DMAD A181: INTRODUCTION TO COMPUTER GRAPHICS

Item	Value
Curriculum Committee Approval Date	10/19/2022
Top Code	061460 - Computer Graphics and Digital Imagery
Units	3 Total Units
Hours	90 Total Hours (Lecture Hours 36; Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)
Associate Arts Local General Education (GE)	• OC Comm/Analytical Thinking - AA (OA2) • OC Active Participation - AA (OC2)
Associate Science Local General Education (GE)	• OCC Comm/AnalyticalThinking-AS (OAS2) • OCC Arts - AS (OSC1)
California State University General Education Breadth (CSU GE-Breadth)	• CSU C1 Arts (C1)

Course Description

This course is designed to effectively and creatively introduce Photoshop, Illustrator and InDesign. The programs will be approached from an application perspective. Course may include guest speakers and field trips. Transfer Credit: CSU. C-ID: ARTS 250.**C-ID:** ARTS 250.

Course Level Student Learning Outcome(s)

1. Demonstrate the ability to use Adobe Photoshop to make basic alterations to pixel-based images including, but not limited to: brightness, contrast, color cast and color mode.
2. Create original pixel-based art using Adobe Photoshop to manipulate pre-existing images.
3. Demonstrate the ability to use Adobe Illustrator to create basic and complex vector-based shapes.
4. Create original vector-based art using Adobe Illustrator to originate and edit vector graphics and type.
5. Demonstrate the ability to combine vector graphics and pixel-based images to create unique digital art.

Course Objectives

- 1. Apply the elements and principles of design in finished digital images and time-based works;
- 2. Create a portfolio of work demonstrating formal, conceptual, and technical development;
- 3. Produce digital images and time-based work through various digital media input and output methods using vector or raster-based software;
- 4. Demonstrate general knowledge of facts and principles across discipline lines.
- 5. Demonstrate specialized knowledge of facts and principles in subject field.
- 6. Demonstrate skill development and application.
- 7. Demonstrate personal development.
- 8. Explain the basic elements of color theory
- 9. Demonstrate a working knowledge of input and output devices
- 10. Examine and describe contemporary approaches, language, aesthetics and emerging media in digital art;
- 11. Demonstrate working knowledge of commercial applications of computer graphics
- 12. Explain copyright and legal issues relating to computer graphics
- 13. Safely handle and maintain digital imaging hardware and materials;
- 14. Evaluate and critique digital images and time-based works utilizing relevant terminology and concepts.
- 15. Apply the elements and principles of design in finished digital images and time-based works;
- 16. Create a portfolio of work demonstrating formal, conceptual, and technical development;
- 17. Produce digital images and time-based work through various digital media input and output methods using vector or raster-based software;
- 18. Examine and describe contemporary approaches, language, aesthetics and emerging media in digital art;
- 19. Safely handle and maintain digital imaging hardware and materials;

Lecture Content

Introduction Visual communication History , contemporary trends, language, aesthetics and emerging medias as they relate to digital art. Group and individual critiques of digital images utilizing relevant terminology and concepts. Concept development as it relates to digital and time-based art. Elements and principles of design as they relate to digital media. Influence of technology on art Computer operating system Main menus Micro menus Desktop navigation Universal commands Keyboard shortcuts Software application basics Toolbox Palettes Main menus Micro menus Color theory RGB color CMYK color Color range and dynamic Color palettes Complementary color Primary and secondary color Color models Characteristics of color in additive and subtractive color systems Mastering freehand drawing and painting tools Principles and uses of vector and raster-based software in creation of digital art. Composition Formal concerns, basic design elements Physical and psychological properties of line and shape Emphasis of basic design elements Victor based design Vector based images vs. pixel based images Mastering vector based tools Masking techniques Scanning procedures Collage and cloning techniques The use of technology to create art through various digital media input and output methods. Transforming photographs Commercial applications Input devices Scanners Photo CD Digital camera Output devices Slides > Digital prepress Multimedia presentations/motion graphics output CD ROM

Internet Copyright, other legal and ethical issues Customizing tools Gif animation Quicktime

Lab Content

1. Orientation: lab procedures 2. Digital Imaging Exercises (from text exercises, files provided by instructor and original work generated in response to lecture assignments. (raster-based including image control, montaging, digital cameras, output). Assignments focusing on conceptual development in in project-based digital images and time-based works. a. contrast controls b. resolution and file sizes c. color balance d. color modes e. image output: profiles, printers, paper f. typography g. importing files from vector based programs, downloading from camera, internet. Exporting to various media file formats. h. constructing masks i. assembling slide shows and videos - experiments with motion graphics using vector and raster-based files. Saving, exporting to various formats. j. smart objects, filters, rasterizing k. understanding histograms and impact on output l. use of brushes, adjustments, drawing styles 3. Explorations with Vector Based software: a. vector drawing tools: developing control b. pattern exercises and color theory c. typography nb d. editing and creating brushes e. shape transformation tools f. creating styles, symbols, gradients g. color theory and cmyk output exercises h. rasterizing, output to web, output to animation sequence, export to rasterbased programs 3. Group and individual critiques in oral and written formats.

Method(s) of Instruction

- Lecture (02)
- DE Online Lecture (02X)
- Lab (04)
- DE Online Lab (04X)

Instructional Techniques

Powerpoint lectures, software demonstartions, discussions, observations and critiques.

Reading Assignments

Students will spend a minimum of two hours per week on assigned reading text.

Writing Assignments

Students will have 1-2 hours per week of writing assignments. Written reports and critiques of work seen outside of class, group critiques of student work.

Out-of-class Assignments

A minimum of two hours per week on graphic design exercises to reinforce concepts learned from the software.

Demonstration of Critical Thinking

Tests, problem solving exercises, group critiques of student work

Required Writing, Problem Solving, Skills Demonstration

Written reports and critiques of work seen outside of class, group critiques of student work.

Eligible Disciplines

Graphic arts (desktop publishing): Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Schwartz, R.. Learn Adobe Photoshop CC for Visual Communication, ed. Adobe Press, 2016 Rationale: Legacy 2. Required Wilson, D., Schwartz, R., Lourekas, P.. Learn Adobe Illustrator CC for Graphic Design and Illustration, ed. Adobe Press, 2016

Other Resources

1. Selected handout materials to be provided and distributed by the instructor.