South Carolina CTE

Digital Art & Design 4 (2024)

PORTFOLIO DEVELOPMENT

Digital artists present and maintain a portfolio of their work consistent with fundamental design practices. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Exhibit evidence of proficiency among multiple portfolio pieces in the following practices. A.1

a Typography A.1.A

b Pre-production practices A.1.B

c Production Practices A.1.C

d Photographic Principles A.1.D

e Image manipulation A.1.E

f Vector illustration A.1.F

g Document layout A.1.G

CAREER PREPARATION

Digital artists demonstrate appropriate professional development skills and knowledge. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Update resume. B.1

2 Explain the advantages of different types of portfolios. B.2

3 Research different kinds of networking opportunities. B.3

4 Demonstrate application of creative commons licenses and how they are used in the design industry. B.4

5 Explain the importance of obtaining media releases. B.5

6 Investigate independent digital art and design opportunities. B.6

CERTIFICATIONS

Digital artists acquire appropriate certifications/credentials. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Prepare and test for College and Career Ready certification(s). C.1

EVALUATION AND CR

Digital artists acquire appropriate certifications/credentials. The following :countability criteria are considered essential for students in the Digital Art and esign program of study.

1 Establish project requirements. D.1

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a Identify the purpose, target market and audience market for the final product(s). D.1.A

b Demonstrate knowledge of project management tasks and responsibilities. D.1.B

c Communicate with others (such as peers and clients) about design plans. D.1.C

d Ensure ADA compliance. D.1.D

2 Analyze, refine and iterate design based on client and/or peer feedback. D.2

3 Critique work effectively. D.3

BUSINESS OF DIGITAL ART DESIGN

Digital artists demonstrate appropriate business skills and knowledge. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Prepare a digital design/art services quote for prospective work. E.1

2 Demonstrate strategies to promote digital design/art services. E.2

3 Summarize practices for planning and growing successful services. E.3

4 Evaluate personal productivity over the course of a design project. E.4

5 Investigate methods for protecting/managing intellectual property rights (e.g., Creative Commons vs. professional trademark/patent/legal services). E.5

6 Explain the basic fundamentals of a business, such as cost, estimates, and productivity. E.6

7 Summarize the use and application of various industry standards and specifications. E.7

8 Explain how copyright laws apply to printing companies. E.8

9 Describe the differences between, and the advantages/disadvantages of: in-line; off-line; and, near-line finishing. E.9

DESIGNER/CLIENT RELATIONS

Digital artists demonstrate appropriate designer/client relationships. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Establish a regular communication schedule with the client. F.1

2 Demonstrate understanding of client needs. F.2

3 Establish and meet client timelines. F.3

4 Present work to the client using appropriate media and format. F.4

5 Receive and respond to client feedback by iterating designs as required. F.5

6 Maintain open and timely communication with the client regarding changes in scope or cost of the project. F.6

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igital artists have knowledge of the career pathways found in the Digital Art and esign industry. The following accountability criteria are considered essential for udents in the Digital Art and Design program of study.

1. Demonstrate an understanding of the responsibilities of a Photo Editor – Photo editors work with real-life images to adjust, color-correct or combine images to create the desired final image. Image editing can be as simple as adjusting the lighting and color balance on a photograph or as drastic as changing garment colors or adding logo information or banners to the image. G.1
2. Demonstrate an understanding of the responsibilities of an Apparel Designer – Apparel graphic designers create individual, original images for clothing. They develop a strong understanding of the brand's customers and ensure their graphics are cohesive and visually appealing to that audience. They design a variety of images and font-based graphics for screen printing on shirts, pocket-placed embroidery designs and any other special designs or prints the brand's design executives want to include on their clothing. G.2
3. Demonstrate an understanding of the responsibilities of a Logo Designer – Logo designers develop visually compelling graphics or symbols to represent a company, product, brand or service. G.3
4. Demonstrate an understanding of the responsibilities of a Packaging Designer – Packaging designers—or production designers—develop the box, container and labels on a product to protect the product during shipping and communicate important features to the customer. G.4
5. Demonstrate an understanding of the responsibilities of a Web Designer – Web designers assist in developing websites by creating individual web pages, designing page layouts and developing graphics for the website. They are also responsible for designing the navigation menus, drop-down options and the website's structure. G.5
6. Demonstrate an understanding of the responsibilities of a Multimedia Designer – Multimedia designers create complex animated images and videos using art and computerized animation programs. They plan out the animation by sketching, creating scale models and developing computerized graphics to build the story. G.6
7. Demonstrate an understanding of the responsibilities of an Advertising Designer – Advertising designers use graphic design, sketching and photography to create visually compelling marketing materials for a brand or company. They create billboards, magazine advertisements, website advertisements and any other requested promotional materials. G.7
8. Demonstrate an understanding of the responsibilities of a Publication Designer – Publication designers develop the layout, visual appearance and graphics for a range of printed publications. Companies that create annual reports, research papers, books, catalogs and user manuals use internal or freelance publication designers to add images and graphics to the written information. G.8
9. Demonstrate an understanding of the responsibilities of an Art Director – The art director is a high-level executive responsible for guiding the design team's vision, directing the theme concept and overseeing all design artwork. They can work in a variety of industries including fashion, print publications, advertising, television or consumer products. G.9

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10 Demonstrate an understanding of the responsibilities of a User Interface (UI) Designer – The UI designer is responsible for ensuring every webpage or operational step of the final product follows the user experience (UX) designer's intent. G.10

11 Demonstrate an understanding of the responsibilities of a User Experience (UX Designer) – UX designers make products, services and websites enjoyable and accessible for users. They consider the intended end-use of the product and how the product feels to the consumer to ensure it is a user-friendly product or service. G.11

12 Demonstrate an understanding of the responsibilities of a Motion Graphic Designer – Create artwork for the web, television, or film. They use visual effects, animation and other cinematic techniques to bring life to their creations. G.12

13 Demonstrate an understanding of the responsibilities of a Colorist – A colorist in the film industry creates a visual story for a production, through adjusting the hues in the corrected film through color grading techniques. G.13

14 Demonstrate an understanding of the responsibilities of a Concept Artist – Concept artists develop the initial visual concepts (characters, props, vehicles, environments) from a script or creative brief. G.14

15 Demonstrate an understanding of the responsibilities of a 3D Rendering Specialist –A 3D rendering specialist utilizes drawings and technical information to construct 3D models representative of the client's desired goals. G.15

16 Demonstrate an understanding of the responsibilities of a Character Designer – Create and draw the visual elements which describe the characters, environments, and props associated with characters in game design and other media. G.16

17 Demonstrate an understanding of the responsibilities of a Product Visualization Designer – Uses renderings, images, and artwork to visually communicate products to customers. G.17

EMERGING TECHNOLOGIES

Digital artists explore emerging technologies to enhance and improve their existing skills. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Identify and describe an emerging technology, whether technical, software, or hardware- based and its application in the digital art world. H.1

2 Use appropriate technical, software, or hardware tools to create an original digital artwork which integrates an identified emerging technology (e.g., virtual reality, augmented reality, or 3D printing). H.2

DIGITAL SCULPTING: ZBRUSH

Professionals demonstrate appropriate character and concept development skills. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Demonstrate efficient navigation of the Zbrush interface (e.g., gizmo, camera). I.1

2 Block out organic shapes. I.2

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Use primitives and DynaMesh basics to work efficiently (e.g., sculpting, combining, imperfections). I.3

4 Demonstrate the use of various types of brushes and tools. (e.g., brushes, symmetry, smoothing). I.4

5 Demonstrate how to properly prepare a model for compositing in Photoshop or other appropriate application. I.5

6 Utilize Zspheres to block out a design. I.6

7 Demonstrate the use of polypainting to develop a model (e.g., nanomesh, fibermesh). I.7

8 Experiment with lighting in the scene. I.8

MOTION GRAPHICS: (modeled after CINEMA 4D)

Professionals demonstrate appropriate animation and motion graphics skills using Cinema 4D. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Create and edit 3D models, animations, and simulations using Cinema 4D. J.1

2 Demonstrate the manipulation of objects. J.2

3 Demonstrate the application of materials. J.3

4 Demonstrate the use of MoGraph to create dynamic animations. J.4

5 Demonstrate the use of fields to control elements. J.5

6 Apply the elements and principles of design to compose effective 3D designs. J.6

7 Demonstrate effective use of cameras, lighting, and rendering tools to create a desired effect. J.7

8 Demonstrate effective typographical design and animation. J.8

9 Demonstrate how to prepare a design for export into another application. J.9

10 Demonstrate the use of Redshift renderer to create advanced lighting and material designs. J.10

MOTION GRAPHICS: (modeled after ADOBE AFTER EFFECTS)

Digital artists demonstrate appropriate animation and motion graphics skills using Adobe After Effects or equivalent software. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Create, import, and organize assets in a project. K.1

2 Use folders and labels to organize and document their project. K.2

3 Create, modify, and arrange compositions and layers. K.3

4 Use precomps (precomposing), nesting, and proxies to optimize and simplify their workflow. K.4

5 Use blending modes, track mattes, masks, and alpha channels to control the visibility and transparency of layers K.5

6 Use keyframes, expressions, and graphs to animate the properties and attributes of layers K.6

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7 Demonstrate the application of effects and presets to enhance the appearance and functionality of layers. K.7

8 Create, edit, and animate text and shape layers. K.8

9 Demonstrate the application of text animators, text presets, shape tools, and shape modifiers to create dynamic typography and graphics. K.9

10 Render and export their compositions for publication to the desired output format. K.10

PHOTOGRAPHIC PRINCIPLES

Digital artists demonstrate appropriate photography skills. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Demonstrate a RAW photography workflow. L.1

2 Capture digital images using a scanner and other digital devices. L.2

3 Demonstrate appropriate scanner/program operations. L.3

4 Demonstrate the application of focus, aperture, shutter, and ISO to achieve a properly exposed image, and to achieve the desired effect. L.4

5 Demonstrate the use and operation of studio flash units to create and control artificial light sources. L.5

6 Demonstrate the use of a camera and flash modifiers such as umbrellas, reflectors, or gels to alter the light and shadow created by the flash unit. L.6

7 Demonstrate advanced use of composition elements and techniques by composing simple and balanced shots using the rule of thirds, framing, leading lines, and perspective. L.7

8 Demonstrate basic editing by performing basic cropping, rotation, and exposure adjustments using simple editing tools. L.8

9 Demonstrate and identify the application of visual storytelling through photography. L.9

10 Demonstrate post-processing skills by utilizing more advanced editing software for photo enhancement. L.10

11 Provide and receive constructive feedback on photographs by participating in critiques. L.11

CREATING ANIMATIONS

Proficient professionals demonstrate appropriate animation skills. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Define animation and its relationship to time. M.1

2 Create a storyboard of proposed animation. M.2

3 Create a simple frame-based/key frame animation. M.3

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Demonstrate use of controller palettes to review, loop, and play back animation. M.4

Create a layer-based animation. M.5

6 Animate a project using motion tweening. M.6

WEB DESIGN

Digital artists demonstrate appropriate web design skills. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Analyze existing web sites for style and content. N.1

2 Compare and contrast preferred formats for various page elements. N.2

3 Analyze and design websites for functionality and visual appeal. N.3

4 Evaluate the user interface and enhance the user experience through web design best practices. N.4

5 Plan a web page design with thumbnail sketches, wireframe, and site map. N.5

6 Create a functional plan for a user interface in the form of a mockup. N.6

7 Organize, optimize, and collect images and content for website design. N.7

8 Integrate client or individual brand identity and standards into web design. N.8

9 Edit and refine design based on client feedback. N.9

SAFETY

Proficient professionals know the academic subject matter, including safety as required for proficiency within their area. The following accountability criteria are considered essential for students in any program of study.

1 Identify lab policies and procedures.

2 Identify lab equipment.

3 Identify contact information for classroom emergencies.

4 Demonstrate safety procedures used in digital art and design program including safe body mechanics and ergonomics.

5 Identify all fire exits.

6 Demonstrate proper workspace cleaning procedures.

STUDENT ORGANIZATIONS

Proficient professionals know the academic subject matter, including professional development required for proficiency within their area. The following accountability criteria are considered essential for students in any program of study.

1 Identify the purpose and goals of a Career and Technology Student Organization (CTSO).

2 Explain how CTSOs are integral parts of specific clusters, majors, and/or courses.

3 Explain the benefits and responsibilities of being a member of a CTSO.

4 List leadership opportunities that are available to students through participation in CTSO conferences, competitions, community service, philanthropy, and other activities.

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5 Explain how participation in CTSOs can promote lifelong benefits in other professional and civic organizations.

LEGAL REQUIREMENTS AND ETHICAL CONSIDERATIONS

Proficient professionals know the academic subject matter, including the ethical use of technology. The following accountability criteria are considered essential for students in the Digital Art and Design program of study.

1 Demonstrate proficiency and skills associated with the use of technologies that are common to a specific occupation.

2 Identify proper netiquette when using e-mail, social media, and other technologies for communication purposes.

3 Identify potential abuse and unethical uses of laptops, tablets, computers, and/or networks.

4 Explain the consequences of social, illegal, and unethical uses of technology (e.g., piracy; cyberbullying; illegal downloading; licensing infringement; inappropriate uses of software, hardware, and mobile devices in the work environment).

5 Discuss legal issues and the terms of use (e.g., plagiarism) related to copyright laws, fair use laws, and ethics pertaining to downloading of images, photographs, documents, video, sounds, music, trademarks, and other elements for personal use.

6 Define differences between classroom and professional practices in regard to copyrights.

7 Define the impact of the Americans with Disabilities Act and other civil rights legislation on a business/organization, its employees, and its customers.

8 Analyze accessibility laws and their impact on the end-user.

9 Describe ethical and legal practices of safeguarding the confidentiality of business-related information.

10 Describe possible threats to a laptop, tablet, computer, and/or network and methods of avoiding attacks.

PERSONAL QUALITIES AND EMPLOYABILITY SKILLS

Proficient professionals know the academic subject matter, including positive work practices and interpersonal skills. The following accountability criteria are considered essential for students in any program of study.

1 Demonstrate creativity and innovation.

2 Demonstrate critical thinking and problem-solving skills.

3 Demonstrate initiative and self-direction.

4 Demonstrate integrity.

5 Demonstrate work ethic.

6 Demonstrate conflict resolution skills.

7 Demonstrate listening and speaking skills.

Demonstrate respect for diversity.

Demonstrate customer service orientation.

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10 Demonstrate teamwork.

PROFESSIONAL KNOWLEDGE

Proficient professionals know the academic subject matter, including positive work practices and interpersonal skills. The following accountability criteria are considered essential for students in any program of study.

1 Demonstrate global or “big picture” thinking.

2 Demonstrate career and life management skills and goal-making.

3 Demonstrate continuous learning and adaptability skills to changing job requirements.

4 Demonstrate time and resource management skills.

5 Demonstrates information literacy skills.

6 Demonstrates information security skills.

7 Demonstrates information technology skills.

8 Demonstrates knowledge and use of job-specific tools and technologies.

9 Demonstrate job-specific mathematics skills.

10 Demonstrates professionalism in the workplace.

11 Demonstrate reading and writing skills.

12 Demonstrate workplace safety.