledge and skills.

2. Who should attempt Certification?
The **Certified User** and **Certified Expert** credentials are for anyone seeking to validate their knowledge of Autodesk software. The design and visualization industries are competitive environments, where only the best stand out. Anyone who uses Autodesk software for professional reasons can benefit from the program by emphasizing their skills and knowledge with an official certification from Autodesk. An Autodesk Certified User or Certified Expert has validated their knowledge and skills of the performance tasks specified for the specific examination.

3. What score must I obtain to pass a certification examination?
The passing score varies by certification examination. Please refer to information about a specific certification examination to determine the passing score.

4. What happens if I do not pass?
If you do not pass, you will receive a Diagnostic Score Report that indicates areas for improvement. You may then retake the examination after 7 days. You can take the examination three times a year. If you do not pass after three attempts, you must wait until one year has passed from the first attempt before retaking an examination.

5. Once granted, does certification last forever?
Certification validates your knowledge and skills using a specific version of an Autodesk application. Although certification for a particular version of an application never expires, certification is not considered current unless you have passed the latest recertification examination, and the full examination for the prior release.

6. What is a recertification examination?
A recertification examination is a much shorter version (20-30 questions) of the standard examination that focuses on new features and functionality in the current release. A recertification examination is offered for each major release of an Autodesk application. As with a User or Expert examination, you can take a recertification examination up to three times a year.

7. How much does it cost to take the examination and how do I pay?

The costs for the examinations are:

Application Proficiency Examination	$18 USD per attempt
User Examination	$150 USD per attempt
Expert Examination	$150 USD per attempt
Recertification Examination	$50 USD per attempt

To purchase a certification examination visit http://autodesk.starttest.com. Click the **Purchase** link to see the available certification products for Autodesk applications. You may purchase an examination by first establishing a candidate profile and paying by credit card

8. Where can I take an examination and how do I schedule my session?

You can take the examination at any participating Autodesk Authorized Certification Center. When you purchase your certification examination you have the option of scheduling your examination at the time of purchase, or any time in the future. To schedule your examination at the time of purchase click the **Schedule** link and then use the **Center Search** function to locate an Authorized Test Delivery Facility in your country or area. After you locate a list of potential centers, select a center and click the option to continue your appointment. If the center has open appointments you will have the option of selecting a time that is convenient for you. To schedule an appointment after the time of purchase, visit http://autodesk.starttest.com, log in to your profile, and then click the link for your unscheduled appointment. You will then be able to schedule your appointment by locating a center.

9. How do I prepare for the certification examination?
Each certification examination assesses your knowledge and skills of specific tasks using an Autodesk application. For most certification examinations, Autodesk offers an Autodesk Official Certification Courseware (AOCC) book, available for purchase. The courseware provides a detailed listing of the knowledge and skills covered on a certification examination, as well as instructional lessons and exercises for the skills assessed on the examination. AOCC books also include a CD with the exercise files, and a 30-day Trial CD of the application.

The certification examination objectives are also listed on the Autodesk Test site. Visit http://autodesk.starttest.com and click the **Purchase** link. Locate the examination in the list of available products, and click the **Details** link. Click the link to view the examination objectives.

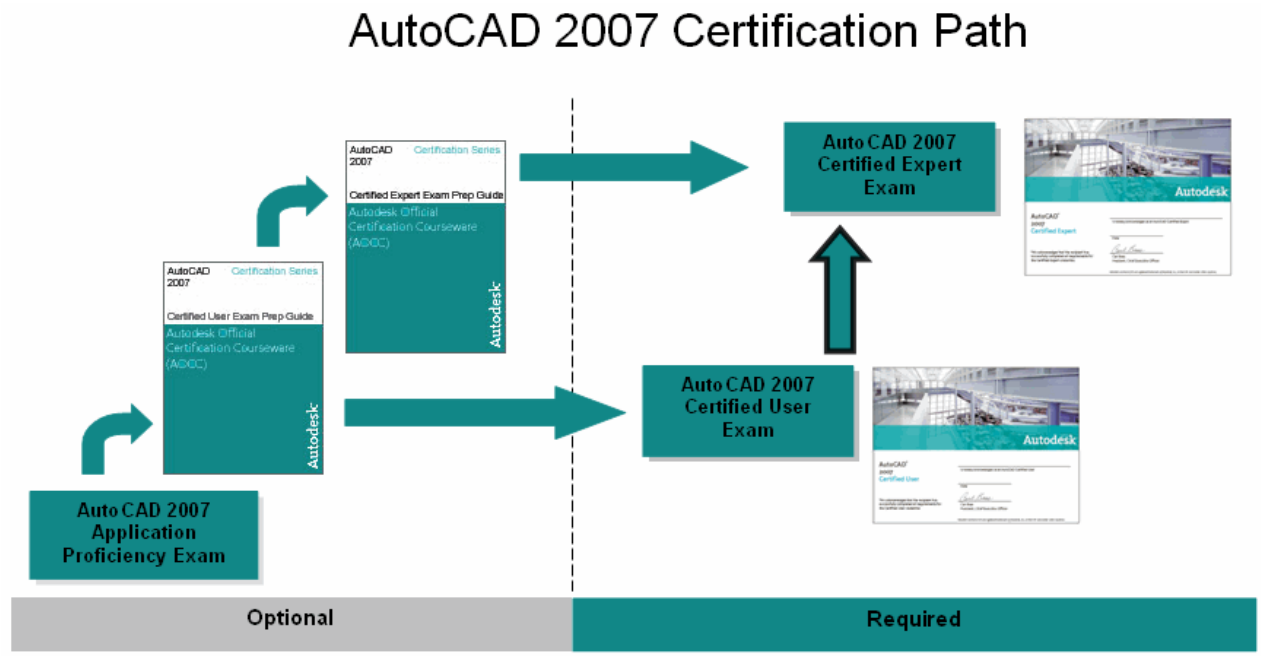
You may also review the certification examination objectives from http://www.autodesk.com/certification. From this page click the link for a specific Autodesk certification, and then download or open the Adobe Acrobat Examination Overview document.

10. What do I receive when I become certified?
When you obtain Autodesk Certified User or Certified Expert status you obtain the right to use the official Autodesk Certified logo in marketing your Autodesk skills (on business cards, websites, Résumés, and so forth) as specified in the logo usage guidelines. You also have access to your electronic Certificate, and if you choose (when establishing or modifying your candidate profile), you may request your certification results be available in the Certified Users database.

You will need to log in to your profile to view your certification history and access your score reports, certificates, and any associated certification logos. To log in, visit http://autodesk.starttest.com.

Certification paths and examination objectives

The following pages with help you to visualize the certification paths and focus on the examination objectives of the Autodesk® Certification Exams:



To obtain the Autodesk AutoCAD 2007 Certified Expert credential, you must pass both the AutoCAD 2007 Certified User and AutoCAD 2007 Certified Expert examinations.

AutoCAD®

Application Proficiency Examination for AutoCAD 2007

Proficiency Examination for Application Awareness

Validate that you know the current product release. How well do you know an Autodesk application?

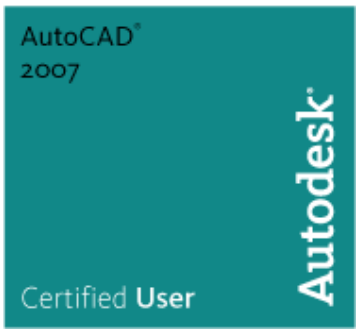
The *Autodesk AutoCAD 2007 Application Proficiency Examination* is an on-line examination consisting of 42 questions that assess your knowledge of the tools, features, and common tasks in AutoCAD. Available 24/7 through the Web, this exam will help you assess your readiness for certification.

Autodesk AutoCAD 2007 Application Proficiency Examination Objectives

This examination consists of 42 multiple-choice questions that assess the following knowledge tasks:

- Access the Design Center, add content to the Design Center
- Customize the Drawing Environment
- Open and save drawings
- Repair and restore drawings
- Maintain standards in drawings
- Use the Layer Translator to convert layers to a standard
- Pan a View
- Magnify a View
- Create Single-View Drawing Layouts (Model space)
- Create Multiple-View Drawing Layouts (Paper Space)
- Control the Properties of Objects
- Create and Name Layers
- Change Layer Settings and Layer Properties
- Work with Colors
- Change the Linetype of an Object
- Control Linetype Scale
- Control the Display of Polylines, Hatches, Gradient Fills, Lineweights, and Text
- Enter 2D Coordinates
- Enter 3D Coordinates
- Add 3D Coordinates
- Use Dynamic Input
- Create and modify Hatches
- Use Notes and Labels
- Create and Modify Tables
- Work with Table Styles
- Set the Scale for Dimensions
- Create Dimensions
- Apply a New Dimension Style to an Existing Dimension
- Add Geometric Tolerances
- Plot drawings
- Publish Drawings
- Reference other Drawing Files (Xrefs)
- Work with Data in other Formats
- Protect and Sign Drawings
- Use the Internet to Share Drawings
- Use Markups for Design Review
- Work with Raster Images in AutoCAD Drawings
- Draw 2D Isometric Views
- Choose and Refine Objects for Use in 3D Images
- Render 3D Objects
- Using the dashboard
- Drawing output

Autodesk Certification
Autocad 2007 Certified user examination overview



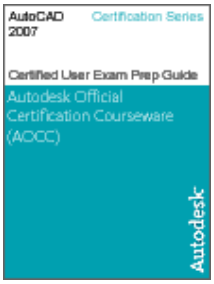
Overview

The Autodesk AutoCAD 2007 Certified User examination is intended to measure your comprehensive knowledge of Autodesk AutoCAD 2007® software.

Examination

The Certified User examination includes 50 questions. Some of the questions require you to use AutoCAD 2007 to create and modify drawings. The question format includes multiple choice, multi select, and point and click questions. The exam has a two-hour time limit. Your exam results will always be available online at http://autodesk.starttest.com. These results are confidential.

Preparation



Passing the examination requires a working knowledge of the performance tasks listed below. You may purchase the **AutoCAD 2007 Certified User Exam Preparation Guide** to review the knowledge and skills assessed on the examination. This courseware is designed to teach the knowledge and skills assessed on the AutoCAD® 2007 Certified Expert examination. This courseware is designed as a teaching tool for instructor-led courses as well as self-paced learning. In addition to the coursework, this manual encourages self-learning through the use of the AutoCAD Help system. The courseware includes student data files and a 30-day trial version of AutoCAD 2007.

Autodesk AutoCAD 2007 Certified User Examination Objectives

Section 1: Displaying Drawings

Objective	Change the display of drawings.
Required Knowledge and Skills	Perform zooming and panning to alter the display of the drawing.
Performance Tasks	▪ Perform zooming to alter the display of the drawing. ▪ Pan a drawing to alter the display.

Section 2: Working with Objects and Geometry

Objective	Create common objects and geometry; modify, manipulate and alter AutoCAD objects and geometry; change general and geometry specific properties of AutoCAD objects.
Required Knowledge and Skills	Create lines, arcs, circles and ellipses while utilizing specific units at a pre-determined level of design accuracy. Move, copy, rotate, trim, extend, offset, lengthen, break, stretch, mirror, fillet, array and scale AutoCAD objects. Match object properties and to alter object properties via the properties palette.
Performance Tasks	▪ Use the command line to enter commands and command options. ▪ Use direct distance entry to enter distance values. ▪ Use running object snaps and object snap overrides to select snap points in the drawing. ▪ Use polar tracking and PolarSnap to increase speed and accuracy when creating geometry. ▪ Use several different selection methods to select objects in AutoCAD. ▪ Use the Move command to move objects using object snaps, coordinate entry, and object snap tracking. ▪ Use the Copy command to copy objects in the drawing. ▪ Use the Rotate command to rotate objects in the drawing. ▪ Use the Mirror command to mirror objects in the drawing. Change the MIRRTEXT system variable and observe the effect on mirrored text objects. ▪ Use the Scale command to scale objects in the drawing. ▪ Use the Trim and Extend commands to modify geometry in your drawing. ▪ Use the Offset command to create parallel and offset geometry. ▪ Use the Join command to join similar objects. ▪ Use the Lengthen command to change the length of an object. ▪ Use the Break command to break objects in AutoCAD. ▪ Use the Stretch command to stretch objects. ▪ Use the Chamfer command to create chamfer features. ▪ Use the Array command to pattern objects in the drawing. ▪ Use the Fillet command to create radiused geometry connecting two objects. ▪ Use the Undo and Redo commands to return to previous drawing states. ▪ Access the Layer Properties Manager and use other commands to manage layers. ▪ Use Quick Select to select objects in the drawing. ▪ Use the Match Properties command to apply the properties from a source object to destination objects. ▪ Use the Properties palette to adjust object properties.

Section 3: Working With Layers and Linetypes

Objective	Create, manage and alter the display of color, layers, linetypes and lineweight in an AutoCAD drawing.
Required Knowledge and Skills	Create, manage and alter the display of layers in AutoCAD dwg Import and use linetypes, change scale, color, layers and lineweight on new and existing geometry. Access the layer dialog box, create layers and change settings (display and color) of layers.
Performance Tasks	▪ Access the Linetype Manager. ▪ Use the Linetype Manager to add linetypes to your drawing. ▪ Access the Layer Properties Manager and use other commands to manage layers.

Section 4: Annotations

Objective	Create, manage and alter the display of annotation in an AutoCAD drawing.
Required Knowledge and Skills	Create and modify text styles, create Mtext, create Dtext and to demonstrate knowledge of text scaling.
Performance Tasks	▪ Create and use text styles. ▪ Use the Mtext command to create multiline text. ▪ Use the Text command to create single line text. Make single line text associative. ▪ Edit text using these commands and methods.

Section 5: Hatching

Objective	Create, manage and alter the display of hatching in an AutoCAD drawing.
Required Knowledge and Skills	Open AutoCAD drawings, access commands and use commands to create hatching, and to demonstrate knowledge of hatch scaling.
Performance Tasks	▪ Open drawings. ▪ Create hatch patterns and fills. ▪ Use the Hatchedit command to edit hatches and fills. ▪ Use enhanced hatching features to create hatch objects.

Section 6: Dimensioning

Objective	Use AutoCAD commands to create, manage and alter the display of dimensions in an AutoCAD drawing.
Required Knowledge and Skills	Create dimension styles, create dimensions, modify dimensions and to demonstrate knowledge of dimension scaling.
Performance Tasks	▪ Access and identify the types of dimensions you can create. ▪ Create different types of dimensions. ▪ Access and identify options to the Dimension Style command. ▪ Create and modify dimension styles to control the appearance of dimensions. ▪ Access the Dimension Style Manager. ▪ Create dimension substyles and style overrides. ▪ Compare two dimension styles to see the differences.

- Access and identify commands for editing dimensions.
- Edit dimensions using grips and the Dimedit and Dimtedit commands.

Section 7: Blocks, Attributes, and Reusable Content

Objective
- Create, use, edit and manage reusable content.
- Edit attributes in blocks.
- Create, manage and alter the display of tables in an AutoCAD drawing.
- Create utility and construction geometry.
- Manage drawing file layers, blocks, text styles, dimension styles and linetype styles.

Required Knowledge and Skills
- Create blocks, insert blocks and to demonstrate knowledge of block management. Use the DesignCenter and Tool Palettes. Use x-reference insertion, management, editing and types of x-references.
- Edit block attribute values, text style and color.
- Create table styles, create and modify tables.
- Create donuts, xlines and rays, wipeouts and boundaries while utilizing specific units at a pre-determined level of design accuracy.
- Use the AutoCAD purge and Wblock commands.

Performance Tasks
- Use the Refedit command to redefine blocks.
- Use DesignCenter to add data to a drawing.
- Import named page setups from another drawing file.
- Use the Block and Insert commands to create and insert blocks.
- Access the Attribute Definition command.
- Use Xref Manager to attach drawings and create external references.
- Edit attributes.
- Create tables and enter values in the table cells.
- Use table options to add new columns and rows, create formulas, and copy and paste cell contents.
- Access and identify options of the Point command.
- Use the Point Style dialog box to change the appearance of point objects.
- Use the Explode command to break a compound object into its component objects.

Section 8: Layouts and Views

Objective: Create and manage layouts, viewports and page setups.

Required Knowledge and Skills: Create layouts, viewports, scaled viewports, edit the display of layers in independent viewports, Manage with page setups and layouts.

Performance Tasks
- Create a new layout from a template.
- Create a new layout by copying an existing one.
- Rename a layout.
- Delete a layout.
- Change the order of layouts.
- Explain how to create polygonal viewports.
- State the methods for activating a layout viewport and the characteristics of an active layout viewport.
- Set the scale factor for a layout viewport.

- Lock the display of a layout viewport.
- Explain the function of the Current VP Freeze and New VP Freeze layer properties.
- Freeze or thaw the display of layers within the current layout viewport.

Section 9: Creating Output

Objective	Output drawings to hard copy and electronic formats.
Required Knowledge and Skills	Identify the environments that you can output from, describe ModelSpace output and layouts to created scaled hard copy and electronic drawings.
Performance Tasks	▪ Access plotter configuration files. ▪ Access plot style tables. ▪ Access the Publish command and identify its options. ▪ Use the Publish command to publish DWF files and plot drawings. ▪ Use the Create New Sheet Set wizard to create sheet sets from an example sheet set and from existing drawings.

Section 10: Drawing setup, Templates, and Standards

Objective	Output drawings to hard copy and electronic formats.
Required Knowledge and Skills	Use commands to identify output environments; describe the characteristics of ModelSpace output; describe the characteristics of hard copy and electronic drawings.
Performance Tasks	▪ Use the Save As command to create a drawing template.

Autodesk Certification
Autocad® 2007 Certified Expert examination overview

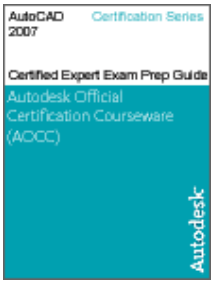
Overview

The Autodesk AutoCAD 2007 Certified Expert examination is intended to measure your comprehensive knowledge of Autodesk AutoCAD 2007® software.

Examination

The Certified Expert examination includes 48 questions. Some of the questions require you to use AutoCAD 2007 to create and modify drawings. The question format includes multiple choice, multi select, and point and click questions. The exam has a two-hour time limit. Your exam results will always be available online at http://autodesk.starttest.com. These results are confidential.

Preparation



Passing the examination requires a working knowledge of the performance tasks listed below. You may purchase the **AutoCAD 2007 Certified Expert Exam Preparation Guide** to review the knowledge and skills assessed on the examination. This courseware is designed to teach the knowledge and skills assessed on the AutoCAD® 2007 Certified Expert examination. This courseware is designed as a teaching tool for instructor-led courses as well as self-paced learning. In addition to the coursework, this manual encourages self-learning through the use of the AutoCAD Help system. The courseware includes student data files and a 30-day trial version of AutoCAD 2007.

Autodesk AutoCAD 2007 Expert Certification Examination

Objectives

Section 1: Working with Layouts and Views

Objective	Create and manage layouts, viewports and page setups.
Required Knowledge and Skills	Create layouts, viewports, scaled viewports, edit the display of layers in independent viewports, manage layouts and page setups.
Performance Tasks	▪ Convert closed loop objects into viewports. ▪ Clip an existing viewport with a closed loop object. ▪ Modify a layout and save that layout configuration as a named page setup.

Section 2: Working with Drawing Objects

Objective	Create utility and construction geometry. Perform different types of calculations with the QuickCalc command.
Required Knowledge and Skills	Create donuts, xlines and rays, wipeouts and boundaries; utilize specific units at a pre-determined level of design accuracy. Use the QuickCalc command.
Performance Tasks	▪ Use the Boundary command to create boundaries in the drawing. ▪ Access the Region command. ▪ Use the Xline and Ray commands to create construction lines and rays. ▪ Perform different types of calculations using the QuickCalc command.

Section 3: Working with Blocks and Attributes

Objective	Edit attributes in blocks.
Required Knowledge and Skills	Edit block attribute values, text style and color.
Performance Tasks	▪ Extract attributes from blocks in the drawing. ▪ Create table styles to use when extracting attributes to a drawing table. ▪ Create attributes using the Attribute Definition command. ▪ Enhance attributes with fields.

Section 4: Working with Dynamic Blocks

Objective	Create and edit dynamic blocks.
Required Knowledge and Skills	Use commands to create and edit dynamic blocks.
Performance Tasks	▪ Create a dynamic block of a door. ▪ Access and set the Chain Actions property. ▪ Describe dynamic attributes. ▪ Create dynamic attributes. ▪ Use different methods to access your dynamic block libraries. ▪ Disable the Block Editor environment to limit access to dynamic block definitions. ▪ Use the Block Editor to create or edit blocks. ▪ Use parameters and actions to create dynamic blocks.

Section 5: Working with Sheet Sets

Objective	Create, manage and edit sheet sets. Use field data in sheet sets, multi-line text, view labels, call-out data and blocks.
Required Knowledge and Skills	Create sheets sets, manage their use and edit sheet set data. Insert field information into sheet sets, multi-line text and blocks.
Performance Tasks	▪ Access and identify sheet set placeholder fields. ▪ Add sheet set functionality to a title block. ▪ Use fields to automate view label and callout data in your sheet set drawings.

Section 6: Working with Reusable Content

Objective	Create, use, edit and manage reusable content.
Required Knowledge and Skills	Create blocks, insert blocks and perform block management; use the Design Center and Tool Palettes; Insert, edit, and manage x-references.
Performance Tasks	▪ Use the Xclip command to clip the display area of external references. ▪ Use the Refedit command to edit external references in the context of the host drawing.

Section 7: Customizing AutoCAD

Objective	Create and use workspaces in and AutoCAD session. Describe the parameters for creating basic macros. Describe the methods of for creating menus. Describe the parameters for creating and importing custom linetypes.
Required Knowledge and Skills	Create and manage workspaces. Use parameters when creating macros. Create custom menus. Create and import custom linetypes.
Performance Tasks	▪ Create and use workspaces. ▪ Create basic macros. ▪ Migrate a custom menu. ▪ Automate commands by creating and using script files. ▪ Automate commands by creating and using script files. ▪ Create and load custom linetypes.

Section 8: Managing, Maintaining, and Recovering Drawings

Objectives	Manage associated drawing related files. Recover corrupt drawing files.
Required Knowledge and Skills	Locate, identify and manage files that are associated with AutoCAD drawing files. Recover corrupt or damaged drawings.
Performance Tasks	▪ Identify temporary file types. ▪ Use Design Center to search for drawings and named objects. ▪ Locate temporary files associated with your drawings. ▪ Describe how to access and use the Drawing Recovery Manager to recover drawings. ▪ Recover a drawing with the Drawing Recovery Manager. ▪ ▪ Access and identify options to the Audit command to report and fix problems in the current drawing. ▪ Access the Recover command to recover damaged drawings. ▪ Identify ways to archive drawing data and maintain your computer system to minimize drawing corruption.

Section 9: Collaboration

Objectives	Attach and validate digital signatures. Configure and connect to external data. Export data from drawings. Attach and validate digital signatures in drawing files.
Required Knowledge and Skills	Connect drawing files and drawing objects to external database information. Export data from blocks and drawings.
Performance Tasks	▪ Attach and validate digital signatures. ▪ View external data in read-only mode in the Data View window. ▪ Create, store, and execute a query. ▪ Access and identify the types of export formats. ▪ Extract attributes from a drawing.

Section 10: CAD Standards

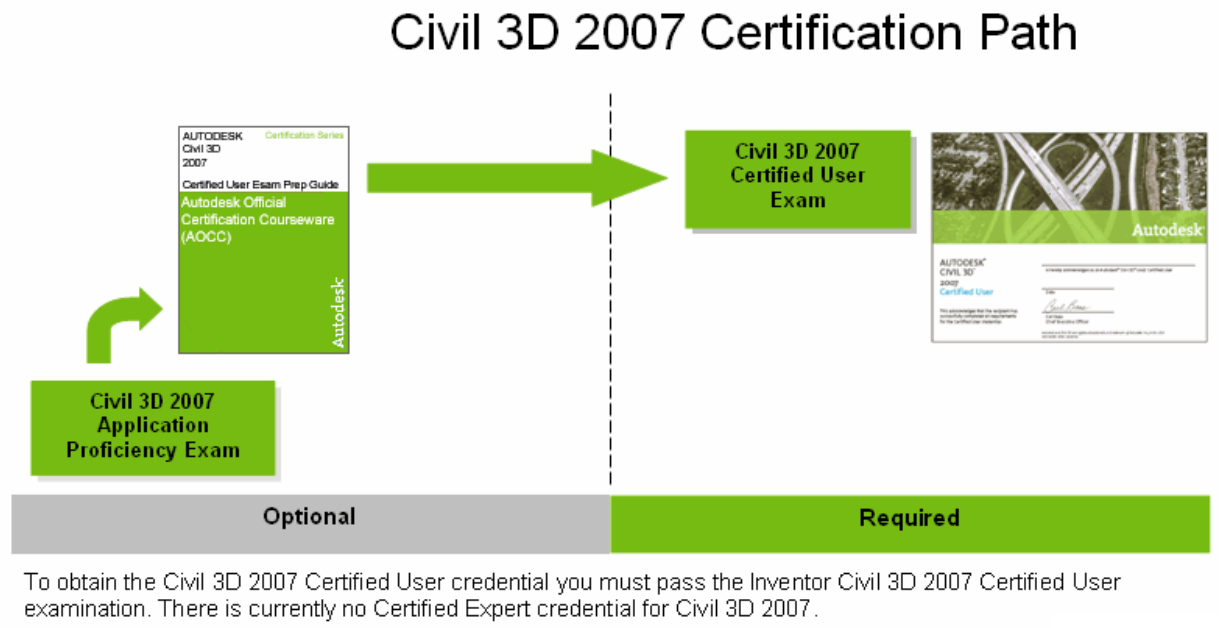
Objectives	Create and modify a drawing standards file. Create and translate mapped layers.
Required Knowledge and Skills	Create and manage standards files; Batch process multiple drawings for standards compliance. Create mapped layers and translate layers based on that mapping.
Performance Tasks	▪ Create and modify a standards file. ▪ Check the current drawing for standards compliance and fix any identified problems. ▪ Use the Batch Standards Checker to create a check file and to check multiple drawings at one time. ▪ Create and save mapped layers, then translate the layers based on that mapping.

Section 11: AutoCAD Options

Objective	Set and Configure AutoCAD Options
Required Knowledge and Skills	Set and Configure AutoCAD Options
Performance Tasks	▪ Explain what you configure on the Files tab and the purpose of each configuration. ▪ Explain the purpose of the settings on the Open and Save tab. ▪ Describe the purpose of the settings on the User Preferences tab. ▪ List the settings on the Drafting tab that control the display and interaction of object snaps, AutoSnap™, AutoTrack™, and tooltips. ▪ Explain the settings that control the selection of geometry, the display of selected geometry, and the activation and display of grips. ▪ Explain the purpose and function of profiles.

Section 12: Configuring Output

Objective	Output drawings to hard copy and electronic formats.
Required Knowledge and Skills	Identify output environments; describe the characteristics of output from ModelSpace; describe the characteristics of output to hard copy and electronic drawings.
Performance Tasks	▪ Create a plotter configuration file based on the System Printer option and another one based on the My Computer option.



To obtain the Civil 3D 2007 Certified User credential you must pass the Inventor Civil 3D 2007 Certified User examination. There is currently no Certified Expert credential for Civil 3D 2007.

Application proficiency examination for civil 3d 2007

Proficiency Examination for Application Awareness

Validate that you know the current product release. How well do you know an Autodesk application?

The *Autodesk Civil 3D 2007 Application Proficiency Examination* is an on-line examination consisting of 41 questions that assess your knowledge of the tools, features, and common tasks in Civil 3D. Available 24/7 through the Web, this exam will help you assess your readiness for certification.

Autodesk Civil 3D 2007 Application Proficiency Examination Objectives

This examination consists of 41 multiple-choice questions that assess the following knowledge tasks:

- Create and manage points
- View and edit point data
- Use point styles and labels
- Create points using transparent commands
- Import data from an external LandXML file
- Add a break line to a surface
- Generate a surface analysis
- View surfaces in 3D
- Create a surface output
- Create contour labels
- Add a volume surface to the Surfaces collection
- Calculate volume difference
- Create parcels
- Label parcel segments
- Create a parcel table using segment labels
- Create parcel reports
- Create an alignment
- Edit an alignment
- Create a profile view
- Create and edit a profile layout
- Create sections
- Create an assembly
- Edit a corridor model
- Create a corridor surface
- Create a volume report
- Create a section view of a a corridor model

- Create a feature line, a grading group, and a grading object
- Create a surface from a grading object
- Generate a quantity takeoff report
- Create a grading solution
- Import Land Desktop data
- Export data
- Access the Vault
- Create a pipe network
- Edit a pipe network
- Edit pipe network part properties
- Draw pipe network parts
- Edit pipe network parts
- Import survey control network data
- Create a local survey database
- Modify survey database settings

Autodesk Certification
Civil 3D 2007 Certified user examination overview

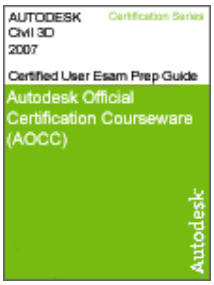
Overview

The Autodesk Civil 3D 2007 Certified User examination is intended to measure your comprehensive knowledge of Autodesk Civil 3D 2007® software.

Examination

The Certified User examination includes 40 questions. Some of the questions require you to use Civil 3D 2007 to create and modify drawings. The question format includes multiple choice, multi select, and point and click questions. The exam has a two-hour time limit. Your exam results will always be available online at http://autodesk.starttest.com. These results are confidential.

Preparation



Passing the examination requires a working knowledge of the performance tasks listed below. You may purchase the **Civil 3D 2007 Certified User Exam Preparation Guide** to review the knowledge and skills assessed on the examination. This courseware is designed to teach the knowledge and skills assessed on the Civil 3D ® 2007 Certified Expert examination. This courseware is designed as a teaching tool for instructor-led courses as well as self-paced learning. In addition to the coursework, this manual encourages self-learning through the use of the Civil 3D Help system. The courseware includes student data files and a 30-day trial version of Civil 3D 2007.

Autodesk Civil 3D 2007 Certified User Examination Objectives

Section 1: Application Interface

Required Knowledge and Skills Objective

Use the Civil 3D application interface to change point styles, and create label styles.

Performance Tasks

- Assign a new object style and label style to a point.
- Create label styles for surfaces, parcels, and alignments.
- Change parcel styles and parcel label styles and change parcel style display order.

Section 2: Working with Point Data

Required Knowledge and Skills Objectives

Use Civil 3D to create and edit points based on objects, point groups, and description keys, view and edit point data in table format and using Toolspace, and create points using transparent commands.

Performance Tasks

- Create points based on a parcel, surface, or alignment.
- Create a new point group.
- Create and edit a description key.
- Create points using transparent commands.

Section 3: Surface Modeling

Required Knowledge and Skills Objectives

Use Civil 3D to create a surface by importing an external LandXML file, add a breakline, adjust elevation criteria, generate a surface analysis, and display the results in the drawing area. Create and view a 3D surface and use 3D viewing tools. Create boundaries, masks, and contour labels for surfaces.

Performance Tasks

- Import data from an external LandXML file.
- Add a breakline to a surface.
- Generate a surface analysis and display the results in the drawing area.
- Use the 3D Orbit, Object Viewer, and Camera tools.
- Create a 3D view, add viewports, and add shadings to your drawing.
- Create a boundary.
- Create a mask.
- Create contour labels.

Section 4: Parcel Development

Required Knowledge and Skills Objectives

Use Civil 3D to create parcels using an object or by subdividing existing parcels, create and modify parcel segment labels, and annotate parcels using tables and generate a report from parcel data.

Performance Tasks

- Create a parcel by using an object or by subdividing an existing parcel.
- Add and modify parcel segment labels.
- Create a parcel table using segment labels.
- Create parcel reports.

Section 5: Road Design

Required Knowledge and Skills Objectives

Use Civil 3D to create and edit alignements, profiles and profile views, profile layouts, and sample lines and section views.

Performance Tasks

- Create an alignment by drawing it manually or by using an existing polyline.
- Edit an alignment by using grips or in a table format.
- Create and edit profiles.
- Create a profile view and change its display style.

- Create and edit a profile layout.
- Create single or multiple sample lines.
- Create section views.

Section 6: Corridor Modeling, Subassemblies, and Cross Sections

Required Knowledge and Skills Objectives

Use Civil 3D to model complex corridors, create an assembly and an assembly offsets. Edit existing cooridor models and create a corridor surface, calculate the corridor volume, and create a corridor cross section.

Performance Tasks

- Create an assembly.
- Create a corridor with multiple regions.
- Edit a corridor mode including creating section viewl.
- Create a corridor surface.
- Create a volume report.

Section 7: Grading

Required Knowledge and Skills Objective

Use Civil 3D to create grading objects and surfaces from grading objects.

Performance Tasks

- Create a feature line, a grading group, and a grading object.
- Create a surface from a grading object.

Section 8: Sharing Data

Required Knowledge and Skills Objectives

Use Civil 3D to import contents of a Land Desktop projects into Autodesk Civil 3D, Share project data with non-Autodesk Civil 3D users, and work with Civil 3D files using Vault.

Performance Tasks

- Import the contents of a Land Desktop project into Autodesk Civil 3D.
- Export data as a LandXML, DWF, or text file.
- Access the Vault.
- Use a typical workflow for Autodesk Civil 3D and the Vault.
- Check files in to a vault.
- Check out drawings and data.

Section 9: Pipe Networks

Required Knowledge and Skills Objectives

Use Civil 3D to add pipes and structures to a pipe network, edit pipe networks, change the properties of parts in plan view. Draw and edit pipe network parts in profile and section views.

Performance Tasks

- Create a pipe network.
- Edit a pipe network using grip editing and the shortcut menu.
- Edit pipe network part properties in a tabular format.
- Draw pipe network parts in profile or section view.
- Add labels to pipe network parts in profile view.
- Edit pipe network parts in profile view.

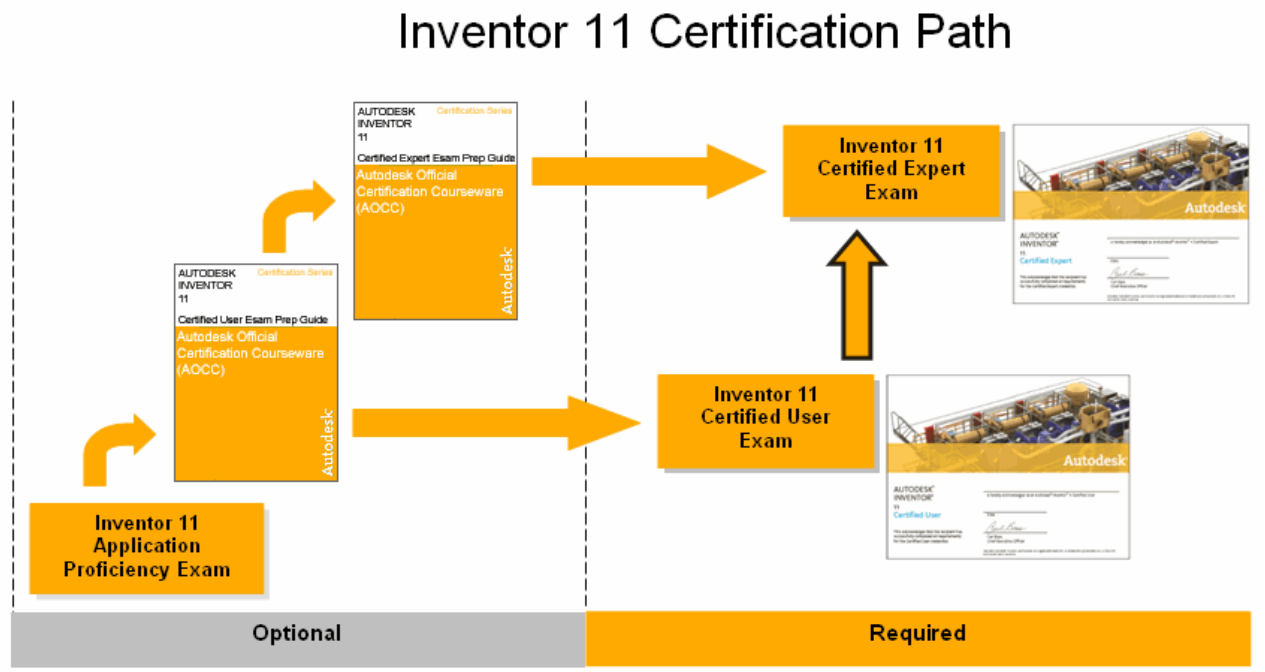
Section 10: Survey

Required Knowledge and Skills Objectives

Use Civil 3D to import survey data containing networks, figures, and points to create a local survey database. Modify the database settings, and modify survey user settings.

Performance Task

- Import survey control network data.
- Create a local survey database.
- Modify survey database settings.



To obtain the Inventor 11 Certified Expert credential, you must pass both the Inventor 11 Certified User and Inventor 11 Certified Expert examinations.

AUTODESK INVENTOR®

Application proficiency examination for Inventor 11

Proficiency Examination for Application Awareness

Validate that you know the current product release. How well do you know an Autodesk application?

The *Autodesk Inventor 11 Application Proficiency Examination* is an on-line examination consisting of 40 questions that assess your knowledge of the tools, features, and common tasks in Inventor. Available 24/7 through the Web, this exam will help you assess your readiness for certification.

Autodesk Inventor 11 Application Proficiency Examination Objectives

This examination consists of 40 multiple-choice questions that assess the following knowledge tasks:

- Define search paths in project files
- Use relative search paths in project files
- Apply 2D sketch constraints while sketching
- Apply 2D sketch constraints
- Work with adaptive features
- Create a shared sketch
- Create hole features

- Create a presentation file
- Create Assembly features
- Create and Edit Style Libraries
- Use Drawing Resources
- Place balloons in a drawing
- Create rib and web features
- Create a coil feature
- Use window and crossing selection methods in a drawing
- Create a section view in a drawing
- Apply assembly constraints
- Apply assembly constraints to Mate assemblies
- Control visibility of parts in an assembly
- Control the center of gravity symbol
- Create a sweep feature
- Create a loft feature
- Create 3D curves from intersecting surface
- Use surface tools to create a solid
- Use sheet metal tools
- Weldment environment
- Import data from other CAD systems
- Create a frame using the Frame Generator
- Create User Parameters
- Work with Bill of materials
- Edit a Parts List
- Know the functions of each area of Inventor
- Create an iAssembly
- Use AutoLimits
- Setup Standards for the Content Center

Autodesk Certification
Inventor 11 Certified user examination overview

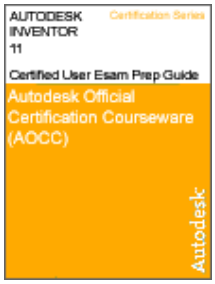
Overview

The Autodesk Inventor 11Certified User examination is intended to measure your comprehensive knowledge of Autodesk Inventor 11® software.

Examination

The Certified User examination includes 50 questions. Some of the questions require you to use Inventor 11 to create and modify drawings. The question format includes multiple choice, multi select, and point and click questions. The exam has a two-hour time limit. Your exam results will always be available online at http://autodesk.starttest.com. These results are confidential.

Preparation



Passing the examination requires a working knowledge of the performance tasks listed below. You may purchase the **Inventor 11 Certified User Exam Preparation Guide** to review the knowledge and skills assessed on the examination. This courseware is designed to teach the knowledge and skills assessed on the Inventor 11 Certified User examination. This courseware is designed as a teaching tool for instructor-led courses as well as self-paced learning. In addition to the coursework, this manual encourages self-learning through the use of the Inventor 11 Help system. The courseware includes student data files and a 30-day trial version of Inventor 11.

Autodesk Inventor 11 Certified User Examination Objectives

Section 1: Parametric Part Design and Basic Sketching

Required Knowledge and Skills Use Inventor 11 to design parametric parts, create 2D sketches, apply geometric constraints, dimension sketches.

Performance Tasks

- Create parametric parts.
- Work with 2D Sketches.
- Use basic sketching tools.
- Apply geometric constraints.
- Show and delete constraints.
- Create dimensional constraints.

Section 2: Basic Shape Design

Required Knowledge and Skills Use Inventor 11 to create basic sketched features, use intermediate sketching functions, edit parametric parts, create work features, create basic swept shapes.

Performance Tasks

- Create extruded features.
- Create revolved features.
- Create and use construction geometry.
- Create and use reference geometry.
- Edit features.
- Edit sketches.
- Create work planes.
- Create work axis.
- Create sweep features.

Section 3: Detailed Shape Design

Required Knowledge and Skills Use Inventor 11 to create chamfers and fillets, holes and threads, use patterning and mirroring features, create thin-walled parts.

Performance Tasks

- Create fillets.
- Create holes.
- Create rectangular patterns.
- Mirroring features.
- Create shell features.

Section 4: Advanced 2D Sketching

Required Knowledge and Skills	Use Inventor 11 to capture design intent; use construction geometry.
Performance Tasks	▪ Create and use sketch points.

Section 5: Part Modeling Enhancements

Required Knowledge and Skills	Use Inventor 11 curve enhancement features.
Performance Tasks	▪ Use precise input.

Section 6: Imported Data Workflow Enhancements

Required Knowledge and Skills	Use Inventor 11 measure tools.
Performance Tasks	▪ Use measure tools.

Section 7: Assembly Design Overview

Required Knowledge and Skills	Use Inventor 11 to implement general assembly design approaches, create and apply project files in assembly designs, use assembly modeling techniques.
Performance Tasks	▪ Identify the fundamental approaches to modeling an assembly. ▪ Choose the correct assembly modeling approach for a given situation. ▪ Create a project file. ▪ Edit a project file.

Section 8: Placing, Creating, and Constraining Components

Required Knowledge and Skills	Use Inventor 11 to place components in an assembly, constrain components, use the Content Center, and constrain components.
Performance Tasks	▪ Assemble components into and assembly. ▪ Assemble components use multiple techniques. ▪ Constrain components in an assembly. ▪ Identify constraint types and place appropriate constraints ▪ View and edit assembly constraints. ▪ Identify the characteristics of the content center. ▪ Place components from the content center. ▪ Access the supplier content center. ▪ Pattern components. ▪ Create components in place in an assembly. ▪ Edit components in place in an assembly.

Section 9: Basic Assembly Tools

Required Knowledge and Skills	Use Inventor 11 to calculate physical properties, check for interferences, drive constraints for simple motion and analysis
	▪ Calculate physical properties.

Performance Tasks

Section 10: Assembly Modeling Enhancements

Required Knowledge and Skills Use the content center

Performance Tasks

- Use the content center.

Section 11: 3D Engineering Design and Documentation

Required Knowledge and Skills Use Inventor 11 to work with a presentation file.

Performance Tasks

- Identify uses for a presentation file.

Section 12: Drawing Standards and Resources

Required Knowledge and Skills Use Autodesk Inventor 11 to manage drawing resources.

Performance Tasks

- Create sheets in a drawing.
- Create sheet formats in a drawing.

Section 13: Basic View Creation

Required Knowledge and Skills Use Autodesk Inventor 11 to create a drawing environment, create base and projected views, create section and detail views, manage views.

Performance Tasks

- Create drawings.
- Edit base and projected views.
- Create section views.
- Create detail views.
- Move, align, and edit views.

Section 14: Dimensions, Annotations, and Tables

Required Knowledge and Skills Use Autodesk Inventor 11 to apply automated and manual dimensioning techniques, create hole and thread notes, create hole tables, and create centerlines, symbols, and leaders.

Performance Tasks

- Retrieve model dimensions
- Create general, baseline, and ordinate dimensioning.
- Create and edit hole and thread notes.
- Create and edit hole tables.
- Create centerlines and center marks.
- Work with symbols.
- Add leaders and text.

Section 15: Drawing and Documentation

Required Knowledge and Skills Use Autodesk Inventor 11 to edit a dimension's display, move a dimension between views.

Performance Tasks

- Edit a dimension's display.
- Movie a dimension between views.

Autodesk Certification
Inventor 11 Certified Expert examination overview

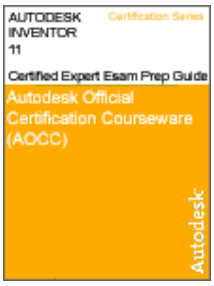
Overview

The Autodesk Inventor 11Certified Expert examination is intended to measure your comprehensive knowledge of Autodesk Inventor 11® software.

Examination

The Certified Expert examination includes 50 questions. Some of the questions require you to use Inventor 11 to create and modify drawings. The question format includes multiple choice, multi select, and point and click questions. The exam has a two-hour time limit. Your exam results will always be available online at http://autodesk.starttest.com. These results are confidential.

Preparation



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Autodesk Inventor 11 Certified Expert Examination Objectives

Section 1: Part Design

Required Knowledge and Skills Objectives

Use Inventor 11 to reorient and share sketches, apply parameters, work with imported images, create work points, and perform part validation.

Performance Tasks

- Reorient a sketch
- Describe shared sketches and their benefits.
- Share sketches and describe the guidelines for sharing sketches.
- Use a shared sketch to create holes with different sizes from a single sketch.
- Create and modify parameters and equations.
- Import an image into a layout sketch.
- Locate, display, and use the default work features and create new work features on a part.
- Use the Work Point tool to create work points on a part.
- Determine the physical properties of components in Autodesk inventor.

Use Inventor 11 to control 2D spline shape, apply G2

Section 2: Curves

Required Knowledge and Skills Objectives

continuity and the smooth constraint, create 3D lines, import points, create curves by intersecting sketches or surfaces, create 3D curves from intersecting 2D curves, apply 3D sketch constraints, and edit 3D splines using their bowties.

Performance Tasks

- Describe how to analyze spline curvature.
- Control spline shape with connections to other sketch geometry.
- Control spline shape with spline point handles.
- Describe G2 continuity and add Smooth (G2) constraints to spline sketch geometry.
- Describe 3D sketches and their functions.
- State the differences between 2D and 3D sketches.
- State the recommended practices for creating 3D sketches.
- Identify the types of constraints that can be added to a 3D sketch.
- Use the Line tool to create geometry in 3D space.
- Use the Bend tool to create bends at the vertex of 3D sketch lines.
- Modify 3D sketch geometry using the 3D Move/Rotate tool.
- Import coordinate values from an Excel file to create points in a 2D or 3D sketch.
- Describe included geometry and its functions.
- State guidelines for using existing edges in 3D sketches.
- Project edge geometry into a 3D sketch using the Include Geometry tool.
- Describe guidelines and procedures for editing and moving included geometry.
- Describe the creation of 3D curves at the intersection of 2D sketches, faces, planes, or surfaces.
- Create 3D sketch geometry at the intersection of two 2D sketches or two sets of part geometry using the 3D Intersection Curve tool.
- Create new 3D sketch geometry by projecting sketch curves to a surface.

Section 3: Surface Design

Required Knowledge and Skills Objectives	Use Inventor 11 to project sketch curves to a surface, trim surfaces, extract loop, create boundary patches, stitch surfaces, solve surface problems, and fillet surfaces.
Performance Tasks	▪ Project curves onto a surface. ▪ Trim surfaces. ▪ Extract a loop. ▪ Create planar and 3D boundary patches using the Boundary Patch tool. ▪ Extend surfaces in the part modeling environment using the Extend Surface tool. ▪ Create and modify a solid model from surfaces, work planes, and boundary patches by extending, and trimming. ▪ Stitch together surfaces. ▪ Check quality of surfaces. ▪ Identify common surface and continuity problems in complex designs. ▪ Describe how to isolate and repair surface problems. ▪ Remove and replace problem faces in a complex design. ▪ Describe the recommended practices for adding fillets to a part. ▪ Fillet surfaces with the Fillet tool.

Section 4: Advanced Part Design

Required Knowledge and Skills Objectives	Use Inventor 11 to replace a face using a work plane, create ribs and webs, create loft features, create sweep features, apply sculpt to create and edit solid models, adding autolimits, and apply standard tolerancing values and parameter tolerances.
Performance Tasks	▪ Use the Replace Face tool to replace a face on a part with a face based on a work plane. ▪ Determine when to use a rib or web in your design. ▪ Use the Rib tool to create ribs and webs on your parts. ▪ State the guidelines for creating and using ribs and webs. ▪ Create loft features using different enhancements and enhanced techniques. ▪ Create sweep features using different enhancements and enhanced techniques. ▪ Describe how solid and surface modeling are related. ▪ Create complex solid models using sculpt features. ▪ Create AutoLimits ▪ Apply part tolerance

Section 5: Assembly Design

Required Knowledge and Skills Objectives	Use Inventor 11 to apply browser filters, isolate components, derive bodies as bounding boxes, derive components, apply level of detail representations, manage design variations, author iassembly configurations, add tables listing iassembly configurations, and work with global bill of materials.
Performance Tasks	▪ Describe the use of browser filters ▪ Utilize browser filters in an assembly. ▪ Use the Isolate tool to isolate components in the assembly. ▪ Manage which components are suppressed in an assembly and have part bodies display as bounding boxes in a derived assembly. ▪ Describe the characteristics of large assemblies. ▪ Explain the purpose and characteristics of Level of Detail representations. ▪ Create, save, and activate your own custom Level of Detail representations. ▪ Describe the characteristics of derived parts. ▪ Create individual parts from a master model. ▪ Describe how to reuse design data to reduce the time to complete your designs. ▪ Change the iAssembly version placed in an assembly by changing a member's iPart. ▪ Define and describe how to author iAssembly configurations. ▪ Author different configurations in an iAssembly. ▪ Describe the global bill of materials and its uses. ▪ State how to renumber, lock, and set the view properties for item numbers. ▪ State how iProperties for components are modified and how to control when row merging occurs. ▪ Change the display of BOM data, change item number values, add property columns, and change property values.

Section 6: Additional Tools

Required Knowledge and Skills Objectives	Use Inventor 11 advanced tools.
Performance Tasks	▪ Explain what content can be published to the Content Center and how it can be published. ▪ Use content from the Content Center to add a machine key and bearing to an assembly design. ▪ Describe how functional design can help you create better designs in less time. ▪ Explain how to use Design Accelerator to reduce the

	time required to design and generate common components and systems. ▪ Generate a bolted connection. ▪ Describe how to set up and render images and animations. ▪ Create rendered images with Inventor Studio. ▪ Create a skeletal frame file for use with the Frame Generator. ▪ Use the Frame Generator's Insert tool to add structural members to a frame assembly. ▪ Identify the types of information stored within sheet metal styles. ▪ Create and use sheet metal styles. ▪ Understand sheet metal punching. ▪ Use the Punch tool to create sheet metal punch features. ▪ Understand when to use corner seams. ▪ Use the Corner Seam tool to create sheet metal corners. ▪ Define an assembly weldment. ▪ Activate the weldment environment. ▪ Describe the tools that are available in the weldment environment. ▪ Use Autodesk Inventor to create weldments. ▪ Use Autodesk Inventor to create weld features.
Section 7: Drawing Creation	
Required Knowledge and Skills Objectives	Use Inventor 11 to create custom title blocks, create styles with the style editor, and model sketches in drawing views.
Performance Tasks	▪ Describe custom border and title blocks. ▪ Create custom borders. ▪ Create custom title blocks. ▪ Create styles in the Styles and Standards Editor dialog box. ▪ Explain what it means to include 2D and 3D model sketches in a drawing view and how to include them.

Helpful links:

www.autodesk.com/atc

www.autodesk.com/certification

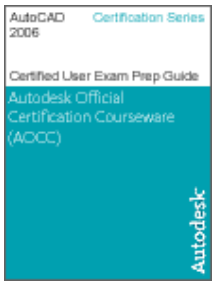
www.autodesk.com/aotc

www.estore.autodesk.com

Autodesk Official Certification Courseware

AutoCAD 2007

Certified User Exam Preparation Guide

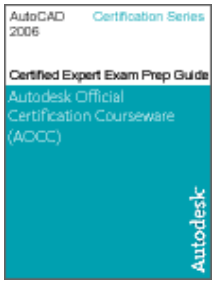


This courseware covers the concepts and skills necessary to pass the Autodesk 2007 User Certification Exam. The lessons in this material map to the specific learning objectives required on the Certification Exam. Tips are provided on how to take the exam. Some sample exam questions are provided as examples of how questions appear on the exam. Although this courseware is designed to be used as part of an instructor-led course, the materials are also well-suited for self-paced training. Includes a 30-day trial CD of AutoCAD 2007 software.

Suggested Course Duration: 2-3 days
Page Count: 424
U.S. MSRP: $83.95
SKU: 001260500081685

AutoCAD 2007

Certified Expert Exam Preparation Guide



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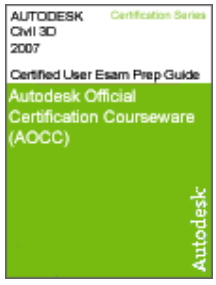
Suggested Course Duration: 2-3 days
Page Count: 460
U.S. MSRP: $83.95
SKU: 001260500081690

Autodesk Civil 3D 2007

Certified User Exam Preparation Guide

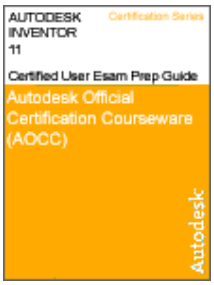


This courseware teaches the knowledge and skills assessed on the Autodesk Civil 3D 2007 software Certified User examination. This courseware can serve as a teaching tool for instructor-led courses as well as self-paced learning. In addition to the coursework, this manual encourages learning through the use of the AutoCAD® Help system. Includes a 30-day trial CD of Autodesk Civil 3D 2007 software.

Suggested Course Duration: 2 days
Page Count: 302
U.S. MSRP: $83.95
SKU: 237040500081950

Autodesk Inventor 11

Certified User Exam Preparation Guide



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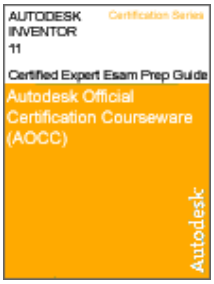
Suggested Course Duration: 2-3 days
Page Count: 440
U.S. MSRP: $83.95
SKU: 527110500081675

Autodesk Inventor 11

Certified Expert Exam Preparation Guide



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Suggested Course Duration: 2-3 days
Page Count: 370
U.S. MSRP: $83.95
SKU: 527110500081680

The Autodesk® Official Certification Courseware can be ordered through:

estore.autodesk.com

Other courseware if available at:

www.autodesk.com/aotc