Skills Framework

AutoCAD

Overview

Introduction to Tosa Skills Framework

For Tosa Assessment and Certification

Tosa® (Test on Software Applications)

The Tosa assessments and certifications will determine and validate a candidate's proficiency and skill level in software applications used in a professional environment. The Tosa assessments are designed to validate the professional AutoCAD software skills of individuals (students, trainees, employees, or jobseekers) in supporting their employment, professional or academic objectives.

Tosa assessments employ the Adaptive Testing methodology, which creates a personalized testing experience adapted to a candidate's skill level for a selected software application. The score is based on the Item Response Theory using a 3-parameter logistic model, similar to the GMAT scoring method. Adaptive-based testing selects questions that challenge candidates to the limit of their knowledge and abilities.

Tosa Skills Framework Objective

This Tosa framework provides an overview of the subject areas being assessed during the Tosa Assessment and Certification exams. Tosa assessments and certification exams validate candidate proficiency in the most popular professional AutoCAD software programs using a score on a scale from 1-1000 for the Certification Assessment, and a score divided into five levels, from "Beginner" to "Expert," for the Diagnostic Assessment.

The objective of this document is to present an overview of the technical skills associated with each of the four main AutoCAD domains within each proficiency level. This information will also support educators and trainers in tailoring their training programs to achieve desired proficiency levels.

Unique Tosa Scoring

Tosa® assessment and certification is based on a single scoring scale translated into five levels:

- from Beginner to Expert for the assessment;
- from 1 to 1000 for certification.

Tosa® levels	Corresponding Tosa® score	Certification status & documents issued
Expert	876 - 1000	Certification earned - diploma & Credly digital badge issued
Advanced	726 – 875	Certification earned - diploma & Credly digital badge issued
Productive	551 – 725	Certification earned - diploma & Credly digital badge issued
Basic	351 – 550	Certification failed - certificate of completion issued
Beginner	1 – 350	Certification failed - certificate of completion issued

AutoCAD domains and subdomains

Interface and settings	■ Managing AutoCAD workspace ■ Creating macros and scripts
Drawing tools and modifications	■ Creating and editing shapes ■ Using drawing precision tools ■ Mastering layers, blocks, and attributes
Layout and annotations	■ Adding hatches, dimensions, tables, and scales ■ Creating and modifying dynamic blocks ■ Editing object styles
Printing	■ Configuring windows ■ Setting up views ■ Exporting the presentation to different formats ■ Printing

About the AutoCAD certification

The Tosa AutoCAD certification relies on a database of around 140 questions. It is composed of 35 questions and lasts one hour. The algorithm adapts to each answer of the candidates to adjust the difficulty level of the questions until they reach the exact definition of the candidates' level by calculating the limit of their skills.

Since the test is adaptive, the series of questions that each candidate gets is unique for each test. This uniqueness allows for a more accurate evaluation of the candidate's level. It also limits cheating and the memorization of questions on different passages.

Our platform allows individuals to take the certification in class, in an approved testing center, or remotely via our integrated asynchronous online proctoring solutions.

Our remote proctoring solutions provide added flexibility for both the administrator and the candidate, allowing the certification exam to be taken anywhere, at any time. The candidate only needs an internet connection and a computer equipped with a working webcam and microphone.

Candidates receive a numeric score out of 1000 points associated to a proficiency level on a five-level scale. Candidates who score between 1 and 550 points don't earn the certification. They will not receive a diploma but a certificate of completion. Candidates who score 551 points or above earn the certification. They will receive a diploma by email within five (5) business days and are eligible to a Credly digital badge. There is no requirement to be eligible to take the exam, but our recommendations to be well prepared on exam day are:

- Take at least one Tosa AutoCAD adaptive assessment to estimate your level and get familiar with the test format
- Use free practice tests on our website for training
- Follow e-learning or training courses (average duration per level is between 10 and 15 hours per certification so around 150 hours total)

Tosa certification diplomas are valid for three years from the date of issue as skill levels evolve or decline over time, depending on the use of the software. New software and software versions are released every year, and skills must be updated. We cannot legitimately certify a digital skills level for more than three years. Limiting the certification validity reinforces the need for life-long learning and professional development.

Tosa certifications can be retaken when it is expired. Earners willing to improve their score and level can also retake the exam at any time.

Level 1 – Beginner User

Between 1 and 350 points

The Beginner Proficiency is set for a score from 1 to 350, which is the lowest Tosa score category. Attaining the Beginner score defines little or limited knowledge of the AutoCAD application, including the application's basic functions and features, highlighting the inability to use the application in a professional environment.

Overview

Domains	Skills Assessed
Interface and settings	⸢ Identify the different areas of the interface (ribbon, graphics area, command line, status bar) ⸢ Open a file
Drawing tools	⸢ Draw simple shapes (lines, circles, rectangles, arcs) ⸢ Change the size of simple shapes ⸢ Select a drawing unit ⸢ Edit objects (move, copy, mirror) ⸢ Select objects using different methods
Layout and annotations	⸢ Create texts, dimensions, and leader lines ⸢ Create hatches
Printing	⸢ Configure a layout ⸢ Select paper size and printer ⸢ Set unit

Level 2 – Basic User

Between 351 and 550 points

Prior to the acquisition of the skills of the Basic level, the candidate will have mastered the skills of the Beginner level.

Interface and Settings

Candidates can use basic settings to start a new drawing.

Drawing Tools

Candidates know how to use certain precision tools to produce simple drawings.

Layout and Annotations

Basic candidates adjust the size of texts, leader lines and dimensions. They can also use and create layers, knowing how to set the color, line type and printing thickness of the layers. They can insert and create simple blocks.

Printing

Candidates can print their work. They can position the drawing on the presentation sheet using windows. They know how to assign a print scale to a window.

Overview

Domains	Skills Assessed
Interface and settings	**Environment** ⊤ Activate essential status bar options ⊤ Change the color of the graphics area and the ribbon ⊤ Save a file ⊤ Save a file under a new name
Drawing tools	**Drawing** ⊤ Start a drawing ⊤ Easily navigate within a drawing using the zoom features

TOSA graphics

	Use the Polar Tracking, Object Snaps, Dynamic Input, Object Snap Tracking precision tools **Editing** Edit objects (Mirror, Trim, Extend, Connect, Chamfer, Offset)
Layout and annotations	Adjust the size of texts, leader lines and dimensions Use and create layers Configure the color, line type and printing thickness of the layers Insert and create simple blocks
Printing	Position the drawing on the presentation sheet using windows Assign a print scale to a window

Level 3 – Productive User

Between 551 and 725 points

Prior to the acquisition of the skills of the Productive level, the candidate will have mastered the skills of the Basic level.

Interface and Settings

Managing the interface and settings in AutoCAD at the Productive level requires candidates to identify the different areas of the interface to become familiar with a file.

Candidates know how to use basic settings to start a new drawing and essential settings for working with existing drawings.

Business application: for example, these skills enable a design office drafter to make the essential settings of the software to adjust the details of a product.

Drawing Tools

The use of AutoCAD drawing tools and editing to at the Productive level involves skills that enable candidates to accurately draw simple shapes to draw plans.

Candidates know how to use the editing tools to make corrections and draw more efficiently.

Business application: for example, these skills enable a design office drafter to produce detailed drawings of products.

Layout and Annotations

AutoCAD layout and annotations at the Productive level involve skills that enable candidates to create and edit blocks, attributes, geographic locations, and external references to work with libraries and external information linked to the plans.

Business application: for example, these skills enable a drafter in a design office to update and classify a technical library.

Printing

The preparation for printing at the Productive level involves skills that enable candidates to create several windows on the same sheet by displaying different areas of the drawing to print complex page layouts.

Business application: for example, these skills enable a design office drafter to print out procedures and technical supports.

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Overview

Domains	Skills Assessed
Interface and settings	**Environment** 🖈 Use the simple options settings 🖈 Use the main file formats and versions 🖈 Edit the original position and orientation
Drawing tools	🖈 Use basic and advanced drawing tools 🖈 Use basic and advanced editing tools 🖈 Use the Centerline and Center Mark tools
Layout and annotations	**Block management** 🖈 Edit blocks 🖈 Add attributes to a block **Table management** 🖈 Create a table 🖈 Use a geographic location 🖈 Insert an external reference
Printing	**Window management** 🖈 Create several windows on the same sheet with different scales 🖈 Create windows of any shape **Printing** 🖈 Print the entire drawing or only a selected area

Level 4 – Advanced User

Between 726 and 875 points

Prior to the acquisition of the skills of the Advanced level, the candidate will have mastered the skills of the Productive level.

Interface and Settings

Managing AutoCAD interface and settings at the Advanced level involves skills that enable candidates to customize the user interface to adapt the software to their work habits.

Business application: for example, these skills enable an interior designer to customize the software interface to adapt it to an interior design project.

Drawing Tools

The use of AutoCAD drawing tools and editing at the Advanced level involves skills that enable candidates to master drawing tools for complex shapes and use the editing functions to create and edit complete plans.

Business application: for example, these skills enable an interior designer to manage a complex project, such as the development of an industrial site.

Layout and Annotations

AutoCAD layout and annotations on at the Advanced level involve skills that enable Candidates to create Excel links and clean up files to create automatic table updates and streamline plans.

Business application: for example, these skills enable an interior designer to update a project involving set design for a stage show, a project that could change during its production.

Printing

Preparation for printing at the Advanced level involves skills that enable candidates to manage layers in windows to create several presentations with different displays.

Business application: for example, these skills enable an interior designer to create different presentation versions for the same project.

Overview

Domains	Skills Assessed
Interface and settings	**Environment customization** ⌐ Customize the software interface ⌐ Create new icons ⌐ Create keyboard shortcuts ⌐ Edit keyboard shortcuts
Drawing tools	**Drawing** ⌐ Use advanced drawing tools: Spline, Clean, Revision Clouds, Donuts, etc. **Editing** ⌐ Use advanced editing tools ⌐ Edit the network ⌐ Remove duplicates ⌐ Edit the space
Layout and annotations	⌐ Create table links with Excel ⌐ Purge a file ⌐ Use advanced layer functions ⌐ Layer Walk, Merge, Layer State ⌐ Draw in an object
Printing	⌐ Manage layers in presentations ⌐ Publish presentations ⌐ Edit plot styles

Level 5 – Expert User

Between 876 and 1000 points

TOSA**graphics**

Prior to the acquisition of the skills of the Expert level, the candidate will have mastered the skills of the Advanced level.

Interface and Settings

Managing the AutoCAD interface and settings at the Expert level involves skills that enable Candidates to create interface elements to automate repetitive tasks.

Business application: for example, these skills enable an AutoCAD modeling expert to create automated scheduling and support functions.

At this level, candidates can provide training on the software.

Drawing Tools

The use of AutoCAD drawing tools and editing at the Expert level involves skills that enable candidates to use different command options to acquire quick for creation and editing tools.

Business application: for example, these skills enable an AutoCAD modeling expert to update and develop the information present by industrializing the elements to ensure deployment in all stores.

At this level, candidates can provide training on the software.

Layout and Annotations

AutoCAD layout and annotations at the Expert level involve skills that enable candidates to use the dynamic blocks to create libraries that are simple and efficient to use.

Business application: for example, these skills enable an AutoCAD modeling expert to create automatisms for updating AutoCAD libraries to ensure deployment in all stores.

At this level, Candidates can provide training on the software.

Printing

Preparation for printing at the Expert level involves skills that enable candidates to use custom fields to obtain automatic updating of information when printing plans in one or more presentations.

Business application: for example, these skills enable an AutoCAD modeling expert to configure all line types according to the printing scale.
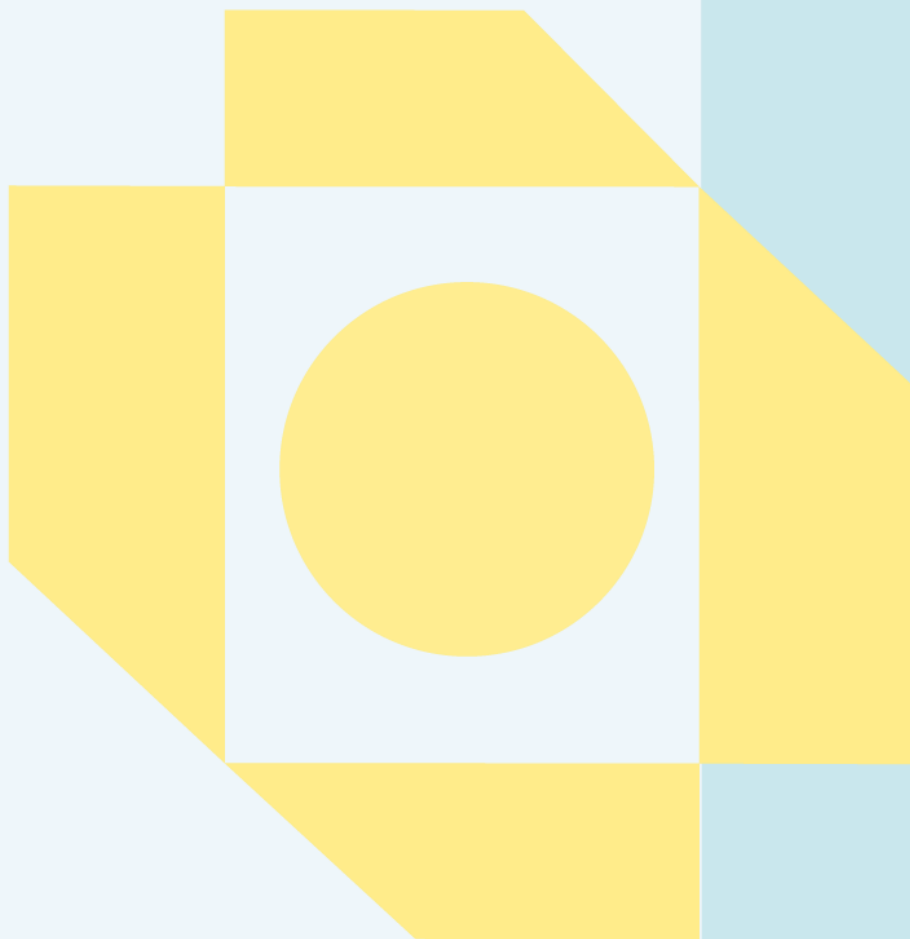
At this level, candidates can provide training on the software.

Overview

Domains	Skills Assessed
Interface and settings	**Environment customization** 🕴 Create macros 🕴 Create scripts 🕴 Create workspaces
Drawing tools	🕴 Create custom line types **Use the most advanced command options** 🕴 Handle options 🕴 Select filters 🕴 Analyze and edit any type of object
Layout and annotations	**Block management** 🕴 Create dynamic blocks 🕴 Edit dynamic blocks 🕴 Manage Libraries
Printing	🕴 Create master layouts using custom fields 🕴 Export presentations in different file formats (PDF, DWG, Images)