Florida Department of Education
Curriculum Framework

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

Career Certificate Program	
Program Number	K100300
CIP Number	0650060502
Grade Level	30, 31
Standard Length	1050 hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4021 – Photographers 27-4032 – Film and Video editors
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	Mathematics: 9 Language: 9 Reading 9

Purpose

The purpose of this program is to prepare students for careers in the photography industry.

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, communication skills, leadership skills, human relations and employability skills, safe and efficient work practices, and the use of digital cameras techniques, commercial and industrial applications with emphasis on composition and color dynamics, printing, workflow, software and use, care, and maintenance of photographic equipment.

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	PGY0190	Photographic Specialist	PHOTOG @7 G	150 hours	27-4021
B	PGY0191	Photography Technician		300 hours	27-4021
C	PGY0192	Studio Photographer		300 hours	27-4032
D	PGY0193	Digital Photographer		300 hours	27-4021

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:

OCP A- Photographic Specialist

01.0 Discuss the history of photography.
02.0 Evaluate the production process.
03.0 Understand intellectual property rights, copyright laws and plagiarism as each applies to creative assets.
04.0 Operate parts of a camera system.
05.0 Demonstrate proper use of camera and support equipment.
06.0 Take basic photographs.
07.0 Use photographic workflow applications.

OCP B- Photography Technician

08.0 Develop a production plan.
09.0 Demonstrate knowledge of art/creative direction.
10.0 Demonstrate proficiency in computer skills.
11.0 Use photo editing software.
12.0 Use photographic lights.
13.0 Use photography sets, backgrounds and stages.
14.0 Process and print photographs.

OCP C- Studio Photographer

15.0 Demonstrate knowledge of photo/video journalism.
16.0 Demonstrate knowledge of video production with Interchangeable Lens Cameras (ILC).
17.0 Demonstrate knowledge of video software.
18.0 Practice the business of commercial digital photography.

OCP D- Digital Photographer

19.0 Operate various format cameras.
20.0 Demonstrate knowledge of advanced software retouching.
21.0 Develop a professional portfolio of work.

Florida Department of Education
Student Performance Standards

Program Title: **Digital Photography Technology**
Career Certificate Program Number: **K100300**

Course Number: PGY0190 **Occupational Completion Point: A** **Photography Specialist – 150 Hours – SOC Code 27-1019**	
01.0	Discuss the history of photography. The student will be able to:
01.01	Discuss photography as an invention.
01.02	Describe early uses of photography.
01.03	Describe the mechanics of early photographic systems.
01.04	Discuss the concept of photography as art.
01.05	Show the concept of the “decisive moment.”
01.06	Identify aesthetic differences between genres of photography (e.g., pictorial, straight, and photojournalism).
01.07	Demonstrate knowledge of the use and role of Digital Photography in the present.
02.0	Evaluate the production process. The student will be able to:
02.01	Identify the job titles associated with digital photography.
02.02	Identify various tools and equipment used in digital photography.
02.03	Use speed and efficiency concepts (workflow).
02.04	Identify the different types of photographic media and the relation to occupations in the field of Photography (e.g. photojournalism, fine art, event, headshots, family portrait, fashion, sports, magazine, publications, and product).
02.05	Identify the need for industry networking and forming relationships with professionals in the field.
02.06	Use basic communication concepts (e.g., verbal, memos, and paperwork and purchase orders).
02.07	Identify the stages of production.
02.08	Analyze photographic terms and jargon.

	02.09 Prepare, organize, and create presentations for clients (e.g., contact sheets and design layouts).
03.0	Understand intellectual property rights, copyright laws and plagiarism as each applies to creative assets. The student will be able to:
	03.01 Examine the limits and expectations of copyright protection.
	03.02 Analyze the various types of shared work in dealing with all forms of intellectual property, online as well as physical.
	03.03 Describe the transfer and licensing of creative work.
	03.04 Articulate the use of “exclusive rights” to intellectual creations.
	03.05 Demonstrate the use of metadata for embedding authorship within a photo.
04.0	Operate parts of a camera system. The student will be able to:
	04.01 Identify basic camera parts (e.g., lens, battery, flash, shutter and display).
	04.02 Remove and attach standard lenses.
	04.03 Charge and connect batteries.
	04.04 Identify, insert and format recording media.
	04.05 Use basic camera functions (e.g., menu settings and application of settings).
	04.06 Set image format and size.
	04.07 Use camera auto, program, scene and manual modes.
	04.08 Use camera viewfinder and LCD displays for image review.
	04.09 Use basic lens controls (auto, manual focus and zoom).
	04.10 Use image International Standards Organization (ISO) and metering functions.
	04.11 Set proper white balance.
	04.12 Use shutter and aperture priority modes.
	04.13 Set proper f-stop and shutter speeds.
	04.14 Use camera drive modes such as delayed, multiple and remote.
	04.15 Operate a camera mounted flash and use fill and red-eye reduction.

05.0	Demonstrate proper use of camera and support equipment. The student will be able to:
	05.01 Perform basic handholds of camera in portrait and landscape.
	05.02 Identify basic components of a tripod (head, sticks and spreader) and set up a tripod with a camera attached.
	05.03 Setup and level tripod for use in portrait and landscape.
	05.04 Attach camera to support equipment.
	05.05 Identify auxiliary support devices.
06.0	Take basic photographs. The student will be able to:
	06.01 Apply camera care and maintenance principles.
	06.02 Define the subject of a photograph.
	06.03 Identify available light sources.
	06.04 Demonstrate understanding of photo composition (e.g., rule of thirds, leading lines).
	06.05 Select an appropriate lens for subject (wide, tight, macro).
	06.06 Use available light to take still life, portrait, and action photographs.
	06.07 Create a series (picture study) of photographs around a defined subject.
07.0	Use photographic workflow applications. The student will be able to:
	07.01 Establish system requirements for workflow application software.
	07.02 Install and configure workflow application software.
	07.03 Identify parts of the software interface (menus and palettes).
	07.04 Import photographs from various media sources.
	07.05 Define and create keyword tags for imported images.
	07.06 Organize, rate, label and rename image collections.
	07.07 Create and modify image metadata.
	07.08 Perform image post-processing various editing software (e.g., crop, image selection, and image adjustments).

07.09	Export final images for clients.
07.10	Create and upload photos to online portfolio, online art sharing sites, and social media.
07.11	Utilize both menus and tools within the software interface.

Course Number: PGY0191 Occupational Completion Point: B Photographic Technician – 300 Hours – SOC Code 27-4021	
08.0	Develop a production plan. The student will be able to:
08.01	Identify contract scope and work requirements when working with a client.
08.02	Identify client needs.
08.03	Determine distribution requirements and client deliverables.
08.04	Identify the stages of production.
08.05	Create basic communication concepts verbally and online.
08.06	Develop a production schedule.
08.07	Define roles and coordinate needed production crew.
08.08	Evaluate the scope and use of model releases.
08.09	Evaluate the scope and use of property releases.
08.10	Evaluate the scope and use of liability releases.
08.11	Identify need and use for production insurance.
08.12	Determine and secure equipment as required per project.
09.0	Demonstrate knowledge of art/creative direction. The student will be able to:
09.01	Develop overall aesthetic of a photograph based on client's needs, art direction, or brand purpose.
09.02	Demonstrate the ability to create moods with design elements for the images.
09.03	Describe the importance of art direction as it pertains to the message to be conveyed for the images (e.g., composite images and photography).
09.04	Identify the use of color in art direction.

	09.05 Understand the various roles in a large production.
	09.06 Use industry standards to execute assigned tasks in a professional manner.
10.0	Demonstrate proficiency in computer skills. The student will be able to:
	10.01 Understand how computers function as it pertains to necessary components and software for photography.
	10.02 Understand computer performance requirements for image making software.
	10.03 Perform computer and software upgrades.
	10.04 Understand the importance of storing and backing up data and photos.
	10.05 Identify basic troubleshooting and software issues that can occur on jobs/sites.
11.0	Use photo editing software. The student will be able to:
	11.01 Demonstrate understanding of file formats and storage options.
	11.02 Compare and contrast available photographic editing software.
	11.03 Identify parts of the software interface (menus and palettes).
	11.04 Use each of the basic tool sets.
	11.05 Import, open files, and save, and export images.
	11.06 Develop a file backup plan.
	11.07 Demonstrate understanding of layers and channels.
	11.08 Demonstrate understanding of filters, effects and plug-ins.
	11.09 Demonstrate understanding of value and efficiency of file presets.
	11.10 Select portions of an image for manipulation using selection tools.
	11.11 Edit image size using edit/transform tools and cropping tools.
	11.12 Modify and color-correct images using a combination of the following: hue/saturation, vibrance, levels, curves, and brightness/contrast.
	11.13 Use and append brushes for image creation and adjustments.
	11.14 Identify non-destructive and destructive operations.

	11.15 Import edit and export raw files.
	11.16 Demonstrate the basic uses of video.
	11.17 Demonstrate knowledge of use for the undo / redo, history, and cache system.
	11.18 Use keyboard shortcuts to improve efficiency.
	11.19 Locate and effectively use the help menu system.
	11.20 Use editing software for image altering and designing basic typography and/or text-specific art/images.
12.0	Use photographic lights. The student will be able to:
	12.01 Demonstrate understanding of light (direction, intensity, color, contrast, hardness).
	12.02 Demonstrate understanding of natural, artificial, available and ambient light sources.
	12.03 Demonstrate understanding and use of sunlight (time of day, color temperature, color correcting, blocking and shade).
	12.04 Use continuous lighting setups and equipment.
	12.05 Use flash and strobe light setups and systems.
	12.06 Use on camera and integrated camera flash systems.
	12.07 Demonstrate understanding of three-point lighting.
	12.08 Use a light meter.
	12.09 Use light modifiers such as scrim, reflectors and flags.
	12.10 Use lights on location.
13.0	Use photography sets, backgrounds and stages. The student will be able to:
	13.01 Set up backgrounds, sets, or set plans under direction or independently after dialogue with the set / creative director.
	13.02 Define the intended look and materials to be used.
	13.03 Erect background stands and hang background material.
	13.04 Adjust available seating for studio portraits.
	13.05 Safely secure all grip equipment including reflector stands, c-stand, light stands and sand bags.

14.0	Process and print photographs. The student will be able to:
14.01	Prepare photos, both color and black and white images, for printing using photo editing software.
14.02	Adjust the crop, bleed, and trim of a photograph.
14.03	Adjust the color mode and resolution of a photograph.
14.04	Calibrate computer monitor and software for printing system.
14.05	Compare and contrast available papers, printers and inks.
14.06	Compare and contrast available printing services based on quality, speed, price, reliability, location.
14.07	Describe International Color Consortium (ICC) profiles purpose and use.
14.08	Describe the value of archival inks and papers.
14.09	Analyze color prints for color correction and tonality.
14.10	Describe methods of mounting, matting and framing photographs.

Course Number: PGY0192 **Occupational Completion Point: C** **Studio Photographer – 300 Hours – SOC Code 27-4032**	
15.0	Demonstrate knowledge of photo/video journalism. The student will be able to:
15.01	Describe the history of photo/video journalism.
15.02	Identify the jobs and roles related to photo/video journalism.
15.03	Analyze the legal and ethical issues related to photo/video journalism.
15.04	Describe the elements that make up a photo story.
15.05	Create a story board sequence of a photo story and write captions.
15.06	Imbed metadata as needed.
15.07	Shoot correct length of video to tell story and provide coverage.
15.08	Prepare media for and identify distribution sources.
16.0	Demonstrate knowledge of video production with Interchangeable Lens Cameras (ILC). The student will be able to:
16.01	Compare still and video modes on camera.
16.02	Compose video shots to demonstrate movement.
16.03	Choose the appropriate video format (standard/codec and frame rate).
16.04	Compare and contrast ILC video with traditional video cameras
16.05	Choose appropriate recording media based on card speed and size.
16.06	Select appropriate focusing aids and methods.
16.07	Analyze production requirements to determine lighting equipment needs.
16.08	Set appropriate exposure, white balance and shutter speed.
16.09	Use external audio capture device.
16.10	Identify video compression picture quality loss.
16.11	Demonstrate the use of full and cropped sensors (e.g., rolling shutter).
16.12	Establish the use of action-safe and title-safe areas.

16.13	Set appropriate focus.
16.14	Analyze differences with various microphones (e.g., condenser, lavalier, dynamic) to capture audio for video.
16.15	Understand the use of matte boxes.
16.16	Demonstrate use of stabilization rigs.
16.17	Transfer footage to content management software.
17.0	Demonstrate knowledge of video software. The student will be able to:
17.01	Demonstrate the aspects of video editing used in production of video and audio clips, movies, etc.
17.02	Identify panel layout and aspects of each in video editing software.
17.03	Use tools, effects, and filter features in video editing software.
17.04	Understand the importance of asset management when importing and organizing.
17.05	Sync external audio with corresponding video clip.
17.06	Use motion paths, rendering functions, and lighting effects in video editing software for specific/separate functionality within a work of art.
17.07	Apply layer mask to video.
17.08	Color-correct video using brightness, hue and contrast adjustments.
17.09	Use vector, text, and color keying tools.
17.10	Export and render video to appropriate format.
18.0	Practice the business of commercial digital photography. The student will be able to:
18.01	Identify business aspects of commercial digital photography.
18.02	Apply appropriate communication and human relations skills.
18.03	Analyze the photography industry's various market sectors (events, family portrait, public relations, product/studio, fashion, catalog, magazine and food).
18.04	Develop a business plan for a commercial photography business.
18.05	Identify and understand the importance of industry associations related to commercial photography.
18.06	Research market rates for photographic work.

	18.07 Compare and contrast available stock photography sites.
	18.08 Research online portfolio sites.
	18.09 Develop effective advertising.

Course Number: PGY0193 Occupational Completion Point: D Digital Photographer – 300 Hours – SOC Code 27-1021	
19.0	Operate various format cameras. The student will be able to:
	19.01 Use various format cameras (e.g., DSLR, mirrorless, hybrid, and medium format).
	19.02 Understand the unique attributes of mobile phone cameras.
	19.03 Understand processing images with tether capture within software.
20.0	Demonstrate knowledge of advanced software retouching. The student will be able to:
	20.01 Process and create HDR images in camera and with photo editing software.
	20.02 Demonstrate alternate software workflows.
	20.03 Process and create panoramic images in camera and with photo editing software.
	20.04 Create software presets.
	20.05 Process and create black and white images in camera and with photo editing software.
	20.06 Utilize digital stitching and composite images into single frame images.
	20.07 Restore damaged photos.
	20.08 Reduce ghosting effect using photo editing software.
	20.09 Reduce noise and correct chromatic aberrations.
	20.10 Export finished image as flat image or HDR format image.
21.0	Develop a professional portfolio of work. The student will be able to:

21.01	Identify elements of a professional portfolio and résumé.
21.02	Examine and select student work to include in a portfolio and résumé.
21.03	Select cohesive photographs and information to include in a portfolio and résumé.
21.04	Explore and/or utilize websites and digital portfolio creation, distribution and viewing.
21.05	Determine the format for portfolio and résumé.
21.06	Research local galleries for portfolio exhibition.
21.07	Produce résumé for final review.

Additional Information

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.

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 9, Language 9, and Reading 9. 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