

# Common Course Outline

CGVC 120

Digital Imaging I

3 Semester Hours

## The Community College of Baltimore County

### Description

**CGVC 120 — 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; 2 laboratory hours per week**

Pre/co requisite: ARTS 131 or permission of program coordinator

### Overall Course Objectives

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

1. alter contrast, color, and resolution of electronic image files;
2. make local corrections using selection tools;
3. identify and create commonly used image file formats/file types;
4. apply filters and special effects to images;
5. assemble and selectively mask layers in digital images;
6. scan existing photographs/art and convert, alter and store them in various file formats;
7. resize, combine and import images from Postscript applications;
8. acquire and utilize stock photography imagery from the internet and removable media;
9. discuss the basics of the copyright laws regarding the use of stock imagery;
10. compress and store large files on removable media;
11. perform complex image editing/manipulation operations on electronic photographic files;
12. explain light direction and quality in image creation/manipulation;
13. understand and use color effectively in image creation/manipulation;
14. understand and use spatial techniques in image creation/manipulation;
15. produce electronic files that are calibrated for optimum output quality; and
16. optimize images for screen/Web publication using appropriate file formats.

### Major Topics

- I. Understanding electronic image area, resolution and color space
  - a. How ppi is linked to image resolution
  - b. RGB vs. CMYK color space
  - c. Screen resolution and display vs. print resolution
- II. Working with layers

- a. Setting layer opacity and ink mode
- b. Using layer options
- c. Merging layers
- III. Creating and saving selections
  - a. Using local selection tools
  - b. Feathering selections
  - c. Adding and subtracting from defined selections
- IV. Global image correction
  - a. Viewing and understanding image Histograms
  - b. Using the Levels control to distribute/alter contrast
  - c. Altering images using the Curves dialog
  - d. Color correction using Hue, Saturation, and Value
- V. Working with type
  - a. Using internal type editing features
  - b. Importing type from vector/draw programs
  - c. Creating type effects using layer options
- VI. Painting and filter applications
  - a. Defining brush size and shape
  - b. Creating custom brushes
  - c. Simulating hand coloring
  - d. Combining filters and brushes for creative effects
- VII. Creating and manipulating paths and vector shapes
  - a. Defining and using curve points
  - b. Working with direction handles
  - c. Using paths and shape layer masks to define selections
- VIII. Selective masking controls
  - a. Using QuickMask mode for feathered selections
  - b. Creating and using Layer Masks
  - c. Defining and using Clipping Groups
- IX. Retouching Images
  - a. Using the Clone, Dodge, and Burn Tools
  - b. Removing dust and scratches
  - c. Using the Unsharp Mask control effectively
- X. Scanning
  - a. Calculating correct scanning resolution and color space
  - b. Sharpening scans effectively
  - c. Scanning 3D objects for creative effects
- XI. Multi-image compositing
  - a. Combining images of different resolution and color space
  - b. Changing color space for creative effects
- XII. Optimizing images for the Web and screen presentation
  - a. Formats for optimum compression/resolution
  - b. Slicing images for HTML tables
- XIII. Creating a digital portfolio
  - a. Presentation techniques
  - b. Creating an electronic portfolio on disk/Web

- c. Selecting images that demonstrate control and creativity

### **Course Requirements**

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

- A final written exam
- A portfolio of 8-10 images based on course projects

### **Other Course Information**

CGVC 120 is a required program core course for the Computer Graphics and Visual Communication degree options and certificates.

This course is taught in a computerized environment.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.