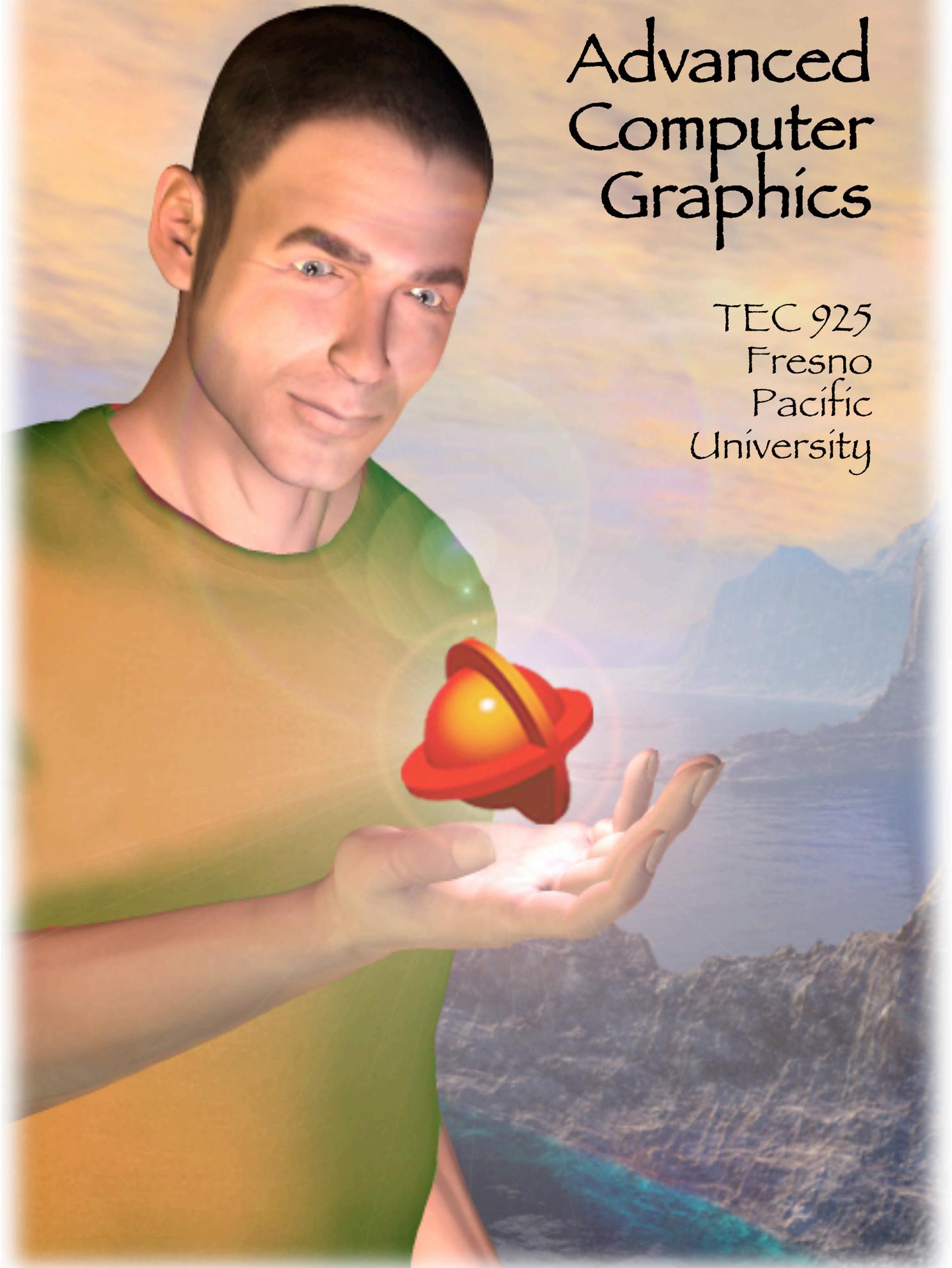


Advanced Computer Graphics

TEC 925
Fresno
Pacific
University





Course Completion Checklist

- Pre-course Survey
- Photoshop Project 1: Layers
- Photoshop Project 2: Masking
- Photoshop Project 3: Filters
- Photoshop Project 4: Retouching
- Photoshop Project 5: Text
- Bryce Project 1: Simple Landscape
- Bryce Project 2: Primitive Object
- Bryce Project 3: Boolean Operations
- Bryce Project 4: 2D picture tool
- Bryce Project 5: Animation
- Poser Project 1: Simple Figure
- Poser Project 2: Interactive Figures
- Poser Project 3: Background
- Poser Project 4: Faces
- Poser Project 5: Animation
- Elective Project 1
- Elective Project 2
- Elective Project 3
- Standards Correlation Chart
- Post-course Survey
- Course Evaluation
- Submit Request for Online Grading

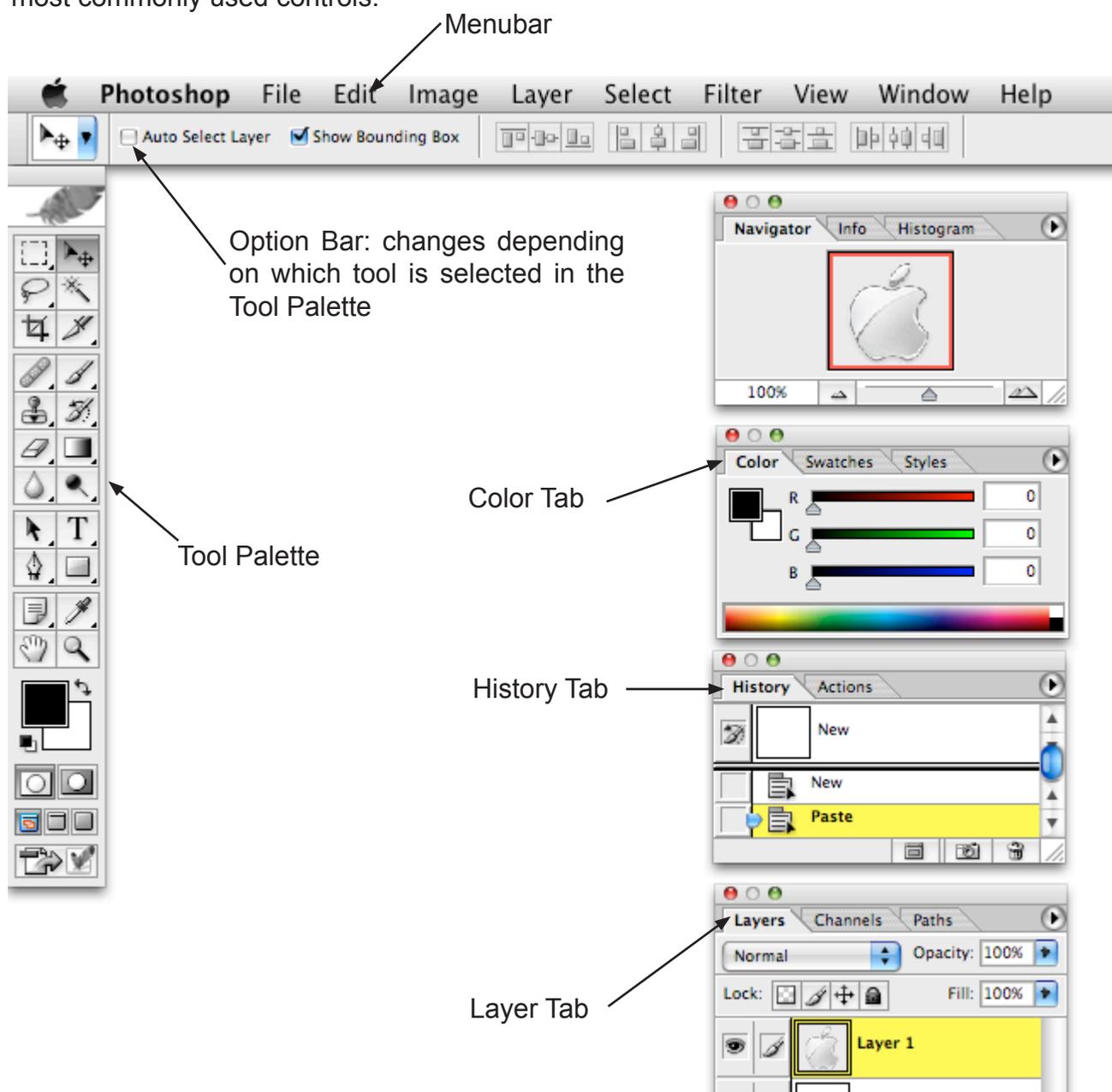


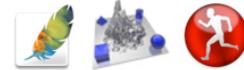
The Photoshop Interface

For the user, the most important part of any program is the interface. The controls, tools, menus and buttons are used to control the program and its functions. How you, the user, 'talk' with the program is purely a function of how well the interface is designed.

Photoshop uses a combination of menus, tool palettes, tabbed floating windows and keyboard shortcuts to access its amazing array of functions. You will use many of them, and become familiar with most of them.

The following pages describe the Photoshop interface and the functions of its tool palette, the most commonly used controls.





Photoshop Tool Palette

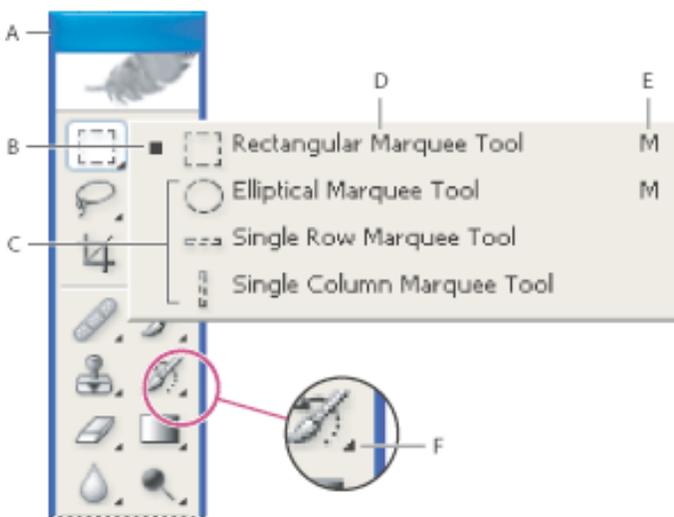
The tool palette (or Toolbox) is a floating window, meaning you can move it wherever you wish on the screen by clicking on its uppermost section (the gray dotted rectangle above the eye) and dragging it to its new location. You can also hide it (along with all the other palettes) by hitting the TAB key. This allows for maximum viewing area of your image.



Many of the tools are nested, meaning several tools live in one place. You will note a small triangle on some of the tools.

Holding the mouse button down on these tools will reveal other tools underneath.

The function of each of these tools is described on the next several pages.



You select a tool by clicking its icon in the toolbox. A small triangle icon at the lower right of a tool icon indicates hidden tools. Positioning the pointer over a tool displays a tool tip with the tool's name and keyboard shortcut.

- A. Toolbox
- B. Active tool
- C. Hidden tools
- D. Tool name
- E. Tool shortcut
- F. Hidden tool triangle

Toolbar shortcuts

- + click tool or + press shortcut key to cycle through hidden tools (except).
- Double-click tool, or select tool and press Return to display Options palette.
- Control + click to display context-sensitive menu.
- Press to constrain dragging or drawing to straight line or multiples of 45°.
- Press Caps Lock to use precise cross hair for brushes.
- Press Return to apply an operation of a magnetic tool, or press Esc or + to cancel the operation.



Photoshop Project 1: Layers

In this project you will be opening two files and merging them into one image using layers. It is a simple but very powerful technique for creating photo montages. In fact, the first four assignments will involve layers. Project 1 is very straight forward; two overlapping images with a graduated transparent edge between them. The next page lists the step-by-step instructions. You will also want to play the QuickTime movie ps1.mov several times to watch a real-time rendering of the project.



ps1.mov

You will also want to look at the color versions of the projects, which are located on the colorimages.pdf file, which is in the help_movies folder on the DVD-ROM.



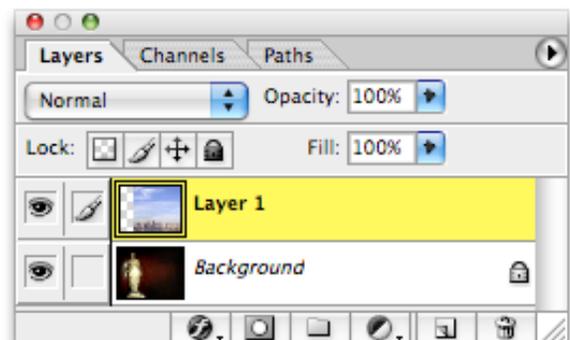
Document 1: statue.jpg



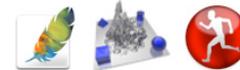
Document 2: newyorkcity.jpg



The final image



The layer tab will show two layers; the background and layer 1. Note that layer 1 is highlighted, indicating it is the active layer.

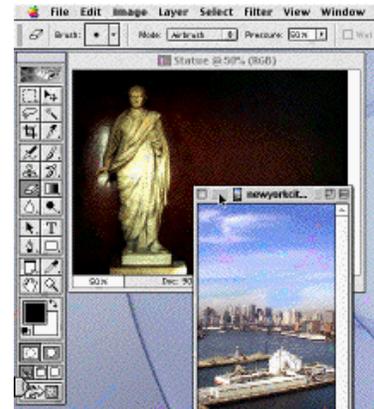


Step 1: Launch Photoshop.

Step 2: In the FILE menu, choose OPEN. Find the document **statue.jpg** It will be on the DVD-ROM in the Mac and Windows folder, in the Photoshop Projects folder. Select the document and click OK to open the file.

Step 3: In the FILE menu, choose OPEN. Find the document **newyorkcity.jpg**

Step 4: Position the new window (newyorkcity.jpg) down and to the right of the **state.jpg** window as shown here. You can zoom (making the window larger or smaller) by using the ZOOM command in the VIEW menu.

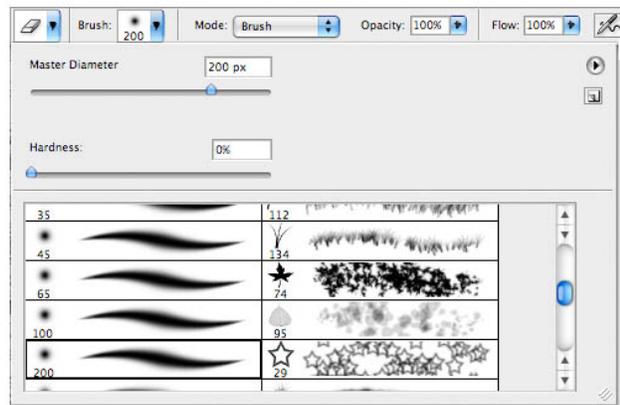


Step 5: In the SELECT window, choose ALL. This will select the entire newyorkcity image.

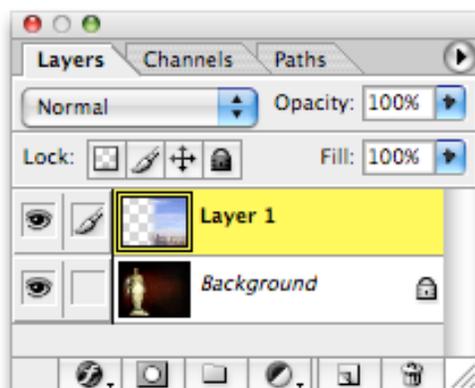
Step 6: Choose the MOVE tool and drag the newyorkcity image onto the statue image. This will create a separate layer containing the city image. With the MOVE tool still selected, drag the city image to the right side of the statue.



Step 7: Select the ERASER TOOL and in the OPTION BAR choose an eraser size of 300 pixels. The mode can be Paintbrush or Airbrush.



Step 8: Erase the left edge of the city image to create a smooth transition from one image to the other. If you are unhappy with the result, delete layer 1 by clicking the trash can icon  on the layers palette, and re-drag the city image onto the statue document.



You are done! If you are satisfied with the outcome, do a screen capture of your finished image and save it to your hard drive. You will be saving quite a few files, so you may want to set up a special folder for them. You may also want to name your files with a descriptive name, such as “finished statue”. You will need to print out the finished image (now or later) to include with the materials you return at the end of the course.

If you prefer, you can burn all your completed projects to a CD-ROM and return it, in lieu of print-outs.



Bryce is the affordable and simple to use application for creating realistic and fantastic landscapes and objects.

Bryce is dedicated to designing and animating breathtaking natural 3D worlds and abstract 3D landscapes while making the creative process every bit as entertaining as the final output.



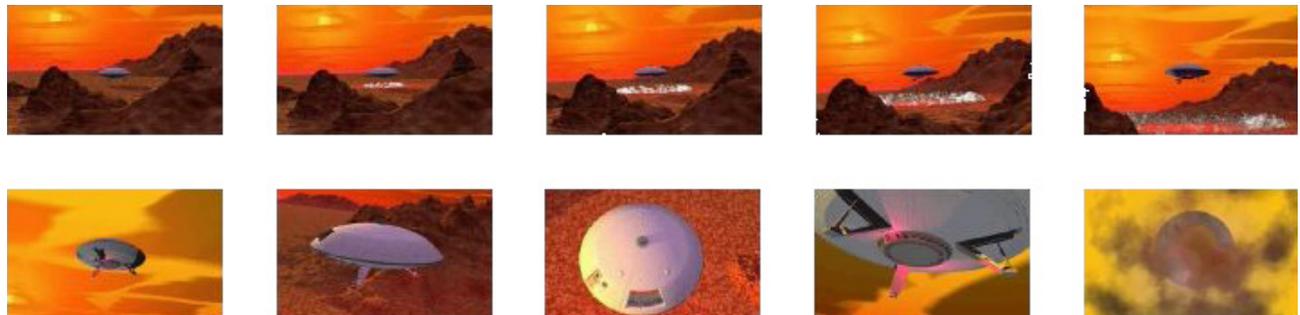
Bryce is the application of choice for hobbyists who want natural 3D animation on the desktop. Create mountain ranges, lakes, oceans and environments that are startlingly realistic with multiple atmospheric and cloud controls.

Bryce includes multiple import and export formats, instantly turns free USGS data into 3D models, new sky models, and lots of content and tutorials to quickly get you started in creating wonderful 3D worlds. Create your own skies, make the weather any way you want it, and then animate your worlds.



Bryce Project 5: Animation

Built in to Bryce is a powerful animation capability. With Bryce you can create short clips or entire movies full of fantastic worlds and amazing computer animation (see **blastoff.mov** in the **help_movies** folder for an example). This project will introduce you with the basics of animation in Bryce. As with any other topic, refer to the PDF file for detailed information.

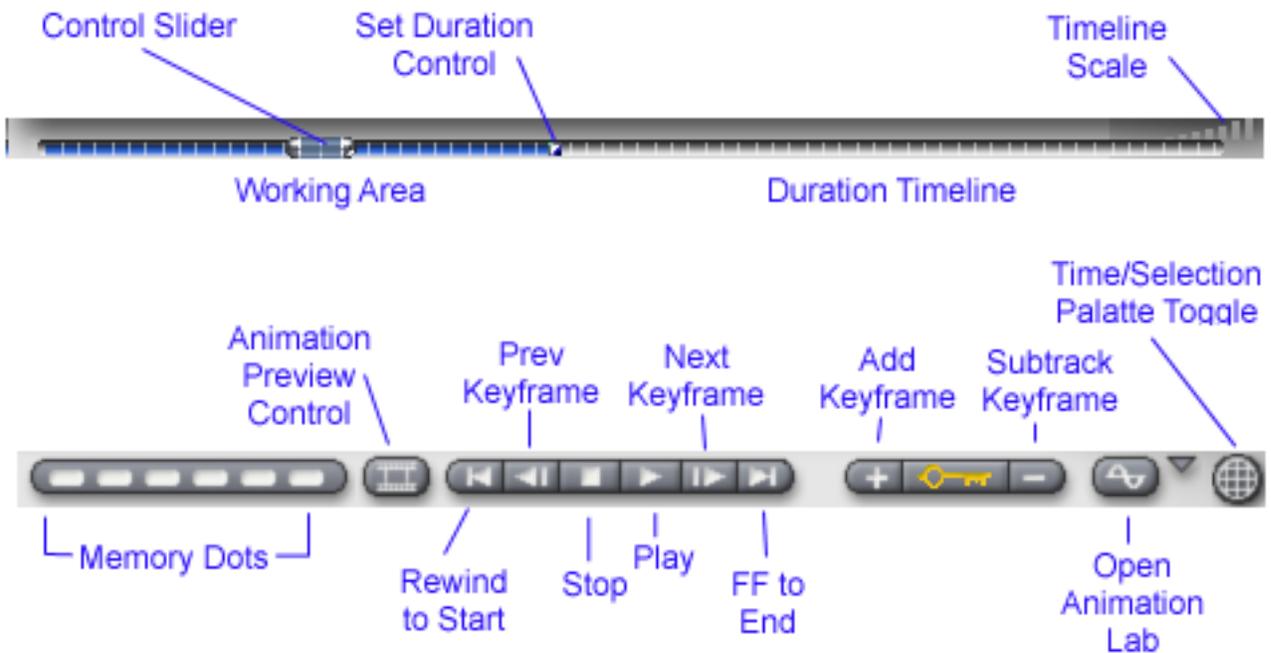


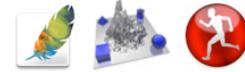
To reveal the animation controls, click the button in the lower right corner of the screen.

You will also want to play the QuickTime movie blast-off.mov several times to watch the 30 second animation.



blastoff.mov





POSER



Poser is a 3D-character animation and design tool for artists and animators. Users can create images, movies, and posed 3D figures from a diverse collection of fully articulated 3D human and animal models. Libraries of pose settings, facial expressions, hand gestures, and swappable clothing are included as well. Posing and animating is fast and easy with Poser's unique interface.

Generate movies and 2D graphics from your posed models for content in web, print and video projects. Add life to your 3D worlds using exported, posed figures. Or use Poser's output as reference for your sculpture or oil painting work!

For computer artists and hobbyists alike, Poser generates dynamic, figure-based content while providing a valuable introduction to 3D.

Sketch Designer

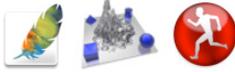
The Poser Sketch Designer is a rendering option that creates a scene using a series of brush strokes that define the background, edges of scene elements and individual elements and figures. The result is a hand-drawn quality that defies the traditional 3D rendering look.



Customized brush strokes for the Sketch Designer can be saved and loaded from scene to scene, rendered in color or black and white, and even exported as Corel® Painter™ scripts. This means that a 3D Poser scene can be recreated using any of Painter's Natural Media™ tools.

Conforming Figures

Each article of clothing was created as if it were a Poser figure. For example, a shirt would have a neck, chest, abdomen and arms. When loaded into a scene, and defined as a conforming figure, the shirt will attach itself to the base figure, snapping to the similarly named body-parts of that figure. As the base figure moves, so move the clothes. Poser has an extensive library of pre-designed clothing.



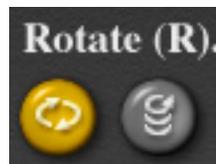
Poser Project 1: New Figure

The first Poser project is a simple one. In it, you will practice opening the program and setting up a simple pose with a high resolution figure.

Step 1: Launch the Poser program. In the demo version of Poser, there is only one figure available (the other figures, while visible in the menus, will not load).



Step 2: Using the ROTATE tool, lift the man's arms up so they are away from his body. Move his right forearm up to a 'waving' position. There are two moving parts to each arm: the FOREARM and the SHOULDER. Click on each area and drag to move.



You will also want to play the QuickTime movie on your course DVD-ROM, `poser1.mov`, several times to watch a real-time rendering of the project.



`poser1.mov`

Step 3: Using the TWIST tool, twist his right hand so the palm is facing the front. You may need to zoom in so you can rotate the entire hand, and not just individual fingers.

Step 4: Using the ROTATION TRACKBALL, rotate the figure to 3/4 profile.



You are done! If you are satisfied with the outcome, screen capture the image and save it to your hard drive. You will be saving quite a few files, so you may want to set up a special folder for them. You may also want to name your files with a descriptive name, such as "finished poser 1". You will also need to print a copy of your project to return with your finished course work. **If you prefer, you can burn all your completed projects to a CD-ROM and return it, in lieu of print-outs.**





Bryce - Pyramid

This scene contains three cubes (one of them the water), a pyramid and mountains. The statue was imported from the course DVD-ROM (FILE menu, IMPORT OBJECT). With artistic licence, create a similar scene which includes the statue.



bird.3ds



Bryce - Room with a view

With the exception of the mountains and trees, this scene is done entirely with cubes. Boolean operations create the room itself and the windows. The sun was positioned for a 'through the window' effect. Using artistic licence, create a room with windows, and a view outside.



Bryce - Castle

This scene was created by importing (FILE menu, IMPORT OBJECT) components (see below) from the course DVD-ROM. Create your own castle scene on a hillside, crag, or even the moon!

- CASTLETO.3DS
- CASTLEWA.3DS
- CASTLEVE.3DS

