San Bernardino Valley College
Curriculum Approved: SP01

I. CATALOG DESCRIPTION

Department Information
Division: Humanities
Department: Art
Course ID: ART 149
Course Title: Intermediate Computer Graphics
Units: 3
Lecture: 2
Laboratory: 3
Prerequisite: ART 148

A. CATALOG DESCRIPTION: Focuses photographic digital imaging and manipulation. Skills such as scanning, photographic correction and combining photographic images are practiced. Projects will involve creating computer-generated images, integrating type, and inserting objects and a variety material into photographs.

B. SCHEDULE DESCRIPTION: Focuses photographic digital imaging and manipulation. Skills such as scanning, photographic correction and combining photographic images are practiced. Projects will involve creating computer-generated images, integrating type, and inserting objects and a variety material into photographs.

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: One

III. EXPECTED OUTCOMES FOR STUDENTS:

Upon completion of the course the student should be able to:
A. Analyze and evaluate the pixel resolution of scanned images.
B. Evaluate the communicative success or failure of a series digital image.
C. Apply masking elements to assist the integration of one or more photographs.
D. Demonstrate the ability to transfer a color image file to a grayscale.
E. Demonstrate the ability to transfer a grayscale file to a color file.
F. Create colorized image from grayscale files.
G. Construct multiple layer files.
H. Demonstrate the ability to compress image files for use in other formats and other applications.

IV. CONTENT

A. Principles of digital imaging
  1. Factors affecting file size
    a. Pixel resolution
    b. Physical size of image
    c. Color and grayscale modes
  2. Pixel resolution for various outputs
    a. Print media using traditional offset and color separation methods
    b. Inkjet printing
    c. Screen only images used for presentation, video and CD-ROM
B. Skills for evaluating images
  1. Why images should not need verbal or written explanation to express a message
  2. Identifying tonal separation
  3. Identifying sharpness and disruptive texture patterns (noise)

C. Skills for creating multiple images
   1. Using layer
   2. Transferring images from separate files onto layers in one combined file
   3. Using quick mask and layer masks
   4. Using color modes
      a. Grayscale
      b. RGB color (Red,Green,Blue)
      c. CYMK color (Cyan, Yellow,Magenta,Black)

D. Using different save formats
   1. TIFF (Tagged Image File Format)
   2. PhotoShop layers
   3. JPEG (Joint Photographic Experts Group)
   4. GIF (Graphic Image File)

E. Transferring images to other software applications
   1. Saving files for printing
   2. Saving files for web, CD, and DVD
   3. Saving files for video

V. METHODS OF INSTRUCTION

A. Computer demonstrations
B. Lectures
C. Individual assistance
D. Customized intranet tutorials and specific examples
E. Textbook and workbook assignments
F. Supervised projects

VI. TYPICAL ASSIGNMENTS

Two examples of supervised projects and individual assistance are:

A. Create a collage made of scanned objects, photos and textures. Objective: Projects look real but are impossible such as a steamship in the desert.
   1. Do a preliminary idea sketch in pencil.
   2. Scan in objects such as cloth, coins or flowers.
   3. Scan in appropriate photos.
   4. Save as separate files and then combine into one PhotoShop multiple layer file.
   5. Use layer masks to fine tune the blending of elements.

B. Restore an old photo and colorize it
   1. Scan in an old faded, damaged family photo. Scan at 300dpi at 3 x 2 inches.
   2. Retouch damage.
   3. Change mode from grayscale to RGB and colorize it.

VII. EVALUATION

A. Methods of evaluation
   1. Objective evaluation: Written test
      Typical questions
      a. Why do some PhotoShop files not allow you to save in formats other than PhotoShop?
      b. What are color modes?
      c. What does flattening a file do?
   2. Subjective evaluation: Completion of 4 projects.
      Projects will be accompanied by creative material such as images, drawings and preliminary layouts used to complete the project.
      Projects will be evaluated on the following criteria.
      a. Originality of the concept
      b. Clarity of organization
      c. Steps executed to complete the project
      d. Success in achieving the original idea
      e. Complexity of the work attempted

B. Frequency of evaluation
   1. One test a the end of the semester
   2. Completion of projects:
      a. 3 weeks will be allowed for each project
      b. All projects will be submitted for grading at the end of the semester
      c. All projects will be we submitted as digital files

VIII. TYPICAL TEXT(S):

A Weinmann and Lourekas, PhotoShop 6 for Windows and Macintosh, CA:PeachPit Press, 2001
B. Dayton and Davis, The PhotoShop 6 WOW! Book,CA: PeachPit Press 2001,

IX. OTHER SUPPLIES REQUIRED OF STUDENTS:

Zip disk, blank CD-R