Course Information

Division: Fine Arts
Course Number: ART 185
Title: Advanced Computer Graphics
Credits: 3
Developed by: Jeff Henley
Lecture/Lab Ratio: 2 Lecture/2 Lab
Transfer Status

<table>
<thead>
<tr>
<th></th>
<th>ASU</th>
<th>NAU</th>
<th>UA</th>
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<td></td>
<td>ART Dept Elective, GIT Dept Elective</td>
<td>Elective Credit</td>
<td>ART Departmental Elective</td>
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Activity Course: No
CIP Code: 50.0400
Assessment Mode: Portfolio
Semester Taught: Upon Request
GE Category: None
Separate Lab: No
Awareness Course: No
Intensive Writing Course: No

Prerequisites: None

Educational Value
Essential to the art student wanting to learn about Graphic Arts. Techniques also pertinent to computer students, business students, and others contemplating a field where they might be expected to create well-designed, professional quality documents.

Description
Emphasizes the advanced concepts and features of Photoshop. Uses industry-standard, image-editing tools for designers who want to produce sophisticated graphics for the Web and for print. This course cannot be used as a curriculum requirement for the Graphic Design AAS program. It is recommended that the student have a working knowledge of Basic Adobe Photoshop.

Supplies
USB storage device
Supplemental handouts
Competencies and Performance Standards

1. Review basic Photoshop terminology, tools, selections, and commands.
   
   **Learning objectives**
   What you will learn as you master the competency:
   a. Define basic Adobe Photoshop terminology.
   b. Utilize lasso tool.
   c. Use floating selections tool effectively.
   d. Layer using the copy command.
   e. Layer using the mask mode.
   f. Acquire knowledge of clipping groups.

   **Performance Standards**
   Competence will be demonstrated:
   o in successful completion of document from lecture
   o in successful completion of instructor assigned exercises

   Performance will be satisfactory when:
   o learner can define basic Adobe Photoshop terminology
   o learner can use lasso tool
   o learner can use floating selections
   o learner can layer via the copy command
   o learner can layer using mask mode
   o learner has a working knowledge of clipping groups

2. Utilize the type tool.

   **Learning objectives**
   What you will learn as you master the competency:
   a. Utilize the vertical type tool.
   b. Utilize the horizontal type tool effectively.
   c. Use the mask mode tool.
   d. Demonstrate the type mask tool.

   **Performance Standards**
   Competence will be demonstrated:
   o in successful completion of document from lecture
   o in successful completion of instructor assigned exercises

   Performance will be satisfactory when:
   o learner can use the vertical type tool
   o learner can use the horizontal type tool
   o learner can use the mask mode tool
   o learner can use the type mask tool
3. Demonstrate the use of free form pen and magnetic tools.

   **Learning objectives**
   
   *What you will learn as you master the competency:*
   
   a. Paint and design using the freeform pen tool.
   
   b. Edit using the magnetic selections tool.

   **Performance Standards**
   
   *Competence will be demonstrated:*
   
   o in successful completion of document from lecture
   
   o in successful completion of instructor assigned exercises

   *Performance will be satisfactory when:*
   
   o learner can paint and design using the freeform pen tool
   
   o learner can edit using the magnetic selections tool

4. Utilize the selections layer and paths tools effectively.

   **Learning objectives**
   
   *What you will learn as you master the competency:*
   
   a. Utilize the lasso and polygon lasso tool.
   
   b. Define a selection with quick mask.
   
   c. Utilize paths to create selections.
   
   d. Subtract from an image using floating selection tool.
   
   e. Utilize clipping groups.

   **Performance Standards**
   
   *Competence will be demonstrated:*
   
   o in successful completion of document from lecture
   
   o in successful completion of instructor assigned exercises

   *Performance will be satisfactory when:*
   
   o learner can use the lasso and polygon lasso tool
   
   o learner can define a selection with quick mask
   
   o learner can use paths to create selections
   
   o learner can demonstrate subtracting from a floating selection
   
   o learner can use clipping groups

5. Retouch a photograph.

   **Learning objectives**
   
   *What you will learn as you master the competency:*
   
   a. Assess the condition of a photograph.
   
   b. Utilize the pen tool and floating selections tools.
   
   c. Retouch using the rubber stamp tool.
   
   d. Change a path to make a new selection.
   
   e. Clone a pattern.
   
   f. Crop an image.
Performance Standards

Competence will be demonstrated:
- in successful completion of document from lecture
- in successful completion of instructor assigned exercises

Performance will be satisfactory when:
- learner can assess the condition of a photograph
- learner can use the pen tool and floating selections tools
- learner can retouch with the rubber stamp tool
- learner can change a path to make a new selection
- learner can clone a pattern
- learner can crop the image

6. Restore heirloom photographs.

Learning objectives
What you will learn as you master the competency:
- Assess the condition of warped, wrinkled, or damaged photos.
- Characterize the features of output as they apply to heirlooms.
- Restore faded photographs by using the adjustment layers and curves command.
- Repair cracked photographs using dust and scratches filter.
- Remove stains from photographs.

Performance Standards

Competence will be demonstrated:
- in successful completion of document from lecture
- in successful completion of instructor assigned exercises

Performance will be satisfactory when:
- learner can assess the condition of warped, wrinkled, or damaged photos
- learner can characterize the features of output as they apply to heirlooms
- learner can restore faded photographs by using the adjustment layers and curves command
- learner can repair cracked photographs using dust and scratches filter
- learner can remove stains from photographs

7. Generate surrealistic images.

Learning objectives
What you will learn as you master the competency:
- Utilize layer opacity to visualize a composite.
- Utilize a variety of tools to apply a layer mask.
- Remove objects with the rubber stamp tool.
- Use guides and rotate a layer.
- Distort an object to achieve the proper perspective.
Performance Standards

Competence will be demonstrated:
- in successful completion of document from lecture
- in successful completion of instructor assigned exercises

Performance will be satisfactory when:
- learner can use layer opacity to visualize a composite
- learner can use a variety of tools to apply a layer mask
- learner can remove objects with the rubber stamp tool
- learner can use guides and rotate a layer
- learner can distort an object to achieve the proper perspective

8. Demonstrate the techniques used to make images appear smaller.

Learning objectives
What you will learn as you master the competency:

a. Scale, adjust camera angle, and alter lighting.
b. Set up an image as a layer.
c. Utilize pen tool for intricate selections.
d. Utilize pen and covert point tools effectively.
e. Demonstrate masking.
f. Utilize paintbrush tools for masking.
g. Utilize shadow tool to add dimension.
h. Sample and apply a shading color.
i. Utilize color casting and correction tools.

Performance Standards

Competence will be demonstrated:
- in successful completion of document from lecture
- in successful completion of instructor assigned exercises

Performance will be satisfactory when:
- learner can scale, adjust camera angle, and alter lighting
- learner can set up an image as a layer
- learner can use pen tool for intricate selections
- learner can use pen and convert point tools effectively
- learner can demonstrate masking
- learner can utilize paintbrush tools for masking
- learner can use shadow tool to add dimension
- learner can sample and apply a shading color
- learner can use color casting and correction tools
9. **Apply the skills needed to work between applications.**

   **Learning objectives**
   
   *What you will learn as you master the competency:*
   
   a. Demonstrate use of pen tool.
   
   b. Demonstrate how to fill when working between applications.
   
   c. Create drop shadow template.
   
   d. Utilize cloning tool.
   
   e. Utilize filters creatively.

   **Performance Standards**
   
   *Competence will be demonstrated:*
   
   o in successful completion of document from lecture
   
   o in successful completion of instructor assigned exercises

   *Performance will be satisfactory when:*
   
   o learner can demonstrate how to use the pen tool
   
   o learner can demonstrate how to fill when working between applications
   
   o learner can use the creating drop shadow template
   
   o learner can use the cloning tool
   
   o learner can use filters effectively

10. **Demonstrate the creative use of working with filters.**

    **Learning objectives**
    
    *What you will learn as you master the competency:*
    
    a. Utilize gradient editor.
    
    b. Filter a custom blend.
    
    c. Utilize lighting techniques and the texture channel.
    
    d. Render using clouds filter.
    
    e. Prepare art for 3-D transform.
    
    f. Work with 3-D transform's sphere shape.
    
    g. Create arcing text.
    
    h. Utilize watercolor filter.

    **Performance Standards**
    
    *Competence will be demonstrated:*
    
    o in successful completion of document from lecture
    
    o in successful completion of instructor assigned exercises

    *Performance will be satisfactory when:*
    
    o learner is able to use gradient editor
    
    o learner is able to filter a custom blend
    
    o learner is able to use the lighting effects and the texture channel
    
    o learner can render clouds filter
    
    o learner can prepare the art for 3-D transform
    
    o learner is able to work with 3-D transform's sphere shape
11. **Produce special effects.**

*Learning objectives*

*What you will learn as you master the competency:*

a. Remove an area by cloning over it.

b. Utilize pen and airbrush tools.

c. Utilize smudge tool effectively.

d. Align sample points.

e. Create and import shadows.

f. Adjusting signing and lighting to maximum effectiveness.

g. Rotating an image.

h. Matching skin tones.

*Performance Standards*

*Competence will be demonstrated:*

- in successful completion of document from lecture
- in successful completion of instructor assigned exercises

*Performance will be satisfactory when:*

- learner can remove an area by cloning over it
- learner can use the pen and airbrush tools
- learner can use the smudge tool
- learner can create and import shadows
- learner can adjust signing and lighting to maximum effectiveness

12. **Design graphics for the web and create animations.**

*Learning objectives*

*What you will learn as you master the competency:*

a. Optimize stain glass filter.

b. Utilize the lighting effects filter and tone/color editing tools.

c. Measure available space and creating navigation button.

d. Create sequential still frames.

e. Utilize batch editing.

f. Animate with flow and transparency masks.

g. Work with compression, timing, and file sorting tools.

*Performance Standards*

*Competence will be demonstrated:*

- in successful completion of document from lecture
- in successful completion of instructor assigned exercises

*Performance will be satisfactory when:*

- learner can optimize the stain glass filter
- learner can utilize the lighting effects filter and tone/color editing tools
- learner can measure available space and creating navigation button
- learner can create sequential still frames
- learner can utilize batch editing
- learner can animate with flow and transparency masks
- learner can work with compression, timing, and file sorting tools
o learner can optimize stain glass filters
o learner can use the lighting effects filter and tone/color editing tools
o learner can measure available space and create sequential still frames
o learner can use batch editing
o learner can animate with flow and transparency masks
o learner can work with compression, timing, and file sorting tools

13. Demonstrate how to use ImageReady to use slicing and image mapping.

Learning objectives
What you will learn as you master the competency:
 a. Prepare high and low frequency images.
 b. Utilize anti-aliasing and image optimizing.
 c. Create droplets.
 d. Slice images.
 e. Create image maps.

Performance Standards
Competence will be demonstrated:
 o in successful completion of document from lecture
 o in successful completion of instructor assigned exercises

Performance will be satisfactory when:
 o learner can prepare high and low frequency images
 o learner can use anti-aliasing and image optimizing
 o learner can create droplets
 o learner can slice images
 o learner can create image maps


Learning objectives
What you will learn as you master the competency:
 a. Adjust optimization.
 b. Create basic roll-over image.
 c. Finalize roll-over button.
 d. Manually edit roll-over page.
 e. Create the glow effect.
 f. Maximize the animated roll-over button as necessary.

Performance Standards
Competence will be demonstrated:
 o in successful completion of document from lecture
 o in successful completion of instructor assigned exercises

Performance will be satisfactory when:
15. Demonstrate how to use ImageReady in creating animated GIFs.

**Learning objectives**

What you will learn as you master the competency:

b. Create a bouncing ball animation.
c. Bring cells into ImageReady to animate.
d. Demonstrate animation disposal methods.
e. Move a virtual camera around spatially.
f. Translate lighting into a scene.
g. Create a neon sign GIF animation.
h. Create a carnival marquee.
i. Create an invisible man GIF animation.

**Performance Standards**

Competence will be demonstrated:

- in successful completion of document from lecture
- in successful completion of instructor assigned exercises

Performance will be satisfactory when:

- learner can utilize ImageReady script for animation
- learner can create a bouncing ball animation
- learner can bring cells into ImageReady to animate
- learner can demonstrate animation disposal methods
- learner can move a virtual camera around spatially
- learner can translate lighting into a scene
- learner can create a neon sign GIF animation
- learner can create a carnival marquee
- learner can create an invisible man GIF animation

**Types of Instruction**

- Classroom Presentation
- On Campus Laboratory

**Grading Information**

**Grading Rationale**
Portfolio evaluation
Student may choose to receive a grade or a pass/fail

**Grading Scale**

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<th>Grade</th>
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<tr>
<td>A</td>
<td>100-90%</td>
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<tr>
<td>B</td>
<td>89-80%</td>
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<td>C</td>
<td>79-70%</td>
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<td>D</td>
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<td>F</td>
<td>59% and below</td>
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<td>P</td>
<td>100-70%</td>
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