

# Maya Certified User exam

## Exam guide



Armada is an Autodesk Certification Centre offering exams that lead to industry-recognised qualifications.

For Maya, we offer an Autodesk Certified User (ACU) exam



### Exam summary and preparation

Entry level exam to validate your knowledge of key techniques for modelling and animation in Maya.

Recognised by industry as proof of competency using Maya.

Qualification: Autodesk Certified User (ACU) in Maya.

Sat online, from your place of work or home.

Length of exam: 50 minutes.

### Requirements

It is expected that all candidates have a general understanding of:

- Creating and setting up projects
- Navigating the user interface and workspaces
- Creating polygon-based models
- Unwrapping a model
- Rigging a model with bones
- Animating a model
- Creating materials and applying them
- Adding cameras
- Lighting and rendering scenes
- 3D perspectives
- Proper topology
- Understanding and locating software preferences
- Troubleshooting models, rigs and animations
- The Maya help system

For a list of the topics and features you're likely to be tested in, see over.

### Recommended preparation

- Attend Maya Essentials training.
- 150 hours' post-course, hands-on experience using Maya.

### Certificate and benefits

Successful candidates receive:

- An e-certificate (PDF) from Autodesk confirming your Maya-certified status.
- An official Autodesk-Certified badge that you can use to market your skills, e.g. on your business cards, in your email signature, on your website, etc.

### Practice test

A practice test is available that reflects the questions you're likely to be asked in your Maya ACU exam.

### Further info, dates, times, price

See [armada.co.uk/exams/maya](http://armada.co.uk/exams/maya).

## Scene Management

### Set up a project

Use the Project Window

- Defining a project and setting paths and folders.

Create a new project

Set the project

### Setup the scene preferences

Change the grid spacing

Set the scene units

Set the scene frame rate

### Manage scene objects

Organize objects

- Select, group, parent, duplicate

Navigate and rearrange hierarchies

- Outliner

Manage and organize display layers

- Labeling, visibility, layer type, colors

### Modify Pivots

Identify the coordinate system used by the pivot

Change the coordinate system used by an object or component

Modifying the pivot

- Move the pivot, rotate the pivot, use discreet rotate on a pivot, snap the pivot to a vertex, center the pivot on an object, align the pivot

### Modify attributes on one or more objects

Locate the value of an animated attribute

Change multiple object's attributes

Use the Input Line for precision transformation

### Change viewport display

Change viewport shading

Change viewport lighting

Determine poly count

Toggle viewport display types

- Wireframe, Shaded, Textured, Light, etc.

## Modelling

### Create and modify a polygon primitive

Toggle interactive creation

Manipulate the parametric attributes

Duplicate a polygon primitive

- Duplicate special and duplicate with transformation

Align polygon primitives

Deform a polygon surface

- Use lattice, non-linear deformers (bend, flare, sine, squash, twist and wave)

### Edit polygon surfaces

Identify polygon components

Add polygon components

- Insert Edge Loop, Offset Edge, Bevel, Fill Hole, Append to Polygon.

Manipulate polygon components

- Move and rotate
- Switch between various object and component modes

Use the mesh display menu

- Hard and soft edges

### Use image planes

Create an image plane

Adjust/modify an image plane

### Modelling tool kit

Utilize Symmetry and Constraints

- Transform and selection constraints

Illustrate uses of Soft Selection

- Change Soft Selection parameters

Perform object operations

- Combine, Separate, Smooth, Boolean

Manipulate components

- Extrude, bevel, bridge, add divisions

Utilize Tools to modify geometry

- Quad Draw, Multi-Cut, Target Weld, Connect

## Texture Coordinates

### Assign UVs to a mesh

Apply basic UV mapping projections

- Automatic, Planar, Cylindrical, Spherical

Change attributes of UV projections

### Use the UV Editor

Describe UV components

- Define a UV and identifying a UV shell

Transform a UV shell

- Cut, Flip, Move and Sew, Unfold, Relax, Layout

Utilize UV manipulation aids

- Assign a checker map and showing distortion

## Materials / Shading

### Work with a material

Differentiate material types

Differentiate shader types

- Lambert, Phong, Blinn, Anisotropic, ai Standard Surface

Create a material

Assign material to an object

- Assign materials to selected polygons

### Modify material attributes

Use Hypershade

- Modifying materials using the graph network

Apply textures to materials

- Classify texture types (2D and 3D procedurals, file textures), use color and normal textures, texture placement attributes (tiling textures), identify projection types (when using procedural or using 3D texture types)

Change shader specific attributes

## Rigging

### Utilize the Skeleton tools

Create joints

- Joint orientation

Edit joints

- Insert, Mirror, Remove, Connect, Disconnect, Reroot
- Forward Kinematics (FK), joint hierarchy

Implement Inverse Kinematics (IK) on joints

- Solver types (RP/SC)

### Use the Skin tools

Bind a mesh to joints

Paint skin weights

### Apply Constraints

Identify the constraints

- Parent, Aim, Point, Orient

Apply a constraint

- Selection order for creation, weights, etc.

View hierarchy in the Hypergraph

- Identifying object connections

## Cameras

### Work with cameras

Differentiate camera types

- Camera, Camera and Aim, Camera and Aim and Up.
- Identifying when to use each camera type and knowing the difference between perspective versus orthographic cameras.

Create a camera

- Lock and unlock a camera
- Look through a selected camera

Use the manipulators to adjust camera attributes directly in the viewport

Use the Camera tools to adjust the camera view

- Roll, Yaw-Pitch, Zoom, Dolly, Track, Tumble, Fly and Walk

### Modify camera attribute names or values

Define the functions of near and far clip planes

Adjust lens/focal length/field of view

### Display Film Gate, Resolution Gate, other view guides

Demonstrate the use of Safe Title and Safe Action

Show Resolution gate, film gate, no gate

## Animation

### Use the Time Slider and set Animation preferences

Modify Animation Time Slider and Playback Preferences

- Adjust frame rate and playback speed

Change the Time Slider range

Set keyframes using Auto Key and Set Key

- Set a keyframe, move/manipulate a keyframe, removing a keyframe.

Create a Playblast

### Demonstrate how to animate an object along a path

Create a curve

Animate an object on the path

Control object orientation and banking on the path

Manipulate an object along the path

- Set a motion path key, adjust motion path markers, attributes, demonstrate how to use a flow path object.

### Edit animation tangents using the Graph Editor

Differentiate different tangent types

- Auto Tangents, Spline, Clamped, Linear, Flat, Stepped, Plateau.
- Switch between spline and stepped tangents

Break and unify tangents

Lock and unlock(free) the length of a tangent

- Weighted and unweighted tangents

## Lighting

### Work with lights

Differentiate light types

- Ambient, Directional, Spot, Point, Area

Create a light

Adjust light type-specific attributes

Change common light attributes

- Color and intensity

Use the manipulators to adjust light attributes directly in the viewport

Link lights to specific objects

- Make and break light links

### Work with shadow types

Differentiate shadow types

- Depth Map and Raytraced

Adjust type-specific shadow attributes

- Shadow quality and color

## Rendering

### Differentiate the built-in renderers

Arnold, Software, Hardware 2.0, Vector

### Configure render settings

Change common settings

- Camera and resolution settings, Frame range
- Frame/animation extension from single image to multiple images
- Adjust frame padding

Change renderer specific settings

- Adjusting basic Arnold settings (Sampling)

Prepare the render settings for batch rendering