Indiana CTE

High School Computer Illustration and Graphics

Students integrate visual arts techniques, as well as, elements and principles of design to develop graphic art. Standards CORE STANDARD 1

1. Identify and apply effective design solutions based on content CIG-1.1
2. Discuss the importance of proper research, brainstorming, and thumbnails CIG-1.2
3. Evaluate the aesthetics of graphic design CIG-1.3
4. Given the target audience, the student will be able to show the importance of assessment in the advertising media industry CIG-1.4
5. Explain the elements of visual design unique to the commercial art and graphic design CIG-1.5
6. List and describe the components of a design CIG-1.6
7. Apply brainstorming techniques to develop many possible solutions CIG-1.7
8. Explain the human, social and environmental issues that affect the design solutions CIG-1.8
9. Analyze ethical issues in choosing design solutions CIG-1.9
10. Analyze the effective use of symbols, elements, principles, and media using appropriate terminology CIG-1.10
11. Evaluate the effectiveness of elements and principles in other design solutions and use this evaluation toward personal work

Students perform basic computer operation for use in computer graphic software. CORE STANDARD 2

1. Navigate within the computer's operating environment CIG-2.1
2. Utilize the hardware components of the computer effectively CIG-2.2
3. Begin, define, and solve challenging visual problems, demonstrating skill and in-depth understanding of media and processes CIG-2.3
4. Integrate data from various software applications CIG-2.4
5. Access information using electronic sources CIG-2.5

	6 Demonstrate basic knowledge of the Internet CIG-2.6
	7 Distinguish among the various forms of intellectual property rights CIG-2.7
Students apply and adapt project management methodology to meet customer needs. CORE STANDARD 3	1 Apply project management principles CIG-3.1
	2 Evaluate project management methodologies CIG-3.2
	3 Demonstrate monitoring of a project's progress CIG-3.3
	4 Gather data and identify client requirements and scope of work CIG-3.5 Develop project concept proposal plan CIG-3.4
	5 Develop project concept proposal plan CIG-3.5
Students utilize digital image equipment and editing software to use in graphic design. CORE STANDARD 4	1 Identify standard hardware platform components and configurations CIG-4.1
	2 Identify memory and storage requirements CIG-4.2
	3 Identify computer architecture requirements for digital imaging CIG-4.3
	4 Explain how a digital image is generated, archived, and managed CIG-4.4
	5 Compare performance of different types of image acquisition hardware CIG-4.5
	6 Operate digital imaging equipment and move images from equipment to computer software CIG-4.6
	7 Apply image techniques that enhance the quality of an image or graphic CIG-4.7
Students create graphic products using desktop publishing software to understand publishing basics. CORE STANDARD 5	1 Evaluate the purposes, functions and features of desktop publishing software CIG-5.1
	2 Demonstrate desktop publishing software skills CIG-5.2
	3 Import, manipulate and integrate data and graphic images CIG-5.3
	4 Apply principles and techniques of publication design and layout CIG-5.4
	5 Apply knowledge of typography to enhance publications using different fonts, styles, attributes, justification, etc CIG-5.5
Students create layouts using design software to demonstrate knowledge of design. CORE STANDARD 6	1 Integrate human factors and user interface in visual design CIG-6.1
	2 Evaluate visual appeal of design CIG-6.2
	3 Demonstrate knowledge of the principles and elements of design and their relationship to each other CIG-6.3

4 **Distinguish the differences in using a template verse a manual layout techniques** CIG-6.4

5 **Apply color theory for emotional impact** CIG-6.5

6 **Demonstrate knowledge of applying principles of basic composition** CIG-6.6

7 **Demonstrate basic technical art skills in both traditional and electronic forms** CIG-6.7

8 **Assess how the technical limitations of the medium affect content and style** CIG-6.8

Students adapt and apply 2D and 3D skills to create animations. CORE STANDARD 7

1 **Create 2D and 3D computer graphics** CIG-6.1

2 **Evaluate visual appeal of design in computer graphics** CIG-6.2

3 **Alter images using an image manipulation program** CIG-6.3

4 **Integrate various special effects to images, graphics, typography, and photos** CIG-6.4

5 **Utilize the basic principles of 2-D animation** CIG-6.5

6 **Create real-time Virtual Reality Mark-up Language (VRML) 3-D animation** CIG-6.6

7 **Explain how to convert objects from two-dimensional to three-dimensional** CIG-6.7

8 **Compare/contrast flat shading, curved shading, ray tracing, and radiosity methods** CIG-6.8

9 **Follow basic animation principles CIG-6.10 Demonstrate knowledge of virtual environment** CIG-6.9