Texas CTE

Digital Art and Animation(2020): Grades 9-12

General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: Art, Level I. This course is recommended for students in Grades 9-12. This course satisfies the high school fine arts graduation requirement. 9-12.A

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Introduction. 9-12.B

1 **Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.** 9-12.B.1

2 **The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.** 9-12.B.2

3 **Digital Art and Animation consists of computer images and animations created with digital imaging software. Digital Art and Animation has applications in many careers, including graphic design, advertising, web design, animation, corporate communications, illustration, character development, script writing, storyboarding, directing, producing, inking, project management, editing, and the magazine, television, film, and game industries. Students in this course will produce various real-world projects and animations. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.** 9-12.B.3

4 **Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.** 9-12.B.4

5 **Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.** 9-12.B.5

Knowledge and skills. 9-12.C

1 **Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:** 9-12.C.1

A evaluate, edit, and create scripts for animations; 9-12.C.1.A

B identify and apply color theories, including harmony rules, tints, shades, gradients, color mixing, new color creation, and the visual impacts of specific color combinations using a digital format; 9-12.C.1.B

C compare, contrast, and integrate the basic sound editing principles, including mixing and manipulating wave forms, audio tracks, and effects; 9-12.C.1.C

D compare and contrast the rules of composition such as the rule of thirds or the golden section/rectangle with respect to harmony and balance; 9-12.C.1.D

E evaluate the fundamental concepts of a digital art and design such as composition, perspective, angles, lighting, repetition, proximity, white space, balance, and contrast; 9-12.C.1.E

F analyze digital art designs to interpret the point of interest, the prominence of the subject, and visual parallels between the structures of natural and human-made environments; 9-12.C.1.F

G distinguish among typefaces while recognizing and resolving conflicts that occur through the use of typography as a design element; 9-12.C.1.G

H use perspective, including backgrounds, light, shades and shadows, hue and saturation, and scale, to capture a focal point and create depth; 9-12.C.1.H

I use the basic principles of design such as proportion, balance, variety, emphasis, harmony, symmetry, and unity in type, color, size, line thickness, shape, and space; 9-12.C.1.I

J edit files using appropriate digital editing tools and established design principles such as consistency, repetition, alignment, proximity, white space, image file size, color use, and font size, type, and style; and 9-12.C.1.J

K identify pictorial qualities in a design such as shape and form, space and depth, or pattern and texture to create visual unity and desired effects in designs. 9-12.C.1.K

2 **Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:** 9-12.C.2

A use vocabulary as it relates to digital art, audio, and animation; 9-12.C.2.A

B demonstrate the use of technology to participate in self-directed and collaborative activities within the global community; 9-12.C.2.B

C participate in electronic communities; 9-12.C.2.C

D create technology specifications for tasks and rubrics for the evaluation of products; 9-12.C.2.D

E design and implement procedures to track trends, set timelines, and evaluate products; 9-12.C.2.E

F collaborate with peers in delineating technological tasks; 9-12.C.2.F

G publish and save information in a variety of ways, including print or digital formats; 9-12.C.2.G

H analyze and evaluate projects for design, content delivery, purpose, and audience; and 9-12.C.2.H

I critique original digital artwork, portfolios, and products with peers. 9-12.C.2.I

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3 **Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:** 9-12.C.3

A distinguish between and correctly apply process color (RGB and CYMK), spot color, and black or white; 9-12.C.3.A

B research the history of digital art and animation; 9-12.C.3.B

C research career choices in digital art and animation; 9-12.C.3.C

D use the Internet to retrieve information in an electronic format; 9-12.C.3.D

E demonstrate the appropriate use of digital imaging, video integration, and sound retrieved from an electronic format; 9-12.C.3.E

F import sounds from a variety of sources; and 9-12.C.3.F

G create planning designs such as rough sketches, storyboards, and brainstorming materials. 9-12.C.3.G

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4 **Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:** 9-12.C.4

A distinguish between and use the components of animation software programs such as cast, score, stage, and the animation manipulation interface; 9-12.C.4.A

B distinguish between and use different animation techniques such as path and cell animation, onion skinning, and tweening; 9-12.C.4.B

C create three-dimensional effects by layering images such as foreground, middle distance, and background images; 9-12.C.4.C

D apply a variety of color schemes such as monochromatic, analogous, complementary, primary/secondary triads, cool/warm colors, and split complements to digital designs; 9-12.C.4.D

E use the basic concepts of color and design theory such as working in a bitmapped and vector mode to create backgrounds, characters, and other cast members as needed for the animation; 9-12.C.4.E

F use the appropriate scripting language or program code to create an animation; 9-12.C.4.F

G use a variety of lighting techniques such as shadows and shading to create effects; and 9-12.C.4.G

H define the design attributes and requirements of products created for a variety of purposes such as posters, billboards, logos, corporate identity, advertisements, book jackets, brochures, and magazines. 9-12.C.4.H

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5 **Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:** 9-12.C.5

A discuss copyright laws/issues and use of digital information such as attributing ideas and citing sources using established methods; 9-12.C.5.A

B define plagiarism and model respect of intellectual property; 9-12.C.5.B

C demonstrate proper digital etiquette and knowledge of acceptable use policies when using technology; and 9-12.C.5.C

D evaluate the validity and reliability of sources. 9-12.C.5.D

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6 **Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:** 9-12.C.6

A demonstrate knowledge and appropriate use of operating systems, software applications, and communication and networking components; 9-12.C.6.A

B make decisions regarding the selection and use of software and Internet resources; 9-12.C.6.B

C make necessary adjustments regarding compatibility issues with digital file formats, importing and exporting data, and cross-platform compatibility; and 9-12.C.6.C

D read, use, and develop technical documentation. 9-12.C.6.D