Florida Department of Education
Curriculum Framework

Program Title: **Digital Media/Multimedia Design**
Program Type: **Career Preparatory**
Career Cluster: **Arts, A/V Technology and Communication**

Career Certificate Program	
Program Number	K100200
CIP Number	0609070208
Grade Level	30, 31
Standard Length	1050 hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1014 – Multimedia Artists and Animators
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	Mathematics: 10 Language: 10 Reading: 10

Purpose

The purpose of this program is to prepare students for careers as multimedia artists and animators.

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Arts, A/V Technology and Communication career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, practical experiences in webpage design and interactive presentation development, testing and production. Specialized skills in multimedia presentations such as video editing, audio features, and simple animation and authoring software are used to produce a variety of interactive multimedia presentations.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of four occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code
A	DIG0081	Theory and Foundations of Design	BUS ED 1 @2 COMM ART @7 7G	150 hours	27-1014
B	DIG0082	Multimedia Digital/Print Designer	COMPU SCI 6 DIGI MEDIA 7G	300 hours	27-1014
C	DIG0083	Multimedia Web Interactive Designer	PRINTING @7 7G SECRETAR 7 G TEC ED 1 @2	300 hours	27-1014
D	DIG0084	Multimedia Integrated Producer Designer	ENG&TEC ED1@2 TEC ELEC @7 TV PRO TEC @7 7G VOE @7	300 hours	27-1014

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.

2. Apply appropriate academic and technical skills.

3. Attend to personal health and financial well-being.

4. Communicate clearly, effectively and with reason.

5. Consider the environmental, social and economic impacts of decisions.

6. Demonstrate creativity and innovation.

7. Employ valid and reliable research strategies.

8. Utilize critical thinking to make sense of problems and persevere in solving them.

9. Model integrity, ethical leadership and effective management.

10. Plan education and career path aligned to personal goals.

11. Use technology to enhance productivity.

12. Work productively in teams while using cultural/global competence.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0   Demonstrate knowledge of presentation production issues.
02.0   Demonstrate basic computer knowledge.
03.0   Demonstrate knowledge of digital still photography.
04.0   Demonstrate knowledge of photo editing software.
05.0   Demonstrate proficiency in advanced design.
06.0   Demonstrate understanding of color modes.
07.0   Demonstrate proficiency in using fonts for advanced design.
08.0   Demonstrate proficiency in using illustration software.
09.0   Demonstrate knowledge of design layout software.
10.0   Demonstrate proficiency in using presentation software and equipment to produce a complex presentation.
11.0   Demonstrate proficiency in webpage design.
12.0   Demonstrate understanding of HTML and CSS.
13.0   Demonstrate proficiency in authoring software for webpage design.
14.0   Demonstrate proficiency in animated webpage design.
15.0   Demonstrate understanding of object-oriented scripting and website animation.
16.0   Demonstrate proficiency in the use of interactive design software for webpage design, interactive presentations and banners.
17.0   Demonstrate proficiency using video editing software and equipment.
18.0   Develop proficiency in using authoring software.
19.0   Demonstrate proficiency using all media to create an advertising campaign.
20.0   Participate in work-based learning experiences.
21.0   Apply job readiness, career planning and job seeking skills to meet personal and professional goals.

Florida Department of Education
Student Performance Standards

Program Title: Digital Media/Multimedia Design
Career Certificate Program Number: K100200

Course Number: DIG0081 **Occupational Completion Point: A** **Theory and Foundations of Design – 150 Hours – SOC Code 27-1014**	
01.0	Demonstrate knowledge of presentation production issues. The student will be able to:
01.01	Identify characteristics of design for digital media (e.g., web, animation, video, and audio).
01.02	Identify presentation materials (slides, handouts) and presentation marketing formats (social media, print media, newspaper, billboards, posters, magazines, television, movies, computer presentations, interactive CD ROM, kiosks, webpages).
01.03	Identify design characteristics (e.g., fonts, size, color modes, backgrounds) that are suited for each type of design format and material.
01.04	Demonstrate knowledge of copyright laws (e.g., copyright statutes, disclaimers, filing procedures).
01.05	Research and identify job titles and skills needed for career positions in multimedia design using information from the U.S. Bureau of Labor Statistics (www.bls.gov).
01.06	Demonstrate understanding of multimedia file formats (e.g., EPS, PDF, TIFF, JPEG, PNG, ASCII, MPEG, MIDI, AVI, and WAV) and knowledge of image size when scanning and saving files for use in different design types (print, web, computer, television, mobile devices).
01.07	Demonstrate knowledge of presentation vocabulary and terms.
02.0	Demonstrate basic computer knowledge. The student will be able to:
02.01	Identify basic computer components (e.g., CPU, monitor, keyboard, resolution).
02.02	Demonstrate understanding of computer specifications.
02.03	Demonstrate best practices of computer safety and ergonomics.
02.04	Demonstrate knowledge of computer operating systems and platforms.
02.05	Demonstrate use of internal and external drives/storage and data backup.
02.06	Identify possible software and hardware malfunctions and perform basic troubleshooting operations.
02.07	Identify characteristics of software for print, photography, web, animation, video and audio.

03.0	Demonstrate knowledge of digital still photography. The student will be able to:	
	03.01	Demonstrate knowledge of digital camera types and uses.
	03.02	Demonstrate knowledge of digital photography composition.
	03.03	Demonstrate knowledge of digital camera supports (e.g., tripod, grips, holds).
	03.04	Identify parts of a digital camera (e.g., lens, sensor, battery).
	03.05	Understand digital camera menus and navigation.
	03.06	Demonstrate knowledge of auto modes and settings (e.g., F-stops, speed, ISO).
	03.07	Demonstrate knowledge of manual modes and settings (e.g., F-stops, speed, ISO).
	03.08	Demonstrate understanding of white balance and lighting.
	03.09	Demonstrate proper care, use, and storage of digital cameras.
	03.10	Create both a digital and printed photography portfolio that includes portraits and landscapes in studio and field settings.
04.0	Demonstrate knowledge of photo editing software. The student will be able to:	
	04.01	Demonstrate understanding of file formats and storage options.
	04.02	Identify the parts of the software interface.
	04.03	Demonstrate the ability to use each of the basic tool sets.
	04.04	Demonstrate the ability to import, export and save images.
	04.05	Demonstrate understanding of layers and channels.
	04.06	Demonstrate understanding of filters, effects and plug-ins.
	04.07	Demonstrate understanding of file presets.
	04.08	Demonstrate the ability to select portions of an image for manipulation.
	04.09	Demonstrate the ability to transform selections and images (e.g., crop, scale).
	04.10	Demonstrate the ability to color-correct images (e.g., brightness, hue, contrast).
	04.11	Demonstrate the ability to use brushes for image creation and correction.

04.12	Understand non-destructive and destructive operations.
04.13	Demonstrate the ability to import, paint and export 3D objects.
04.14	Demonstrate the basic uses of video in photo editing software.

Course Number: DIG0082
Occupational Completion Point: B
Multimedia Digital/Print Designer – 300 Hours – SOC Code 27-1014

05.0	Demonstrate proficiency in advanced design. The student will be able to:
	05.01 Demonstrate knowledge of advanced design.
	05.02 Identify design strategies to reach the intended audience.
	05.03 Use storyboarding or sketches to plan a design.
	05.04 Create formal or informal design layouts using guidelines, colors, fonts, graphics and logos.
	05.05 Demonstrate use of authoring software integration.
	05.06 Identify compatibility formats (extensions) for authoring software integration.
06.0	Demonstrate understanding color modes. The student will be able to:
	06.01 Demonstrate knowledge of the color process for printing purposes.
	06.02 Demonstrate knowledge of color conversion from display to print.
	06.03 Demonstrate knowledge of spot colors.
	06.04 Demonstrate knowledge of web-safe colors.
	06.05 Explain color mode differences (e.g., RGB, CMYK, and HSB).
	06.06 Understand accessing color modes from authoring software.
07.0	Demonstrate proficiency in using fonts for advanced design. The student will be able to:
	07.01 Identify *serif* and *sans-serif* fonts.
	07.02 Demonstrate knowledge of conversion of fonts to outlines.
	07.03 Understand the proprietary copyrights of fonts.

	07.04	Demonstrate knowledge of standard font formats (e.g., TrueType, PostScript, and OpenType).
	07.05	Design and develop a print and a digital portfolio that includes business cards, posters, billboards, magazines, and brochures.
08.0	Demonstrate proficiency in using illustration software. The student will be able to:	
	08.01	Evaluate industry standard illustration software packages.
	08.02	Identify characteristics of vector and bitmap images.
	08.03	Demonstrate understanding of the software workspace.
	08.04	Demonstrate software navigation (e.g., views, tabs, zoom).
	08.05	Demonstrate use of drawing tools to create, combine and edit basic shapes.
	08.06	Demonstrate the ability to transform content (e.g., scale, rotation, position).
	08.07	Demonstrate use of pen and pencil tools to draw/edit straight and curved paths.
	08.08	Demonstrate use of color and painting tools (e.g., patterns, gradients, color palettes).
	08.09	Demonstrate the ability to work with type (e.g., formatting, font palette, character panels, and paths).
	08.10	Demonstrate use of layers by creating, locking, viewing, pasting, merging.
	08.11	Demonstrate use of blending (e.g., gradients, objects).
	08.12	Demonstrate use of brushes; download new brushes.
	08.13	Explore file exporting options and round trip workflows with page layout software.
	08.14	Demonstrate knowledge of bleed for vector and bitmap design software.
	08.15	Demonstrate knowledge of bleed for vector and image editing software.
09.0	Demonstrate knowledge of design layout software. The student will be able to:	
	09.01	Demonstrate understanding of file formats and storage options.
	09.02	Identify parts of the software interface.
	09.03	Demonstrate the ability to customize and navigate the workspace.
	09.04	Demonstrate understanding of pre-flighting.

	09.05	Work with styles, graphics and objects in a design.
	09.06	Set up a document and manage pages within the document.
	09.07	Demonstrate use of layers, text frames and graphic frames.
	09.08	Demonstrate the ability to align, transform and group objects.
	09.09	Understand typography and text editing.
	09.10	Demonstrate understanding of color (e.g., applying, gradients, tint, spot, and management).
	09.11	Import and modify graphics (e.g., links, vector/bitmap images, quality, alpha channels).
	09.12	Understand output and exporting functions (e.g., proofs, separations, prepress).
10.0	Demonstrate proficiency in using presentation software and equipment to produce a complex presentation. The student will be able to:	
	10.01	Using authoring/editing software, create a multimedia presentation that incorporates graphics, video, animation, music, and narration and that adheres to good design principles.
	10.02	Demonstrate knowledge of the roles and responsibilities of a multimedia production team (e.g., project manager, creative or design director, content experts, writers, graphic designers, animators, sound designers, videographers, interface designers/programmers).

Course Number: DIG0083
Occupational Completion Point: C
Multimedia Web Interactive Designer – 300 Hours – SOC Code 27-1014

11.0	Demonstrate proficiency in webpage design. The student will be able to:	
	11.01	Determine the objectives and the audience for webpages.
	11.02	Identify design strategies to reach and keep an audience.
	11.03	Use storyboarding to plan a website.
	11.04	Create styles and other design elements (e.g., backgrounds, colors, fonts, and buttons).
12.0	Demonstrate understanding of HTML and CSS. The student will be able to:	
	12.01	Interpret HTML coding on an existing webpage.
	12.02	Interpret HTML commands to write a webpage.
	12.03	Demonstrate understanding of Cascading Style Sheets (CSS) on an existing webpage.
	12.04	Demonstrate compliance with ADA recommendations for all websites created.

12.05	Utilize markup validity to ensure compliance with the W3C for all websites created.
13.0	**Demonstrate proficiency in authoring software for webpage design. The student will be able to:**
13.01	Demonstrate understanding of photograph compression factors such as transmission speed, color reduction, and browser support.
13.02	Save and export a photograph to the web in the best format for image quality and file size.
13.03	Demonstrate knowledge of image formats related to photos and graphics on the Internet.
13.04	Demonstrate understanding of pixels for web design.
13.05	Create webpages for publication.
13.06	Apply style sheets for consistent website design.
13.07	Format text for webpages (e.g., font families, sizes).
13.08	Create and edit images and photographs for webpages using digital imaging software.
13.09	Create and insert buttons into a webpage and test for accuracy.
13.10	Create navigational links.
13.11	Insert audio files into a webpage.
13.12	Create, edit and integrate video files into a webpage.
13.13	Create, edit and integrate animation files into a webpage.
13.14	Create meta-commands and keywords for search engines.
13.15	Optimize page size for effective downloading to browsers.
13.16	Create and incorporate a form into a webpage.
13.17	Edit and test links for accuracy and validity.
13.18	Create several webpages for a portfolio.
14.0	**Demonstrate proficiency in animated webpage design. The student will be able to:**
14.01	Determine the objectives and the audience for interactive animated webpages.
14.02	Identify design strategies to reach and keep an audience.

	14.03	Use storyboarding to plan an interactive animated website.
	14.04	Demonstrate understanding of the correct use of authoring design software to create animated webpage layouts.
	14.05	Demonstrate understanding of pixels in relation to animated webpages, interactive presentations, banners, etc.
	14.06	Save and export photographs and graphics to the web in the best format for image quality and file size.
15.0	Demonstrate understanding of object-oriented scripting and website animation. The student will be able to:	
	15.01	Interpret object-oriented scripts and animation for an existing webpage.
	15.02	Understand the use of object-oriented scripting and animation for webpages.
16.0	Demonstrate proficiency in the use of interactive design software for webpage design, interactive presentations and banners. The student will be able to:	
	16.01	Demonstrate knowledge of image formats related to photos and graphics on the Internet.
	16.02	Optimize page size for effective downloading to the browser.
	16.03	Use scripting to create an interactive webpage, interactive presentation and web banner for publication.
	16.04	Demonstrate knowledge of timelines, scenes, and other features.
	16.05	Insert audio files into an interactive webpage, interactive presentation and web banner.
	16.06	Integrate video files into an interactive webpage, interactive presentation, and web banner.

Course Number: DIG0084 **Occupational Completion Point: D** **Multimedia Integrated Producer Designer – 300 Hours – SOC Code 27-1014**		
17.0	Demonstrate proficiency using video editing software and equipment. The student will be able to:	
	17.01	Demonstrate knowledge of non-linear editing software.
	17.02	Identify components of non-linear video editing equipment.
	17.03	Set up non-linear video editing equipment.
	17.04	Compare offline editing to linear video editing.
	17.05	Use storyboarding to plan a short non-linear video project that includes existing video footage with a title, transitions, background sound, voice-over, animation, and rolling credits.
	17.06	Use video editing software to create and edit a movie that includes video footage with a title, transitions, background sound, voice-over, and rolling credits and output to video.

	17.07	Collaborate with team members to plan, edit, and shoot video footage utilizing advanced video editing techniques and output to video.
	17.08	Discuss the use of batch processing and project trimming.
	17.09	Plan, create, edit and present a short non-linear movie with title, transitions, sub and virtual clips, sound, background music, voice-over, and credits.
18.0	Develop proficiency in using authoring software. The student will be able to:	
	18.01	Plan interactive projects for use at a kiosk, CD, DVD, e-merchandising, computer-based presentation, training or corporate presentation.
	18.02	Use authoring software to create an interactive project for use in a kiosk, CD, DVD, merchandising applications, computer-based training or corporate presentation.
	18.03	Have the created interactive project evaluated and tested by users and make modifications to improve the project.
	18.04	Collaborate with team members to plan, edit, evaluate, and present a multimedia interactive presentation or product.
19.0	Demonstrate proficiency using all media to create an advertising campaign. The student will be able to:	
	19.01	Use authoring software to plan and create an advertising campaign that includes collateral materials, digital photography, webpages, animation, video, and audio.
20.0	Participate in work-based learning experiences. The student will be able to:	
	20.01	Participate in work-based learning experiences in a digital media/multimedia environment.
21.0	Apply job readiness, career planning and job seeking skills to meet personal and professional goals. The student will be able to:	
	21.01	Create a digital résumé and print it.
	21.02	Create and publish a digital portfolio.
	21.03	Market digital media/multimedia design skills for employment.

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student. Access MyCareerShines by visiting: www.mycareershines.org.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills (if applicable)

In a Career Certificate Program offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 10, Language 10, and Reading 10. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Additional Resources

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:
http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml