South Central College

GCC 1145 Color Applications and Digital Tools

Common Course Outline

Course Information

Description This course is designed to cover basic topics which include input/output hardware and the software involved; basic scanning of graphics and photographs; basic digital camera usage; and file formats, size and resolution comparisons. Additionally, students will cover the basics of color theory and color management with practical knowledge for print and web. The course is taught in a hands-on atmosphere with an emphasis on the different methods of output to various devices and their effect on the digitized image. (Prerequisites: Next Gen Accuplacer Reading score 224 or higher, or Classic Accuplacer Reading score 36 or higher)

Total Credits 3

Total Hours 64

Types of Instruction

Instruction Type	Credits/Hours
Lecture	2/32
Lab	1/32

Pre/Corequisites

Prerequisite Next Gen Accuplacer Reading score 224 or higher, or Classic Accuplacer Reading score 36 or higher

Institutional Core Competencies

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Competencies

1. Differentiate among graphic formats.

Learning Objectives

Explain 1-bit, 8-bit, 24-bit graphical files.
Differentiate between raster vs. vector files.
Compare and contrast the characteristics of various file formats.
Explain the differences between high-resolution (hi-res) and low-resolution (low-res) files.
Save different file formats that align with their appropriate use.

2. Explain the characteristics of fonts and font architectures.

Learning Objectives
Explain the American Standard Code for Information Interchange (ASCII) text and its foundation to digital fonts.
Differentiate among the various font architectures.
Use fonts for digital layouts.
Download and add fonts to a computer.

3. Explain the variables to consider prior to digitizing graphics.

Learning Objectives
Compare and contrast pixels per inch (PPI), lines per inch (LPI) and dots per inch (DPI).
Compare the differences and similarities of hi-res and low-res images.
Explain the impact output has on digital file preparation.

4. Utilize scanners for digital reproduction.

Learning Objectives
Scan bitmap/line art, grayscale, color photos.
Manipulate various scanner functions to produce digital files.
Explain interpolation and the effects on digital files.
Produce digital files that have been downsampled/upsampled.
Explain Optical Character Recognition (OCR) software.

5. Utilize digital camera for digital reproduction.

Learning Objectives
Manipulate digital camera settings.
Explain the various camera settings.
Explain terminology associated with digital cameras.
Upload digital files on computer to manipulate digital photos.
Explain how quality is retained with digital files from a digital camera.
Organize folder and files structure of digital photos.

6. Utilize industry-accepted software for projects.

Learning Objectives
Create layouts with page layout software.
Create and/or manipulate vector graphics with industry used software.
Create and/or manipulate raster graphics with industry used software.

7. Prepare files for various outputs.

Learning Objectives
Work with page layout softwares for print settings and proper outputs.
Convert final projects for various digital and online uses and applications.
Utilize the print preferences for outputting files.
Operate the high-end output devices.

8. Utilize the network and other storage devices for saving files.

Learning Objectives
Discuss the hierarchical method of folders and files.
Develop organizational skills for filing electronic data.
Save files and supporting documents as instructed.

9. Explain the benefits and drawbacks of various storage devices.

Learning Objectives
Differentiate among the various storage media.
Use various storage devices for electronic imaging work, transport and storage.

10. Interpret the principles of color vision.

Learning Objectives
Explain the influences of the light source.
Explain the influences of the object.
Explain the influences of the human observer.

11. Explain attributes of the standard color wheel.

Learning Objectives
Define the basic attributes of color.
Explain various descriptors of color.
Identify historical people that impact dimensions of the color wheel.

12. Interpret various color models.

Learning Objectives
Differentiate between additive and subtractive color.
Identify tristimulus modes to define color.
Differentiate among the various tristimulus color modes.

13. Explain color management.

Learning Objectives
Describe the process of creating a color managed workflow.
Describe color management techniques used in a workflow.
Explain the benefits and drawbacks of color management.

14. Perform color management processes.

Learning Objectives
Differentiate between a source and destination profile.
Use existing profiles.
Compare and contrast the results of color managed files.
Adjust the gray balance of an image.
Explain Gray Component Replacement (GCR) and Undercolor Removal (UCR).

15. Demonstrate industry-related work ethics and habits.

Learning Objectives
Maintain clean work area.
Recycle consumables that can not be discarded in the trash.