Course Acronym:	ART
Course Number:	141
Descriptive Title:	Digital Art Fundamentals
Division:	Fine Arts
Department:	Art
Course Disciplines:	Multimedia
Catalog Description:	This course provides students with a foundation in the two basic types of graphics software, vector (drawing) and raster (painting/photography). Topics include integration of traditional design, color, and compositional principles with contemporary digital tools. Students will work on a variety of digital projects involving drawing, design, typography, photographic manipulation, and animation.
Prerequisite:	
Co-requisite:	
Recommended Preparation:	Art 110 or Art 130 with a minimum grade of C AND eligibility for English 1A Business 52A or equivalent computer skills
Enrollment Limitation:	
Hours Lecture (per week):	2
Hours Laboratory (per week):	4
Outside Study Hours:	3
Total Course Hours:	108
Course Units:	3
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	Prior to July 1992
Transfer UC:	Yes
Effective Date:	
General Education: ECC	
Term:	
Other:	

CSU GE:	
Term:	
Other:	
IGETC:	
Term:	
Other:	
Student Learning Outcomes:	**SLO #1 Vector Paths** Students will use digital illustration software to draw an accurate vector path and use it to select raster information. **SLO #2 Graphic Files** Students will prepare graphics files with correct color, resolution, and file format for both print and screen output. **SLO #3 2D Design Concepts** Students will apply 2D design concepts in the execution of original digital art projects.
Course Objectives:	1. Demonstrate appropriate computer skills needed for the creation of digital art. 2. Produce digital images and time-based work through various digital media input and output methods using vector and raster software. 3. Apply the elements and principles of design in finished digital images and time-based works. 4. Define color relationships and use different color modes reflecting both additive and subtractive color systems. 5. Demonstrate use of typography in designs, define typographic terms. 6. Examine and describe contemporary approaches, language, aesthetics and emerging media in digital art. 7. Assess the purpose, scope, and specifications of art projects and formulate solutions by applying the appropriate creative and technical strategies. 8. Establish work schedules and prioritize tasks in order to satisfy production timelines. 9. Assess, discuss, and critique digital art designs. 10. Create a portfolio of work demonstrating formal, conceptual, and technical development.

Major Topics:	**I. Elements of two-dimensional design (2 hours, lecture)**
	
	  A. Line, shape, value, texture, scale, color, positive/negative space, figure/ground relationships, symmetry, asymmetry, pattern, focal point, balance, unity
	
	II. Elements of two-dimensional design (4 hours, lab)
	
	  A. Line, shape, value, texture, scale, color, positive/negative space, figure/ground relationships, symmetry, asymmetry, pattern, focal point, balance, unity
	
	III. Hardware and System Software Concepts (2 hours, lecture)
	
	  A. Opening and closing software programs and files

B. Saving, save as, copying and renaming files
C. Project folders, naming and organizing files, file extensions
D. Removable media, backing up work, saving to hard drive, saving to removable media, and copying files between the two
E. Keyboard shortcuts such as Save, Print, Copy, Cut and Paste

IV. Hardware and System Software Concepts (4 hours, lab)

A. Opening and closing software programs and files
B. Saving, save as, copying and renaming files
C. Project folders, naming and organizing files, file extensions
D. Removable media, backing up work, saving to hard drive, saving to removable media, and copying files between the two
E. Keyboard shortcuts such as Save, Print, Copy, Cut and Paste

V. Moving Files Between Application (1 hour, lecture)

A. Importing and exporting files
B. Using different file formats
C. Vector and raster applications: capabilities and limitations and usage of each.

VI. Moving Files Between Applications (2 hours, lab)

A. Importing and exporting files
B. Using different file formats
C. Vector and raster applications: capabilities and limitations and usage of each.

VII. Resolution and Image Acquisition (1 hour, lecture)

A. Determining correct resolution and image size based on desired end-product
B. Identifying the terms dpi, ppi, and lpi and their application to image size and print resolution
C. Preparing images for print and screen display

VIII. Resolution and Image Acquisition (2 hours, lab)

A. Determining correct resolution and image size based on desired end-product
B. Identifying the terms dpi, ppi, and lpi and their application to image size and print resolution
C. Preparing images for print and screen display

IX. Color (2 hours, lecture)

A. Defining color relationships: Monochromatic, analogous, complementary, triadic, primary, secondary, tertiary
B. Defining color properties of hue, saturation, brightness
C. Defining and using different color modes to mix and identify color: HSB, CMYK, RGB, Grayscale, and Spot Color
D. Importing and using additional palettes such as Pantone and Web color
E. Color separations
F. Bit depth

X. Color (4 hours, lab)

    A. Defining color relationships: Monochromatic, analogous, complementary, triadic, primary, secondary, tertiary
    B. Defining color properties of hue, saturation, brightness
    C. Defining and using different color modes to mix and identify color: HSB, CMYK, RGB, Grayscale, and Spot Color
    D. Importing and using additional palettes such as Pantone and Web color
    E. Color separations
    F. Bit depth

XI. Create Art Work in Vector Graphics Program (8 hours, lecture)

    A. Line
        1. Using pen tool: create and edit lines and curves
        2. Using different stroke colors and weights
        3. Creating and combining mechanical, calligraphic, and brushstroke lines in compositions
    B. Shape
        1. Utilizing tools to create open and closed shapes
        2. Arranging shapes in overlapping layers using tools to send to back and bring to front, using layers to rearrange overlapping objects
        3. Select, move, delete, copy, and combine objects
        4. Using transformation tools to scale, rotate, reflect, distort objects
        5. Creating complex shapes by modifying and combining simple shapes
    C. Value, Color, and Fills
        1. Filling shapes with solid colors, tints, gradients and patterns
        2. Using blends to create highlights, midtones and shadows
        3. Defining new spot and process colors, creating custom palettes, loading palettes from palette library
    D. Organizing the drawing process
        1. Using layers, guides, and grid
        2. Using templates for tracing
    E. Typography
        1. Specifying and changing font, size, and style of type
        2. Creating outlines from type to alter, combine, and create new letterforms. Differences between type and outlines
        3. Creating text boxes, type on a path.
    F. Importing and Exporting Files
        1. Importing raster file for use as template and image element. Limitations of working with raster image within a vector program. Identifying Links created between raster file and vector file.
        2. Rasterizing and manipulating a vector file in a raster program

XII. Create Art Work in Vector Graphics Program (16 hours, lab)

    A. Line

    1. Using pen tool: create and edit lines and curves
    2. Using different stroke colors and weights

3. Creating and combining mechanical, calligraphic, and brushstroke lines in compositions

B. Shape

1. Utilizing tools to create open and closed shapes
2. Arranging shapes in overlapping layers using tools to send to back and bring to front, using layers to rearrange overlapping objects
3. Select, move, delete, copy, and combine objects
4. Using transformation tools to scale, rotate, reflect, distort objects
5. Creating complex shapes by modifying and combining simple shapes

C. Value, Color, and Fills

1. Filling shapes with solid colors, tints, gradients and patterns
2. Using blends to create highlights, midtones and shadows
3. Defining new spot and process colors, creating custom palettes, loading palettes from palette library

D. Organizing the drawing process

1. Using layers, guides, and grid
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E. Typography

1. Specifying and changing font, size, and style of type
2. Creating outlines from type to alter, combine, and create new letterforms. Differences between type and outlines
3. Creating text boxes, type on a path.

F. Importing and Exporting Files

1. Importing raster file for use as template and image element. Limitations of working with raster image within a vector program. Identifying Links created between raster file and vector file.
2. Rasterizing and manipulating a vector file in a raster program

XIII. Create Art Work in Raster Graphics Program (8 hours, lecture)

A. Scanning
    1. Using formulas based on final image output to determine correct resolution when scanning
    2. Basic tonal and sharpening corrections on scanned images
    3. Altering image size and resolution
    4. Scanning line art and full color images
B. Image Editing
    1. Using selection tools to select portions of images, transforming selections, copying and pasting selections, saving selections
    2. Using layers, merging layers, flattening images
    3. Using painting and editing tools to manipulate images
C. Color

1. Changing color modes from RGB to CMYK and Grayscale
2. Differences in bit depth and their effect on color quality and file size
3. Color limitations of different media (Web, multimedia, print)

XIV. Create Art Work in Raster Graphics Program (16 hours, lab)

    A. Scanning

    1. Using formulas based on final image output to determine correct resolution when scanning
    2. Basic tonal and sharpening corrections on scanned images
    3. Altering image size and resolution
    4. Scanning line art and full color images

    B. Image Editing

    1. Using selection tools to select portions of images, transforming selections, copying and pasting selections, saving selections
    2. Using layers, merging layers, flattening images
    3. Using painting and editing tools to manipulate images

    C. Color

    1. Changing color modes from RGB to CMYK and Grayscale
    2. Differences in bit depth and their effect on color quality and file size
    3. Color limitations of different media (Web, multimedia, print)

XV. Preparation, Analysis, and Criticism of Student Projects (8 hours, lecture)

    A. Applying traditional two-dimensional design concepts of line, value, texture, pattern, scale, and various compositional strategies to computer generated images
    B. Using letterforms and typography in original designs
    C. Using color to enhance aesthetic and expressive content
    D. Originating concepts for art work based on intent, purpose, and use of assigned project
    E. Organizing formal elements in designs so as to support conceptual content
    F. Recognizing content, purpose and scope of design task
    G. Determining spatial and formal motifs
    H. Establishing work schedules
    I. Producing preliminary sketches
    J. Establishing a plan for computer production
        1. Using rulers, guides, and grid to aid in drawing
        2. Using layers to organize design elements
        3. Determining color modes, resolution, and image size based on project specifications
    K. Using mounts and mats to present final printed output
    L. Critiquing finished projects

XVI. Preparation, Analysis, and Criticism of Student Projects (16 hours, lab)

    A. Applying traditional two-dimensional design concepts of line, value, texture, pattern, scale, and various compositional strategies to computer generated images
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    1. Using rulers, guides, and grid to aid in drawing
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    3. Determining color modes, resolution, and image size based on project specifications

    K. Using mounts and mats to present final printed output
    L. Critiquing finished projects

XVII. Animation & Motion Fundamentals (2 hours, lecture)

    A. Frame by frame animation
    B. Squash and Stretch
    C. Walk cycles
    D. Timing
    E. Vector and Raster software tools for animation

XVIII. Animation & Motion Fundamentals (4 hours, lab)

    A. Frame by frame animation
    B. Squash and Stretch
    C. Walk cycles
    D. Timing
    E. Vector and Raster software tools for animation

XIX. Create an online portfolio and record of class progress using a free blogging site (1 hour, lecture)

    A. What is a blog, samples of blogs and portfolio sites
    B. Setting up the site, creating pages and posts, uploading images and galleries, creating links

XX. Create an online portfolio and record of class progress using a free blogging site (2 hours, lab)

	A. What is a blog, samples of blogs and portfolio sites
	B. Setting up the site, creating pages and posts, uploading images and galleries, creating links
	XXI. Contemporary approaches, language, aesthetics, and emerging media in digital art (1 hour, lecture)
	XXII. Research, present, and discuss contemporary approaches, language, aesthetics, and emerging media in digital art (2 hours, lab)
Total Lecture Hours:	36
Total Laboratory Hours:	72
Total Hours:	108
Primary Method of Evaluation:	3) Skills demonstration
Typical Assignment Using Primary Method of Evaluation:	Replicate four of Josef Albers's projects in color value relationships on the computer using the different color modes of HSB, RGB, CMYK, and Spot Color.
Critical Thinking Assignment 1:	Create a drawing of a simple object in a vector application using gradations and blends to create highlights and shadows. Use guides and grid to aid in proportioning and perspective, and layers to organize drawing elements. Create complex shapes by combining and modifying simple shapes. Use tools to scale, rotate, and distort the shapes.
Critical Thinking Assignment 2:	Select and illustrate a term describing fears (phobias) or loves (philias). Use a vector application to create original or modified letterforms to aid in communicating the meaning of the word. Combine type with an illustration created in a raster application to produce an image that combines type and image.
Other Evaluation Methods:	Quizzes
Instructional Methods:	Demonstration, Discussion, Lab, Lecture, Multimedia presentations
If other:	Internet Presentation/Resources
Work Outside of Class:	Observation of or participation in an activity related to course content (such as theatre event, museum, concert, debate, meeting), Problem solving activity, Required reading, Skill practice, Study
If Other:	Create and maintain blog detailing design process for assignments and related research.
Up-To-Date Representative Textbooks:	
Alternative Textbooks:	
Required Supplementary Readings:	Discipline standard online materials and tutorials

Other Required Materials:	Studio tools, Computer data storage device
Requisite:	
Category:	
Requisite course(s): List both prerequisites and corequisites in this box.	
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	
Requisite Skill:	
Requisite Skill and Matching Skill(s): Bold the requisite skill(s). If applicable	
Requisite course:	Art 110 or Art 130 Business 52A
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	**This course involves reading college level textbooks, developing projects, and answering essay questions. A student's success in this class will be enhanced if they have these skil**ls.**Prior experience with drawing and composition.** ART 110 - Compose drawings applying the principles of pictorial structure, balance, rhythm, focal point, and interpretation. ART 110 -Compose drawings applying the principles of pictorial structure, balance, rhythm, focal point, and interpretation. ART 130 - Compose designs using the principles of pictorial organization: balance, rhythm, dominance, sub-dominance, repetition, and unity. **Working knowledge of computer and operating system** BUS 52A -Create, save, retrieve, print, and manage documents
Requisite Skill:	eligibility for English 1A; equivalent computer skills
Requisite Skill and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s). If applicable	**Students need well-developed reading skills in order to understand and interpret information in their textbooks and writing skills to develop essays and projects.** Summarize, analyze, evaluate, and synthesize college-level texts. Write a well-reasoned, well-supported expository essay that demonstrates application of the academic writing process. **Working knowledge of computer and operating system** Create, save, retrieve, print, and manage documents
Enrollment Limitations and Category:	
Enrollment Limitations Impact:	

Course Created by:	Donald G. Hudson
Date:	10/01/1985
Original Board Approval Date:	04/08/1991
Last Reviewed and/or Revised by:	Joyce Dallal
Date:	12/10/2021
Last Board Approval Date:	06/20/2022