Common Course Outline
ARTD 116
Digital Imaging I
3 Semester Hours

Community College of Baltimore County

Description

ARTD 116 — 3 Credits — Digital Imaging I teaches the skills required for creating, manipulating, and publishing digital images for both print and interactive media; includes extensive exposure to bitmap editing software, as well as use of vector/draw programs to develop technical and creative processes.

3 credits: 2 lecture hours; 3 laboratory hours per week
Co-requisite: ARTD 110 or permission of program coordinator

Overall Course Objectives

Upon successful completion of the course the student should be able to:

1. effectively modify pixel and color resolution for image development and production;
2. optimize image quality for a variety of outputs to store, transfer, and prepare images for use electronic and print presentation;
3. identify methods and sources for acquiring digital images;
4. use and manipulate images from a variety of sources and developed in a variety of applications;
5. differentiate between vector and raster graphics;
6. use selection tools independently and combined to make specific pixel selections;
7. practice effective non-destructive images processing;
8. perform intricate image editing techniques/operations;
9. adjust and modify color properties in color space;
10. apply Art and Design concepts to visual problems;
11. use the design process to develop a concept; and
12. recognize and abide by copyright law.

Major Topics

I. Modifying Pixel and Color Resolution
   a. PPI/DPI relationship to image resolution
   b. RGB, HSB, CMYK relationship to image resolution
   c. Screen and print viewing/printing relationship to resolution
   d. RGB and CMYK Color Spaces
   e. Raw image properties

II. Compression Schemes
    a. Uncompressed editing file types and portable file formats
    b. Lossless compression formats/schemes
    c. Lossy Compression formats/schemes
    d. Comparison of file formats and uses.

III. Digital Image Acquisition
    a. Digital camera images and megapixel technology
    b. Scanned media and reflective scanning.
    c. Local and Internet downloads and copyrights
    d. Copyrights

IV. Raster vs. Vector.
    a. Definition of raster based graphics
    b. Definition of vector based graphics
    c. Compare and contrast production and uses of Raster and Vector graphics
    d. Indicate ways to incorporate vector data in raster design

V. Making Selections
    a. Use marquee tools to select pixels
    b. Use multiple selection techniques to make intricate pixel selections
    c. Use color properties to make selections, color range, channels, and magic wand.
    d. Change selections using selection modification tools

VI. Non-Destructive editing and layer management
    a. Using layer and masks
    b. Smart filters and layer effects
    c. Blending options and transparency
    d. Adjustment Layers

VII. Editing Techniques
    a. Basic Brushes selections and uses
    b. Custom Brushes making and using
    c. Edit and Transforming selections
    d. Automation

VIII. The Design Process
    a. Brainstorming and critiquing work for effectiveness
    b. Using specific advantages of raster based graphic images
    c. Refining and developing visual communications
    d. Developing a final production and output of the product

IX. Importing assets.
    a. Importing non-native Photoshop data

b. Importing Vector images and Smart objects
c. Using the Clipboard to Copy and pasting pixel data

X. Retouching
   a. Patching missing visual pixels
   b. Pixel interpolation, healing tools
   c. Duplication of pixel information, cloning
   d. Blur and sharpening images

XI. Workflow:
   a. Keyboard shortcuts
   b. Mouse shortcuts
   c. Palette arrangement
   d. Saving workspaces

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will include the following:

- A portfolio of three to four major projects and eight to ten in-class and/or take home exercises
- A sample notebook containing examples of contemporary digital imaging A final written exam
- A written design brief

Other Course Information

This course is a foundation/core course within the Institute of Art, Design, and Interactive Media. Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.

Revised: 7/08/2019