

Florida Department of Education
Curriculum Framework

Program Title: Digital Design 1
Program Type: Career Preparatory
Career Cluster: Art, A/V Technology and Communication

Career Certificate Program

Program Number	K700100
CIP Number	0510030307
Grade Level	30, 31
Standard Length	600 hours
Teacher Certification	Refer to the Program Structure section.
CTSO	SkillsUSA
SOC Codes (all applicable)	15-1151 – Computer Support Specialists 43-9031 – Desktop Publisher
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 employment in digital publishing positions, such as Information Technology Assistants, Production Assistants, Digital Assistant Designers, Graphic Designers, and Multimedia Designers.

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, enhanced practical experiences in computer generated art and text, graphic design, graphic production, electronic design skills, preparation of electronic layouts and illustrations, and electronic scanning, and development of specialized skills in 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 three (3) 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	OTA0040	Information Technology Assistant	OTA0040 Teacher Certifications	150 hours	15-1151
B	GRA0024	Production Assistant	MANAG SUPV 7G BUS DP @7 %G BUS ED 1 @2 CLERICAL @7 7G COMM ART @7 7G COMP SCI 6 @2 ELECT DP @7 %G PRINTING @7 7G SECRETAR 7 G TC COOP ED @7 TEC ED 1 @2 ENG&TEC ED1@2 TEC ELEC \$7 G VOE @7	150 hours	43-9031
C	GRA0025	Digital Assistant Designer		300 hours	43-9031

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:

Information Technology Assistant (OTA0040) is the first course in this and other programs within the Business Management & Administration Career Cluster. Standards 01.0 – 15.0 are associated with this course; those standards/benchmarks do not appear in this framework.

OCP B- Production Assistant

- 16.0 Demonstrate knowledge of digital publishing concepts.
- 17.0 Demonstrate knowledge of basic digital imaging.
- 18.0 Demonstrate proficiency in the safe and ethical use of the Internet to locate information.
- 19.0 Identify project requirements, define project planning, and understand the design process.
- 20.0 Perform page layout and measurement activities.
- 21.0 Demonstrate an understanding of color and its role in digital design.
- 22.0 Demonstrate a basic understanding of typography.
- 23.0 Demonstrate an understanding of elements and principles of design.
- 24.0 Demonstrate basic skill in digital photography.
- 25.0 Demonstrate skills in the use of raster software applications.
- 26.0 Demonstrate basic skills in the use of vector software applications.
- 27.0 Demonstrate basic technical skills using a desktop publishing application.
- 28.0 Develop an awareness of the emergent technologies associated with digital design.
- 29.0 Demonstrate understanding in page layout using desktop publishing applications.
- 30.0 Demonstrate an understanding of career opportunities and requirements in the field of digital design.

OCP C-Digital Assistant Designer

- 31.0 Perform critical thinking activities.
- 32.0 Demonstrate the ability to set project requirements, engage in project planning, and utilize the design process.
- 33.0 Demonstrate an intermediate understanding of typography.
- 34.0 Demonstrate skills in the use of vector software applications.
- 35.0 Demonstrate an intermediate understanding in digital publishing operations.
- 36.0 Demonstrate skills in promotional design and application.
- 37.0 Demonstrate proficiency in digital imaging.
- 38.0 Demonstrate the ability to apply the design process.
- 39.0 Demonstrate understanding in the creation of digital design solutions involving motion or special effects.
- 40.0 Demonstrate an understanding of the use of emergent technologies in digital design industries.
- 41.0 Identify relevant career/college opportunities and produce required documents.
- 42.0 Demonstrate the ability to independently set, design and evaluate project requirements, project planning, model project planning and utilize the design process.
- 43.0 Demonstrate understanding in creating a simple webpage.
- 44.0 Demonstrate an advanced understanding in digital publishing operations.

- 45.0 Demonstrate the ability to create a multimedia presentation.
- 46.0 Demonstrate advanced knowledge and skills relative to the design process.
- 47.0 Demonstrate proficiency in digital photography.
- 48.0 Plan, organize, and carry out collaborative digital design projects.
- 49.0 Demonstrate proficiency in the creation of a digital design product using mobile communication devices.
- 50.0 Create a portfolio (print and/or digital).

Florida Department of Education
Student Performance Standards

Program Title: Digital Design
Career Certificate Program Number: B070600

Course Number: OTA0040
Occupational Completion Point: A
Information Technology Assistant – 150 Hours – SOC Code 15-1151

Information Technology Assistant (OTA0040) is part of several programs across the various CTE career clusters. To ensure consistency, the standards and benchmarks for this course (01.0 – 14.0) have been placed in a separate document. To access this document, visit:
<https://www.fldoe.org/core/fileparse.php/9943/urlt/ITA.rtf>

Course Number: GRA0024
Occupational Completion Point: B
Production Assistant – 150 Hours – SOC Code 43-9031

16.0	Demonstrate knowledge of digital publishing concepts. The student will be able to:
16.01	Define the terms commonly used in digital publishing.
16.02	Identify the characteristics of paper (e.g., weight and point).
16.03	Apply different types of color (e.g., RGB, CMYK, Pantone Color Matching System, and HEX).
16.04	Identify software used in digital publishing.
16.05	Differentiate between raster (bitmap) and vector graphic images.
16.06	Compare and contrast image formats (e.g., BMP, EPS, GIF, JPEG, PDF, PNG, RAW, and TIF).
17.0	Demonstrate knowledge of basic digital imaging The student will be able to:
17.01	Demonstrate proper use of scanners, digital cameras, and various input devices.
17.02	Identify the attributes of line art, grayscale, duotone, spot color and the four-color process.
18.0	Demonstrate proficiency in the safe and ethical use of the Internet to locate information. The student will be able to:
18.01	Understand the principles of copyright.

18.02	Identify and apply Copyright Fair Use guidelines.
18.03	Demonstrate an understanding of safe and ethical Internet usage.
19.0	Identify project requirements, define project planning, and understand the design process. The student will be able to:
19.01	Identify the purpose, audience, and the needs of the audience for the preparation of design projects.
19.02	Research and describe the implications of audience, purpose/message, and time constraints relative to a design project.
19.03	Determine project specifications.
19.04	Define design criteria and design constraints.
19.05	Produce basic thumbnail sketches and rough designs.
19.06	Identify project management tasks and responsibilities.
20.0	Perform page layout and measurement activities. The student will be able to:
20.01	Determine the appropriate type of basic layout for a specified problem (e.g., audience and purpose).
20.02	Identify distinct components in a layout (e.g., headlines, subheads, and body copy).
20.03	Demonstrate basic use of typography (e.g., visual hierarchy, proximity, alignment, contrast, and repetition).
20.04	Compare and contrast units of measurement (e.g., inches, centimeters, millimeters, points, picas, and pixels).
20.05	Produce a variety of design layouts (e.g., flyers, postcards, brochures, business cards, and letterhead).
20.06	Incorporate clip art, images, borders, and other special effects into a layout.
20.07	Select the appropriate color format and resolution for a variety of purposes (e.g., web and print).
21.0	Demonstrate an understanding of color and its role in digital design. The student will be able to:
21.01	Understand the color wheel and its uses.
21.02	Describe the spectral colors in the visible light spectrum.
21.03	Define and explain the terminology related to color (e.g., Chroma, lightness, saturation, hue, intensity, luminance/value, shade, and tint).
21.04	Describe the difference between additive and subtractive color mixing.
21.05	Compare and contrast RGB and CYMK color models as used in digital design.

21.06	Demonstrate the application of color theory to design practices.
22.0	Demonstrate a basic understanding of typography. The student will be able to:
22.01	Define and describe the terminology related to character and line spacing (e.g., leading, kerning, tracking, baseline shift, and ligature).
22.02	Identify the characteristics and psychology of type, type families, type series, and type styles.
22.03	Understand the installation and application of fonts.
23.0	Demonstrate an understanding of elements and principles of design. The student will be able to:
23.01	Identify the elements of design (line, shape, mass, color, texture, etc.).
23.02	Identify the principles of design (variety, movement, emphasis, balance, space, etc.).
24.0	Demonstrate basic skill in digital photography. The student will be able to:
24.01	Demonstrate knowledge of ethics related to digital images/imaging; examine legal and content-related issues
24.02	Demonstrate the operation of a digital camera (typical features/modes).
24.03	Apply effective design principles in digital photography compositions (e.g., rule of thirds).
24.04	Develop an understanding of metadata and the digital photography workflow.
25.0	Demonstrate skills in the use of raster software applications. The student will be able to:
25.01	Demonstrate basic knowledge of the tools and techniques for using a raster-based software application.
25.02	Demonstrate skill in importing, transforming and cropping images.
25.03	Create and edit images/photographs using digital imaging software (e.g., layers, image editing, adjustments, filters, and selections).
25.04	Demonstrate skill in raster image manipulation, color correction, and special effects.
25.05	Demonstrate an understanding of image resolution and compression factors such as transmission speed, color reduction, and delivery media parameters.
26.0	Demonstrate basic skills in the use of vector software applications. The student will be able to:
26.01	Demonstrate basic knowledge of the tools and techniques for using vector software applications.
26.02	Create and edit various illustrations using vector software (e.g., line art, drawing basics, transforming/applying effects to objects, painting, type and type effects, and layers).

27.0	Demonstrate basic technical skills using a desktop publishing application. The student will be able to:
27.01	Determine the activities and implications of content preparation and proofreading.
27.02	Incorporate scanned and digital photographs into documents comprising a specified design (e.g., poster, brochure, card, and advertisement).
27.03	Proofread manually and digitally.
28.0	Develop an awareness of the emerging technologies associated with digital design. The student will be able to:
28.01	Compare and contrast emerging technologies relative to their role in digital design (e.g., wireless, cloud-based, mobile, portable devices, and kiosks).
28.02	Describe social media as a form of digital design.
28.03	Describe the emergent and evolving nature of software applications used in interactive design.
28.04	Explain how the use of advanced image sensing devices have altered the manner in which communication takes place, especially those utilizing Quick Response (QR) Codes and other forms of two-dimensional bar coding techniques.
29.0	Demonstrate understanding in page layout using desktop publishing applications. The student will be able to
29.01	Design a document using grids and formats.
29.02	Produce documents integrating the Elements and Principles of Art and Design.
30.0	Demonstrate an understanding of career opportunities and requirements in the field of digital design. The student will be able to:
30.01	Discuss individual interests related to a career in digital design.
30.02	Identify the skills required of a digital designer.
30.03	Explore career opportunities in the field of digital design.
30.04	Explore secondary and post-secondary educational opportunities related to digital design.
30.05	Identify job search platforms.

Course Number: GRA0025
Occupational Completion Point: C
Digital Assistant Designer – 300 Hours – SOC Code 43-9031

31.0 Perform critical thinking activities. The student will be able to:

31.01 Research a digital design problem and determine the most appropriate problem-solving method to enhance the functional, economic, and ethical viability of a project.

31.02 Use critical thinking skills to evaluate information and select relevant material.

32.0 Demonstrate the ability to set project requirements, engage in project planning, and utilize the design process. The student will be able to:

32.01 Produce final designs based on specifications.

32.02 Make decisions based on specifications.

32.03 Explain the relationship between design criteria and design constraints.

33.0 Demonstrate an intermediate understanding of typography. The student will be able to:

33.01 Demonstrate an understanding of the history of typography.

33.02 Describe the principles of typographic design as they relate to digital design.

33.03 Compare and contrast the techniques of typographic communication relative to appropriateness and effectiveness.

33.04 Demonstrate proficiency in incorporating typographic techniques into a communication design.

34.0 Demonstrate skills in the use of vector software applications. The student will be able to:

34.01 Demonstrate skill in vector image manipulation, color correction, and special effects.

34.02 Demonstrate ability to convert vector files to raster files.

35.0 Demonstrate an intermediate understanding in digital publishing operations. The student will be able to:

35.01 Produce a variety of color designs using different color techniques; include process color and spot color.

35.02 Prepare output files using prepress operations (e.g., color separation, font management, and file management).

35.03 Read work orders and prepare electronic files that meet all specifications.

35.04 Understand how to prepare interactive components (hyperlinks, buttons, etc.).

36.0 Demonstrate skills in promotional design and application. The student will be able to:

36.01	Identify the types of promotional designs used in various industries.
36.02	Write a promotional message that appeals to a specified target market.
36.03	Use design principles to prepare promotional messages (e.g., slogans and taglines).
36.04	Produce designs for the appropriate advertising medium.
36.05	Use advertising guidelines to design appropriate sample ads (print, television, and the Internet, etc.).
37.0	Demonstrate proficiency in digital imaging. The student will be able to:
37.01	Demonstrate understanding of and proficiency in the use of formats and modes.
37.02	Demonstrate proficiency with image editing software.
37.03	Complete projects using appropriate resolution and screen values (e.g., DPI, LPI, and PPI).
37.04	Retouch digital photographs; utilize tones, hues, and values, etc.
37.05	Demonstrate proficiency in digital image manipulation (e.g., compositing, destructive vs. non-destructive editing, masks, and color-correction).
38.0	Demonstrate the ability to apply the design process. The student will be able to:
38.01	Determine whether a digital design problem should be addressed or resolved.
38.02	Conduct a brainstorming exercise (e.g., concept mapping and graphic organizers).
38.03	Develop a digital design solution using the design process.
38.04	Evaluate an existing design using conceptual, physical, or mathematical models; note aspects for improvement; determine whether the design meets criteria and constraints.
38.05	Identify the criteria and constraints associated with a digital design problem and select the most appropriate solution based on these factors.
38.06	Evaluate the quality, efficiency, and productivity of an existing or proposed design; refine the design accordingly.
39.0	Demonstrate understanding in the creation of digital design solutions involving motion or special effects. The student will be able to:
39.01	Demonstrate an understanding of kinetic typography.
39.02	Design a communication solution that employs animation or motion (e.g., graphics, text, and video) to achieve or enhance the intended message.
39.03	Describe the design constraints associated with devices (e.g., tablet, kiosk, and smartphone) used to deliver digital design products.

40.0	Demonstrate an understanding of the use of emerging technologies in digital design industries. The student will be able to:
40.01	Discuss trends in digital and printed mediums.
40.02	Explain the various technologies associated with digital design, advertising, and associated industries.
40.03	Compare and contrast printing processes.
41.0	Identify relevant career/college opportunities and produce required documents. The student will be able to:
41.01	Reinforce competence in job interview skills and techniques.
41.02	Create a professional résumé and letter of introduction.
41.03	Procure letters of recommendation; list awards, certifications and recognition received.
42.0	Demonstrate the ability to independently set, design and evaluate project requirements, project planning, model project planning and utilize the design process. The student will be able to:
42.01	Demonstrate knowledge of project management tasks and responsibilities.
42.02	Evaluate solutions to ensure the sustainability and effectiveness of a digital design product (e.g., visual appeal, audience, media, and market research).
42.03	Identify basic usability, readability, and accessibility standards.
42.04	Recommend final design based on the relationship between design criteria and design constraints.
42.05	Utilize a variety of approaches to solve digital design problems.
43.0	Demonstrate understanding in creating a simple webpage. The student will be able to:
43.01	Convert publications for viewing on the Internet.
43.02	Optimize images and files for the web.
43.03	Create a simple webpage and use hyperlinks.
43.04	Develop awareness of acceptable website design.
43.05	Demonstrate an understanding of WYSIWYG editors.
44.0	Demonstrate an advanced understanding in digital publishing operations. The student will be able to:
44.01	Produce multiple projects using a variety of software programs.
44.02	Demonstrate the ability to prepare output files.

44.03	Demonstrate proficiency in the use of a raster-based illustration program.
44.04	Demonstrate proficiency in the use of a vector-based illustration program.
45.0	Demonstrate the ability to create a multimedia presentation. The student will be able to:
45.01	Create and incorporate multimedia files; add audio, links, images/photos, and video.
45.02	Demonstrate the ability to create a multimedia PDF.
45.03	Demonstrate proficiency in the use of 2D and 3D animation effects.
45.04	Create links in webpages, PDF files, and other documents.
45.05	Optimize images for Internet publication.
45.06	Incorporate multimedia elements into digitally delivered documents/products.
45.07	Generate presentation following accessibility guidelines.
45.08	Generate presentations with embedded content.
46.0	Demonstrate advanced knowledge and skills relative to the design process. The student will be able to:
46.01	Demonstrate the ability to represent a concept.
46.02	Determine the most effective software applications for the digital design problem.
46.03	Use communication, analysis, and design skills to define project specifications that meet the client's needs/desires; include purpose, mood, and audience.
46.04	Demonstrate increased proficiency in the use of tools and techniques in desktop/digital publishing software applications (e.g., layout, text, graphics, color, transparency, and output).
46.05	Define, design, and complete digital design projects; account for time and resources.
46.06	Create a project plan to account for the time and resources to complete the project.
46.07	Facilitate project completion based on a documented plan related to the design process.
47.0	Demonstrate proficiency in digital photography. The student will be able to:
47.01	Demonstrate proficiency in adjusting the hardware features (e.g., manual settings, shutter speed, f-stops) of a basic digital single-lens reflex camera (DSLR or digital SLR).
47.02	Demonstrate knowledge of editing processes on smartphone devices; recognize the availability of apps related to photograph editing.

47.03	Demonstrate understanding of white balance and ISO.
47.04	Understand the role of lighting in photographic composition; develop an awareness of and use the three-point lighting concept.
47.05	Use imaging techniques (e.g., High Dynamic Range, panoramic, long exposure, stop motion, and time lapse) to achieve different artistic effects.
47.06	Demonstrate the use of various photography techniques (e.g., black and white photography and macro photography).
47.07	Demonstrate knowledge of photography by creating a variety of photos that include appropriate composition, framing, and point-of-view (POV).
48.0	Plan, organize, and carry out collaborative digital design project(s). The student will be able to:
48.01	Apply the design process to determine the scope of a project.
48.02	Identify the resources required for the project.
48.03	Organize a team and Assign specific tasks according to individual strengths.
48.04	Develop a project plan (conduct research, design, development, and evaluation activities) for the project.
48.05	Determine project priorities and the timeline for completion.
48.06	Carry out the project plan to successful completion.
48.07	Create a presentation to articulate the problem, the solution, the selected process, conclusions, and lessons learned (self-reflection).
49.0	Demonstrate proficiency in the creation of a digital design product using mobile communication devices. The student will be able to:
49.01	Design and create digital design products suitable for delivery via multiple media options (e.g., smartphones, tablets, and laptops).
49.02	Examine the design implications of products intended for delivery via mobile devices.
49.03	Compare and contrast the security and privacy issues associated with different delivery media, particularly in regard to social media.
49.04	Reinforce the implications of copyright and compare various licensing practices.
50.0	Create a portfolio (print and/or digital). The student will be able to:
50.01	Assess personal interests and create an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.
50.02	Prepare a traditional (hard copy) portfolio.

50.03 Prepare a digital portfolio.

50.04 Identify opportunities to present the portfolio to an audience.

50.05 Refine and implement a plan to facilitate personal growth and skill development related to career opportunities in digital design.

50.06 Incorporate a résumé and letter of interest in portfolio.

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>