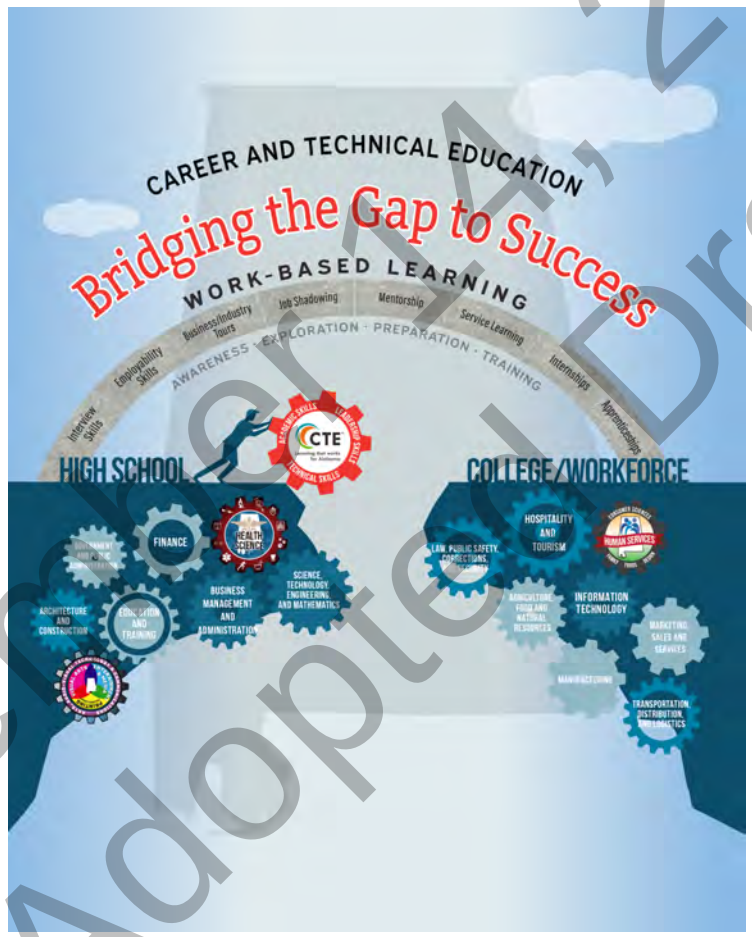
Alabama Course of Study
Career and Technical Education



2023
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Alabama State Department of Education

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Alabama Course of Study
Arts, A-V Technology, and Communications

Eric G. Mackey
State Superintendent of Education

STATE SUPERINTENDENT OF EDUCATION'S MESSAGE

Dear Alabama Educator:

The 2023 *Alabama Course of Study: Career and Technical Education, Arts, A-V Technology, and Communications* presents standards designed to prepare students for the career and technical demands of the future, both in the workplace and in the postsecondary education setting.

This document contains a set of challenging standards designed to promote students' engagement and career interests in Arts, A-V Technology, and Communications fields. I encourage each system to use the document in developing local curriculum guides that determine how local school students will achieve and even exceed these standards.

The 2023 *Alabama Course of Study: Career and Technical Education, Arts, A-V Technology, and Communications* was developed by educators and business and community leaders to provide a foundation for building quality Arts, A-V Technology, and Communications programs across the state. Implementing the content of this document through appropriate instruction will promote students' exploration and enhance preparation for further study and careers in a variety of Arts, A-V Technology, and Communications fields.

Eric G. Mackey
State Superintendent of Education

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Alabama Course of Study
Arts, A-V Technology, and Communications
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Alabama Course of Study
Arts, A-V Technology, and Communications

PREFACE

The 2023 *Alabama Course of Study: Career and Technical Education, Arts, A-V Technology, and Communications* provides the framework for Grades 6-12 Arts, A-V Technology, and Communications programs in Alabama's public schools. Content standards in this document are minimum and required (*Code of Alabama,* 1975, §16-35-4). They are fundamental and specific, but not exhaustive. Arts, A-V Technology, and Communications education courses are organized by pathways, which are aligned with national standards. When developing local curriculum, school systems may include additional content standards to reflect local needs and philosophies. Systems are encouraged to add implementation guidelines, resources, and activities based upon the content standards in the Arts, A-V Technology, and Communications Course of Study.

The 2023 Alabama Career and Technical Education Course of Study Committee and Task Force conducted extensive research during the development of the Arts, A-V Technology, and Communications Course of Study, analyzing career and technical education standards and curricula from other states, previous versions of Alabama's career and technical education courses of study, and national standards. The Committee and Task Force also reviewed information from professional journals and Internet sites, listened to and read comments from interested individuals and industry groups throughout the state, considered suggestions from independent reviewers, sought input from advisory councils, and thoroughly discussed each issue and standard among themselves. The Committee and Task Force reached consensus and developed what members believe to be the best Arts, A-V Technology, and Communications Course of Study for students in Alabama's public schools.

Alabama Course of Study
Arts, A-V Technology, and Communications

ACKNOWLEDGMENTS

This document was developed by the Arts, A-V Technology, and Communications Committee and Task Force of the 2023 Alabama Career and Technical Education Course of Study Committee and Task Force, composed of middle school, high school, and college educators appointed by the Alabama State Board of Education and business and professional persons appointed by the Governor (*Code of Alabama*, 1975, §16-35-1). The Committee and Task Force began work in January of 2023 and submitted the document to the Alabama State Board of Education for adoption at its December 2023 meeting.

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Alabama Course of Study
Arts, A-V Technology, and Communications
GENERAL INTRODUCTION

Alabama's Career and Technical Education programs empower students with the workplace-readiness skills required for success in the twenty-first century. Courses are designed to equip students to become productive, well-prepared citizens who possess the necessary knowledge and skills for postsecondary education and employment. Career and Technical Education provides opportunities for students to combine core academic content with rigorous and relevant technical knowledge and expertise.

The *Alabama Course of Study: Career and Technical Education* is intended for all students in Grades 6-12. Alabama's Career and Technical Education programs promote students' career awareness through engaging career exploration and development activities. Career and Technical Education programs focus on providing students with knowledge and skills that reinforce attainment of academic core content through hands-on, experiential learning. These programs are organized into the sixteen national career clusters identified by the United States Department of Education, which arrange instruction into groups of similar occupations. Within the sixteen national career clusters, separate course content standards have been developed for more than fifty career programs.

Because of the interconnected nature of Career and Technical Education programs, some courses will be utilized in more than one cluster. Shared courses are not reprinted in each course of study, but instead are indicated in the clusters' program guides, which are the definitive listings of required courses for each cluster. Program guides can be found on the Alabama State Department of Education website.

Alabama's Career and Technical Education programs are designed to keep abreast of the rapid changes in business and industry and to be responsive to current and future workforce demands. Rigor in each course of study is derived from both core academic content and industry-specific knowledge and skills required for students to achieve, maintain, and advance in employment in a particular career pathway. The level of academic and workplace rigor determines the degree to which each Alabama Career and Technical Education program prepares students for high-skill, high-wage, and in-demand careers. For each Career and Technical Education program, industry-recognized credentials of value and certifications have been established that validate the rigor of the curriculum to students, parents, and members of business and industry. In addition, articulation agreements are developed in partnership with the Alabama Community College System to allow for a seamless transition for students to further their education.

Alabama's growing economy calls for increasing numbers of highly skilled workers. Alabama's Career and Technical Education programs, through the implementation of each career cluster's course of study, equip students with the employability skills and technical knowledge necessary to meet current and future workforce demands by preparing them for lifelong learning.

Alabama Course of Study
Arts, A-V Technology, and Communications
CONCEPTUAL FRAMEWORK

Alabama Course of Study
Arts, A-V Technology, and Communications
CONCEPTUAL FRAMEWORK

The conceptual framework pictured is a graphic representation of the Arts, A-V Technology, and Communications cluster. In a world where creativity knows no bounds, the conceptual framework for Arts, A-V Technology, and Communications brands the cluster area as a vibrant environment of imagination and cutting-edge advancements offering three pathways for future careers. This graphic representation of color theory and the map outline of Alabama serves as a model for budding artists and instructors through the career landscapes of creative expression, visual communication, and captivating entertainment.

The text displayed in the inner ring of the graphic is the cluster name, Arts, A-V Technology, and Communications. The outer ring of text contains the three program areas, Visual Arts, Entertainment and Media, and Printing Technologies. All are contained within the gear which unifies arts, entertainment and media, and printing and emphasizes their connections to other clusters in Career and Technical Education. The halftone dot design represents an old technology merging with new technologies to create pathways that will transform Alabama's future workforce.

POSITION STATEMENTS

Arts, A-V Technology, and Communications

The Arts, A-V Technology, and Communications program of Career and Technical Education focuses on preparing students for employment in careers that relate to media production, visual arts, and printing techniques. Certain fundamental understandings which support the Arts, A-V Technology, and Communications program must be embraced by schools and school districts in order to provide students with the best possible experiences in the classroom and in the field. These position statements summarize the requirements for an effective Arts, A-V Technology, and Communications program.

Classroom and Laboratory Environment

The effective Arts, A-V Technology, and Communications classroom should be a safe space which is fully equipped with current and emerging technologies, supplies, and materials needed for instruction, where students can increase their skills. As in other pathways in Career and Technical Education, Arts, instruction in A-V Technology, and Communications cannot be confined within the four walls of a traditional classroom. Students and teachers should have access to laboratory environments on campus and in the community where students can experience practical, real-world circumstances in the Arts, A-V Technology, and Communications field.

Technology, Equipment, and Facilities

Classroom technology must be readily available, efficiently maintained, and routinely upgraded according to a regular schedule. Students and teachers utilize equipment to conduct a variety of classroom instruction and learning activities. Using up-to-date technology enhances the learning environment and prepares students for future career opportunities. In addition, students should have ready access to other classroom supplies and materials (such as textbooks, reference materials, and software) in classroom libraries, research areas, and materials centers to support instruction and credentialing. Sufficient funds must be allocated to provide and maintain the technology and materials necessary for a superior career and technical education program.

Safety

The safety of students and instructors is a prime consideration in every learning environment. Creating and implementing a written safety plan is an essential part of designing, carrying out, and evaluating each career and technical education program. An effective plan may include federal, state, local, school, and program guidelines. Care must be taken to ensure that students are in safe environments both on and off campus. Students are required to pass safety tests with one hundred percent accuracy. Safety includes not only physical and emotional well-being but also digital and online security.

Professional Development

Because both technology and instructional methods continue to evolve, it is essential for teachers to participate in professional development and technical training opportunities to stay abreast of innovations pertaining to their content area and to the workplaces in which their students will be employed. Teachers who continually expand their pedagogical knowledge and skills are able to adjust the learning environment to reflect current and emerging trends in teaching methods and to address their students' varied learning styles. Regular program assessment by students, administrators, business and industry personnel, and the educators themselves guides professional development, which in turn enhances the instructional program.

Administrative Support

Full support from district and local administrators is essential in providing the necessary components of an Arts, A-V Technology, and Communications program. Administrators should recruit highly qualified teachers who possess appropriate credentials and secure funding for professional development activities and industry certification for those teachers. Administrators must also provide time for professional development and for planning for the integration of academic content areas into the Arts, A-V Technology, and Communications cluster. Administrators should actively promote the Arts, A-V Technology, and Communications program within the school and in the community.

Instructional Model

The Arts, A-V Technology, and Communications course of study is designed to address the challenges of a changing, technological, diverse, and global society in which students must apply knowledge, skills, and ideas to solve problems and make decisions. The Arts, A-V Technology, and Communications curriculum designed by each local education agency should be project-based, process-oriented, and work-based so that students can develop their abilities to collaborate, analyze, communicate, manage, and lead.

The content standards contained in this document require students to use innovative, critical-thinking skills. Teachers should utilize the course of study to identify the issue or concern addressed in a specific content standard and then use the local curriculum guide to plan appropriate learning experiences. Teachers must understand that there are differences among standards, curriculum, and resources. The Arts, A-V Technology, and Communications content standards delineate what students are expected to know or be able to do at the end of each course. A curriculum is a sequence of tasks, activities, and assessments that teachers enact to support students in learning the standards while drawing on a textbook or other resources when appropriate.

Academic core content should be integrated into the Arts, A-V Technology, and Communications program. To achieve the solution to a given problem, students must possess an adequate foundation in reading, writing, speaking, listening, viewing, and presenting; knowledge and skills in mathematics, science, and social studies; and knowledge of current and emerging technologies.

The Arts, A-V Technology, and Communications program should also integrate workplace demands and employability skills, incorporating various instructional strategies to accommodate students' learning styles and interests. A variety of assessments should be used to evaluate individual students' interests, aptitudes, and abilities.

When individual needs have been determined for students in special populations, a support service program should be planned cooperatively by Arts, A-V Technology, and Communications instructors and other appropriate personnel, because Individual Education Programs are most effective when developed in conjunction with students' career and technical education instructors. Courses and equipment may be tailored to ensure equal access to the full range of learning experiences and skill development in the Arts, A-V Technology, and Communications program.

Career and Technical Student Organizations (CTSOs)

Career and Technical Student Organizations are integral, co-curricular components of each career and technical education course. These organizations enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and access opportunities for personal and professional growth. Students in the Arts, A-V Technology, and Communications cluster affiliate with SkillsUSA.

Business-Industry-School Relationships

The very nature of Arts, A-V Technology, and Communications requires a close relationship between the school and the business community. Some aspects of this relationship are specified by state and federal laws and regulations, while others are determined by the desires, interests, and

willingness of school personnel and business leaders in the local community. The relationship between schools and businesses can be immensely beneficial to all parties involved.

Student Work Experience

As students begin to plan careers, they must have opportunities to visit, tour, and work at local industries and businesses. Real-world experiences, such as cooperative education, internships, apprenticeships, and job shadowing, contribute to the work-based, service-based, and project-based learning that enhances classroom instruction. An additional benefit comes from continuous feedback from students and supervisors, who evaluate the program to facilitate changes that satisfy industry needs.

Advisory Councils and Partnerships

In accordance with Alabama State Department of Education guidelines, each Career and Technical Education program has an advisory council made up of representatives of the local business community that provides professional, real-world input regarding equipment needs, curriculum emphases, technical updates, and problem-solving. This link to business and industry may also provide external support by supplying equipment, resource materials, or qualified speakers. Community partners may provide program sponsors, judges for student career development events, financial support, scholarships, field trip sites, and other program needs.

Community Involvement and Service

There are many ways for Arts, A-V Technology, and Communications students and teachers to become involved with community service projects, providing benefits for students and their communities. Local organizations such as civic clubs, professional educational groups, youth organizations, and community adult education programs are valuable resources for Arts, A-V Technology, and Communications programs. Open houses, tours, and presentations allow families and other interested citizens to become informed about Arts, A-V Technology, and Communications and involved in the education environment.

Postsecondary and Higher Education Credit

Postsecondary and higher education articulation is a significant element in a student's career path. Secondary and postsecondary instructors must communicate on a regular basis to ensure a smooth transition for students and to make students aware of articulation opportunities. Articulation may occur through program alignment with postsecondary programs, early college enrollment, or dual enrollment programs.

Students benefit in a variety of ways when cooperation exists between secondary and postsecondary institutions. One of the benefits is the earning of postsecondary credit in conjunction with work completed while the student is still in secondary school. Postsecondary teachers may offer additional benefits by serving as guest speakers, donating equipment, sharing expertise through professional development activities, and addressing other needs appropriate for the school community.

Dual Enrollment for Dual Credit is an enrichment opportunity allowing eligible high school students to earn high school and college credits for courses taken through an Alabama Community College System (ACCS) institution or an Alabama college or university while still enrolled in high school. Articulated credit is awarded when a student enrolls and satisfactorily completes work in a postsecondary institution that has an articulation agreement with that student's participating school.

DIRECTIONS FOR INTERPRETING STANDARDS

The 2023 *Alabama Course of Study: Arts, A-V Technology, and Communications* is organized around the following elements: foundational standards, topics, and content standards.

Foundational standards are an important part of every CTE course. Through these standards, students learn and apply safety concepts; explore career opportunities and requirements; practice the skills needed to succeed in the workplace; take advantage of leadership, teamwork, and personal growth opportunities afforded by Career and Technical Student Organizations; and learn and practice essential digital skills. Each foundational standard completes the stem *"Students will..."*

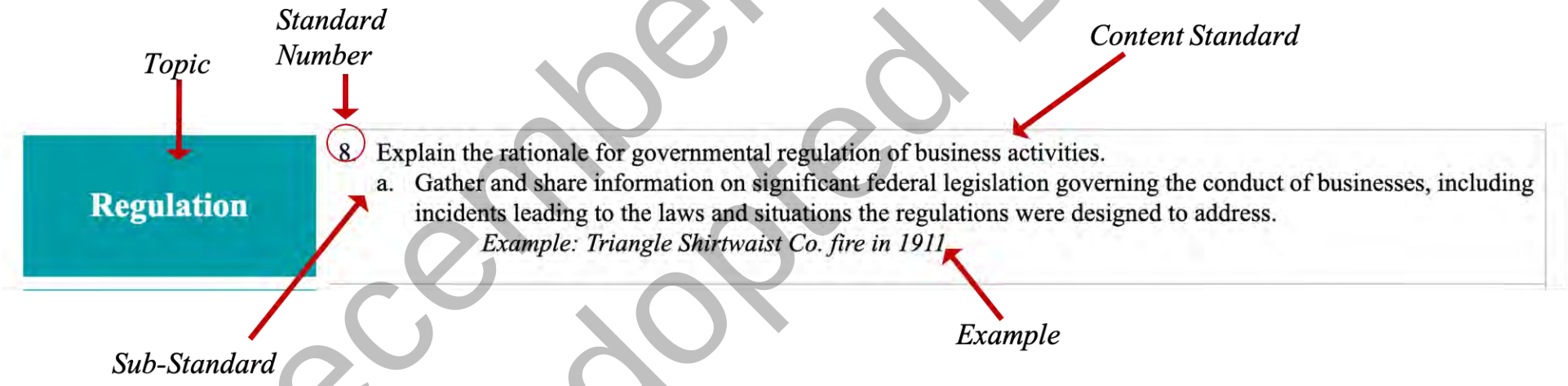
Related content standards are grouped under **Topics**. In the example below, the topic is "<<Regulation>>." Standards from different topics may be closely related.

Content Standards contain the minimum required content and define what students should know or be able to do at the conclusion of a course. Some have **sub-standards**, indicated with a, b, c, d…, which are extensions of the content standards and are also required. Some standards are followed by italicized **examples**, which present options that might prove useful in instruction of the standard. Examples are not intended to be exhaustive lists and are not required to be taught.

Each content standard completes the stem *"Students will..."* When "including" appears in standards, it should be construed as "including but not limited to." The items listed after "including" must be taught; others may also be incorporated in instruction.

The course of study does not dictate curriculum, teaching methods, or sequence; the order in which standards are listed within a course or grade is not intended to convey the order for instruction. Even though one topic may be listed before another, the first topic does not have to be taught before the second. A teacher may choose to teach the second topic before the first, to teach both at the same time to highlight connections, or to select a different topic that leads to students reaching the standards for both topics. Each local education agency should create its own curriculum and pacing guide based on the Course of Study. The standards in each course are to be used as a minimal framework and should encourage innovation. Local education agencies (LEAs) may add standards to meet local needs and incorporate local resources.

Because of the interconnected nature of Career and Technical Education programs, some courses will be utilized in more than one cluster. Shared courses are not reprinted in each course of study, but instead are indicated in the clusters' program guides, which are the definitive listings of required courses for each cluster. They can be found on the Alabama State Department of Education website.



CLUSTER OVERVIEW

Arts, A-V Technology, and Communications

In the Arts, A-V Technology, and Communications cluster, students choose one of three program areas: Visual Arts, Entertainment and Media, or Printing Technologies. Specific content standards indicate what students should know and be able to do upon successful completion of each course. National standards, credentialing opportunities, and course articulation with postsecondary institutions provide the basis of the content of each course. Media Production Foundations is the required initial course for study in audio, broadcasting, film production, or technical theatre.

The Arts, A-V Technology, and Communications cluster challenges students to develop technical skills in media, film, audio and broadcasting production, technical theatre, drone operation and photography, animation, advertising and graphic design, photography, offset printing, and screen printing. Courses in this cluster are designed to provide students with the knowledge and skills for further education and for employment. Students use current and emerging technology in safe and innovative settings, observe modeling and mastery of competencies, and develop and apply skills required for success in their chosen fields. Foundational Standard 4 addresses the safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway, and the ethical use of artificial intelligence is woven throughout the course of study. Students work together to build a community of learning where their shared ideas become a source of learning.

Course standards represent the minimum required content and are not intended to be the course curriculum. LEAs and local schools should use these standards to create a curriculum that utilizes available resources to meet the specific needs and interests of the local community. All Career and Technical Education courses emphasize the application of knowledge and skills to solve practical problems.

CONTENT STANDARDS: MIDDLE SCHOOL COURSE

Introduction to Arts, A-V Technology, and Communications

Course Duration	One semester (Content standards 1, 3, 4, 6, 9, 10, 12, 16, 18, 21, and 21a) **OR** One year (All content standards are required)
Grade Levels	7-8
Prerequisites	

Introduction to Arts, A-V Technology, and Communications provides opportunities for middle grades students to explore and practice basic skills in film production, audio production, photography, animation, advertising and graphic design, printing technologies, and technical theatre. Content is designed to promote understanding of basic concepts and career opportunities within the Arts, A-V Technology, and Communications field; to help students develop critical thinking and problem-solving skills through creative projects; to foster creativity and self-expression through artistic and technological mediums; and to introduce the ethical considerations and legal responsibilities in artistic and communications practices.

Career and Technical Student Organizations are integral, co-curricular components of each career and technical education course. These organizations enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and access opportunities for personal and professional growth. Students in the Arts, A-V Technology, and Communications cluster affiliate with SkillsUSA.

Foundational standards, shown in the table below, are an important part of every course. Through these standards, students learn and apply safety concepts; explore career opportunities and requirements; practice the skills needed to succeed in the workplace; take advantage of leadership, teamwork, and personal growth opportunities afforded by Career and Technical Student Organizations; and learn and practice essential digital skills. The foundational standards are to be incorporated throughout the course.

Each foundational standard completes the stem *"**Students will**..."*

Foundational Standards	
	1. Incorporate safety procedures in handling, operating, and maintaining tools and machinery; handling materials; utilizing personal protective equipment; maintaining a safe work area; and handling hazardous materials and forces.

2. Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork.
3. Explore the range of careers available in the field and investigate their educational requirements and demonstrate job-seeking skills including resume-writing and interviewing.
4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway.
5. Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

INTRODUCTION TO ARTS, A-V TECHNOLOGY, AND COMMUNICATIONS CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**…"*

Introduction	1	Explain the evolution of technology in the arts and communication industries.
	2	Identify problems and suggest possible solutions when exploring artistic and technological concepts in the arts, A-V technology, and communications field.
Film Production	3	Create a basic film script with proper formatting and storytelling elements.
	4	Operate a camera to capture footage with appropriate framing and composition.
	5	Edit and assemble video clips, using basic editing techniques to create a cohesive narrative. *Examples: J and L cuts, editing transitions, sequencing, pacing, sound editing*

Audio Production	6	Select microphones and employ industry-standard techniques for recording clear, high-quality sound in a given setting.
	7	Use audio-editing software to edit and manipulate recorded audio tracks in the production of a podcast.
	8	Apply sound design principles to enhance audio for different media forms.
Photography	9	Compose visually pleasing photographs using principles of framing, rule of thirds, and balance.
	10	Create a series of photographs that tell a story, illustrate a theme, or record an event. *Examples: packing for a camping trip, a day in the life of a library book, highlights from a pep rally or volleyball game*
	11	Use photo-editing software to enhance and manipulate digital images while maintaining visual integrity.
Advertising and Graphic Design	12	Apply principles of graphic design to create visually compelling designs. *Examples: color theory, typography*
	13	Utilize graphic design software to develop and modify digital designs for different purposes.
	14	Design and produce marketing materials that effectively communicate a message or brand. *Examples: posters, logos*
Printing Technologies	15	Explain the processes and key components of various printing technologies. *Examples: electrostatic, offset, screen, inks, substrates, binding, finishing*
	16	Prepare digital files for print, utilizing color management and optimal resolution for each product.
	17	Operate printing equipment and troubleshoot basic printing issues to produce desired results for assigned projects. *Examples: paper jams, ink issues, color discrepancies, smudges, streaks, registration, plate*

		issues
Technical Theatre	18	Review and critique technical elements of theatre. *Examples: View theatrical productions (live or digital) and assess how lighting, audio, and design elements are utilized.*
	19	Research various theatrical venues and design a stage. *Example: theatre in the round, amphitheatre, black box theatre*
Legal and Ethical Considerations	20	Summarize copyright laws and intellectual property rights.
	21	Research and report on ethical considerations in artistic and communication practices.
	21a	Describe responsible and respectful use of technology in the field.

CONTENT STANDARDS: HIGH SCHOOL COURSES

Advertising and Graphic Design I	
Course Credit	1.0
Grade Levels	9-12
Prerequisites	

Advertising and Graphic Design I introduces principles, concepts, and skills related to advertising and graphic design. Topics of study include workflow, design, color theory, typography, critical skills, and file preparation and output. The ethical use of artificial intelligence is woven throughout the course of study.

Career and Technical Student Organizations are integral, co-curricular components of each career and technical education course. These organizations enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and access opportunities for personal and professional growth. Students in the Arts, A-V Technology, and Communications cluster affiliate with SkillsUSA.

Foundational standards, shown in the table below, are an important part of every course. Through these standards, students learn and apply safety concepts; explore career opportunities and requirements; practice the skills needed to succeed in the workplace; take advantage of leadership, teamwork, and personal growth opportunities afforded by Career and Technical Student Organizations; and learn and practice essential digital skills. The foundational standards are to be incorporated throughout the course.

Each foundational standard completes the stem *"**Students will**..."*

Foundational Standards	
	1. Incorporate safety procedures in handling, operating, and maintaining tools and machinery; handling materials; utilizing personal protective equipment; maintaining a safe work area; and handling hazardous materials and forces. 2. Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork. 3. Explore the range of careers available in the field and investigate their educational requirements and

demonstrate job-seeking skills including resume-writing and interviewing.

4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway.

5. Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

ADVERTISING AND GRAPHIC DESIGN I
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

Principles and Legal Issues	1	Explain the rules, laws, regulations, and ethical issues related to advertising and graphic design. *Examples: counterfeiting, creative commons, copyright laws*
Workflow	2	Describe major printing and digital processes and identify products frequently associated with each process. *Examples: flexography, gravure, lithography, screen printing, digital production*
Advertising and Design	3	Explain how the principles of design are used in the conceptualization and creative process of advertising and graphic design. *Examples: color theory, contrast, repetition, alignment, proximity, typography; photo manipulation, data-gathering, brainstorming, developing thumbnails, sketching, word-mapping*
	3a	Utilize artificial intelligence to generate graphic elements for advertising and describe ethical ways to use them.
	3b	Utilize advertising strategies to carry out a design project for a brand.

		Examples: analyze target audiences, conduct a SWOT analysis, utilize brand style guides
Color Theory	4	Explain basic principles of color theory and digital color management in advertising and graphic design.
	4a	Explain the role of color in marketing and branding and identify examples of effective use of color in existing advertising and graphic design works.
	4b	Complete a design project incorporating contrast and color psychology.
Typography	5	Research and share information on the history, anatomy, usage, and development of typography. *Examples: history and classification of type families, manipulation of the letterform, type selection, spacing*
	5a	Compare current styles of typography to historical examples.
	5b	Investigate and report on the role of typography in advertising and graphic design, including the psychology and theory of typography, *Examples: headlines, copy fitting, manuscripts, spacing, type licensure, differences between font formats*
	5c	Complete a design project utilizing contrasting or coordinating type families.
History and Theory	6	Outline how advertising and graphic design have developed throughout history including information about leaders in the field and changes resulting from technological developments.
	6a	Research and report on trends in graphic design and advertising, including trends related to aesthetics, symbols, trademarks, and logos. *Examples: retro line art, punk revival, '90s space psychedelia, airbrush surrealism, mysticism, abstract gradient*

	6b	Identify an artist who has heavily influenced styles, themes, or trends in graphic design, and explain the significance of the artist's work to the field. *Examples: Paul Rand, Andy Warhol, Saul Bass, Neville Brody, Paula Scher, April Greiman, Archie Boston, Thomas Miller*
File Preparation and Output	7	Identify features of various digital file formats that optimize output for file management. *Examples: PDF files, native files for proofs, raster images, vector graphics*
Critical Skills and Evaluations	8	Critique existing advertising and graphic design projects for compositional accuracy and the use of elements and principles of design. *Examples: contrast, repetition, alignment, proximity, use of typography and color theory, technical design solutions*

Advertising and Graphic Design II

Course Credit	1.0
Grade Levels	9-12
Prerequisites	Advertising and Graphic Design I

Advertising and Graphic Design II extends the content of Advertising and Graphic Design I by providing instruction in the application of advanced design techniques and processes. Areas of study include legal issues, workflow, advertising and design, color theory, typography, digital photography, and digital file preparation and output. The ethical use of artificial intelligence is woven throughout the course of study. Designing projects allows students to manipulate files and demonstrate mastery of relevant skills.

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Foundational Standards	
	1. Incorporate safety procedures in handling, operating, and maintaining tools and machinery; handling materials; utilizing personal protective equipment; maintaining a safe work area; and handling hazardous materials and forces.
	2. Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork.
	3. Explore the range of careers available in the field and investigate their educational requirements and

demonstrate job-seeking skills including resume-writing and interviewing.

4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway.

5. Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

ADVERTISING AND GRAPHIC DESIGN II
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

Principles and Legal Issues	1	Explain the impact of copyright and trademark laws related to advertising and graphic design.
	1a	Explain ethical issues related to the use of artificial intelligence in advertising and graphic design.
Workflow	2	Implement the sequence of steps in workflow from idea to finished product.
Advertising and Design	3	Design advertisements in print and digital formats for a variety of products and services.
	3a	Use industry-standard software to design and create graphics for advertising. *Examples: Demonstrate drawing and rendering techniques and illustration skills. Create advanced digital designs and product designs.*
	3b	Implement the principles of design in the creation of advertising and graphic design projects. *Examples: clarity, balance, alignment, simplicity*
	3c	Explain how design can affect corporate identity. *Examples: logos, pictograms, symbols, branding*

	3d	Analyze and critique corporate rebranding projects to determine how well the branding reflects the company's identity and desires. *Examples: Review case studies of rebranding projects to identify and analyze successes and failures.*
Color Theory	4	Implement color theory and basic methods of digital color management in original graphic design works.
	4a	Analyze and explain the use of color theory in existing graphic design works, including advertising and corporate branding.
Typography	5	Implement the psychology and theory of typography in the selection and use of a variety of font types for original works in advertising and graphic design.
Digital Photography	6	Produce photographs with digital equipment for use in original works in advertising and graphic design.
	6a	Use industry-standard photo-editing software to perform basic color correction and image cloning for photographs to be integrated into advertising and graphic design.
Conceptual Process	7	Formulate and implement ideas in advertising and graphic design from concept to a marketable product.
	7a	Explain how an advertising or design business utilizes components of a SWOT analysis.
	7b	Utilize advertising and branding theory to generate a list of target audiences for a brand.
	7c	Explain and demonstrate how contrast, repetition, alignment, and proximity are incorporated in original designs.
Digital File Preparation	8	Produce digital files for product development, using various file outputs and techniques. *Examples: digital printers, imagesetters, platesetters, hard and soft color proofing systems, computer-to-plate operations*

and Output	8a	Create and implement a system for the digital storage of media files.
	8b	Produce files utilizing various file formats for original advertising and graphic design works. *Examples: TIFF, EPS, PICT, JPEG, PDF, PDF/X-3, DCS in a PostScript environment*

Advertising and Graphic Design III

Course Credit	1.0
Grade Levels	10-12
Prerequisites	Advertising and Graphic Design II

Advertising and Graphic Design III is the final course in the Advertising and Graphic Design pathway. It provides opportunities for students to pursue software credentials using industry-standard software, create multimedia design campaigns, develop a professional design portfolio, be exposed to professional experience, and explore careers and post-secondary education opportunities in advertising and graphic design.

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ADVERTISING AND GRAPHIC DESIGN III
CONTENT STANDARDS

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Each content standard completes the stem *"**Students will**..."*

Principles and Legal Issues	1	Implement and explain copyright and trademark laws, rules, and regulations in the creation of original graphic works.
Advertising and Design	2	Create and present comprehensive advertising campaigns created through graphic design. *Examples: rebranding projects, multimedia design projects, the development of multiple branding assets*
	2a	Offer solutions for advertising and graphic design challenges in given scenarios, utilizing market research to determine effective approaches. *Examples: respond to market survey research with design solutions, meet with clients to create design deliverables that address their needs*
Color Theory	3	Justify decisions regarding applications of color theory in original graphic design and advertising projects.
Typography	4	Defend the selection and use of various fonts for original works in advertising and graphic design.

Corporate Design	5	Design corporate logos and supporting graphic assets. *Examples: lettermarks, emblems, annual report design, corporate style guide, signage, promotional products, business cards, letterhead*
	5a	Conduct simulated or actual professional meetings to collaborate with clients on advertising and graphic design projects.
	5b	Create and utilize a SWOT analysis to guide decisions for an advertising and graphic design project.
	5c	Defend design decisions made in the process of creating corporate designs, including suitability for target audiences, color selection, contrast, repetition, alignment, and proximity.
Digital File Preparation and Output	6	Create and organize a comprehensive portfolio of original, professional-quality graphic designs.
	6a	Present a portfolio of original advertising and graphic design works suitable for a professional audience. *Examples: senior exhibit, mock interview portfolio presentation, performance review*

Animation I

Course Credit	1.0
Grade Levels	9-12
Prerequisites	

Animation I introduces the fundamentals, history, and culture of animation, which tells stories through motion. The course invites students to explore the techniques needed to develop a story idea from its inception through its completion as an animated project. Animation I presents the phases of pre-production, production, and post-production as well as traditional, stop motion, 2D, 3D, and motion graphics. The course also requires students to analyze and evaluate examples of professional animation.

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ANIMATION I
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

History and Culture	1	Explain the historical development of animation, including key milestones, influential animators, and significant animated works, and analyze how these developments have shaped the field.
	1a	Explain the varied roles and assignments of animators in the full animation process. *Examples: interpreter, performer, editor, director, storyboard artist, freelance artist*
	1b	Analyze and critique professional animated works, both historical and contemporary, and provide constructive feedback based on animation principles and techniques. *Examples: educational videos, digital marketing, entertainment projects such as cartoons, television series, film, and gaming*
Legal and Ethical Issues	2	Investigate and report on the ethical and legal issues related to digital animation media, including the use of social media. *Examples: intellectual property, image content, nondisclosure, copyrights, artificial intelligence*
	2a	Research and report on violations of copyright and trademark laws.

Pre-Production	3	Outline the operations involved in pre-production of the animation process.
	4	Research and share information about the development and uses of the 12 principles of animation.
	5	Analyze a story or story idea for clarity and entertainment value.
	5a	Select and incorporate archetypes to communicate a story or idea.
	6	Develop animated human characters, basing their characteristics upon research on personality types.
	6a	Identify and utilize design elements to portray human characters' personalities.
	7	Utilize a diverse range of media, techniques, and processes to solve assigned visual arts problems.
	7a	Produce renderings of human and/or animal anatomy for the design of a character.
	7b	Apply canons of proportions and rules of perspective to produce solid character designs with accuracy from varied points of perspective.
	7c	Research and develop animal behaviors and characteristics for animated animal characters.
	7d	Explain the visual and emotional impact of hue, value, and saturation of colors in animation.
Production	8	Explain animation techniques for 2D, 3D, graphics motion, and stop motion, indicating the formats in which they are employed and the software associated with each.
	9	Utilize the 12 principles of animation within 2D, 3D, graphics motion, and stop motion design projects.
	10	Produce short samples of animation, including hand-drawn, digital input device, claymation, and stop motion.

	11	Plan and execute animation projects within given deadlines.
Post-Production	12	Arrange a composite of 2D and 3D layers in preparation for final rendering.
	13	Research the various types of visual effects and apply them to an animation. *Examples: sparks, lens flare, camera shake*
	14	Apply creative color corrections and color grading parameters within an animation.
	15	Identify personal strengths and weaknesses in animation processes and create a plan for improvement to enhance future development as an animator.

Animation II

Course Credit	1.0
Grade Levels	9-12
Prerequisites	Animation I

Animation II extends the content of Animation I by providing instruction in character design and development, sound design, motion graphics, and digital media through the application of animation development and design. Students are challenged to use development and design knowledge and skills to produce 2D and 3D projects. The course is designed to give students the opportunity to enhance artistic skills and develop a portfolio of animated works through hands-on projects and design exercises.

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ANIMATION II
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

Pre-Production	1	Utilize visual storytelling techniques, including storyboarding, animatics, shot composition, and visual pacing, to convey narratives effectively in animated sequences.
	2	Conceptualize and create original characters, considering shape, proportion, anatomy, and expressive features.
	3	Use advanced animation techniques, including lip-syncing, facial expressions, secondary motion, and character acting, to bring characters and objects to life with increased realism and expressiveness.
	4	Produce a scratch track utilizing sample sound effects, dialogue, Foley sounds, and/or musical scores.
	5	Outline the steps of the production phase, including character and background layout, lighting, sound, color grading, and dialogue.
Production	6	Justify the choice between 2D and 3D animation based on target audience, artistic and technical skills, and production time.
	7	Analyze and apply principles of cinematography, including camera angles, camera movements, lighting, and color grading, to enhance the visual storytelling and mood in animated sequences.

	8	Employ sound design techniques, including sound effects, music, and dialogue synchronization, to enhance the overall cinematic experience of animated sequences.
	9	Create visually appealing backgrounds and assets for animated sequences, utilizing principles of composition, color theory, and typography.
	10	Utilize advanced animation software and tools, including rigging, motion capture, and particle effects, to enhance the complexity and visual richness of animated sequences.
Post-Production	11	Arrange a composite by grouping all necessary animation sequences, special effects, colors, and images into one sequence before final rendering.
	12	Utilize industry-standard software to edit audio and visuals, including color correction and color grading, from the initial rough cut to the final draft.
	13	Assemble a selection of original works in a portfolio aimed at a particular target audience and distributor, choosing products showing the greatest artistic merit.

Animation III

Course Credit	1.0
Grade Levels	10-12
Prerequisites	Animation II

Animation III extends the content of Animation II through application of advanced animation techniques to gaming enterprises. Content covers character design, storytelling, visual design, video game art, game modules, and motion capture. The ethical use of artificial intelligence is woven throughout the course of study. Animation III requires students to work collaboratively and individually to complete animation projects for gaming.

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ANIMATION III
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

History of Game Development	1	Research and report on the cultural and historical influences affecting the gaming industry.
	1a	Outline the contributions of various early gaming companies and indie developers and compare their products to current and emerging trends in gaming. *Examples: remakes and reboots, VR, AR, cloud gaming*
	1b	Describe the capabilities of hardware and software used by early game developers and explain how current technologies produce more sophisticated results.
Legal and Ethical Issues	2	Summarize the ethical and legal aspects of operations in gaming production.
	2a	Explain and justify ethical decisions related to the use of artificial intelligence in animation.
Pre-Production	3	Generate a game concept which establishes the parameters for genre (action-adventure, role-playing, multi-player, side-scrolling), dimensionality (two-dimensional, three-dimensional, or both), target audience, gameplay mechanics, and the narrative elements.
	4	Identify and describe art styles and game mechanics typically used in games. *Examples: pixel, cutout, cel-shaded or movement, combat, resources*
	5	Explain the software and hardware needed for performance and visualization in various types of electronic games.
	6	Create a game design document that outlines the core gameplay mechanics, art style, and overall vision for the game.
	7	Create a game, using industry-standard gaming software.
	8	Construct a script that includes storytelling, story arcs, plot twists, and dialogue between characters with distinct personalities, all connected to the game level design.
	9	Design and construct game levels that include challenges, interactive elements, effective level progressions with gradually increasing difficulty, and built-in player rewards.

Production	10	Utilize appropriate software tools to create high-quality 2D and 3D assets, including characters, environments, objects, and animations. *Examples: motion capture, real-life sounds, game economy design*
	11	Write clean and efficient code using a current industry-standard programming language to implement smooth gameplay mechanics, user interfaces, and game features. *Examples: lack of glitches, smooth FPS, short loading times*
	12	Create sound effects, music, and voice-over recordings through the application of sound design principles to enhance the gameplay experience.
	13	Compare and contrast lighting practices used for 2D, 3D, stop motion, and claymation animation.
	13a	Select and use lighting techniques to set the mood of a game and create special effects.
Post-Production	14	Develop and implement comprehensive testing plans to identify and resolve bugs, glitches, and gameplay issues.
	15	Create marketing materials to communicate the game's features and appeal, including trailers, screenshots, and promotional artwork.
	16	Utilize physical and digital distribution channels to publish and release a game.
	17	Apply project management techniques to ensure the successful completion of the game project. *Examples: task tracking, time management, resource allocation, identification of areas of improvement*

Audio Production I

Course Credit	1.0
Grade Levels	9-12
Prerequisites	Media Production Foundations

Audio Production I provides an overview of audio production skills with an emphasis on studio recording. Content includes pre-production, production, and post-production procedures; equipment literacy; and industry concepts.

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AUDIO PRODUCTION I
CONTENT STANDARDS

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Pre-Production	1	Identify music theory concepts and structural components within a work and explain how they are used. *Examples: melody, harmony, chords, rhythm, style, genre, dynamics; verse, chorus, bridge, arrangement*
	2	Create sound equipment configurations for specific studio locations and venues.
	3	Explain roles of composers, artists, performers, engineers, agents, managers, and producers in the audio production process.
	4	Outline the processes for selecting, setting up, and using analog and digital audio equipment for studio recording, including outboard gear and digital audio workstations (DAWs).
Production	5	Use mixing, mastering, and acoustical treatment procedures to enhance audio recordings of studio performances. *Examples: frequency detection, compression, reverb, equalization; mic placement, sound absorption, isolation, panels, diffusers, foam*
	6	Create a variety of original audio works designed to reach specific audiences.

		Examples: podcasts, music tracks, announcements
Post-Production	7	Critique an original recording and utilize industry-standard tools and techniques in the post-production mixing phase to refine the product.
	8	Create and distribute product(s) using various media formats in accordance with industry-standard expectations to meet current consumer demand.
Industry Skills and Concepts	9	Demonstrate management techniques for organizing, saving, archiving, and version control of digital files and explain practices to protect devices from data loss.
	10	Select and operate equipment for given audio settings and explain why the choices were made. *Examples: podcast recording, acoustic guitar recording session with vocal*
	11	Describe the history and evolution of the audio production industry and its role in society.
	12	Research and report on intellectual property law and rights management. *Examples: copyright, free and fair use, licensing*

Audio Production II

Course Credit	1.0
Grade Levels	10-12
Prerequisites	Audio Production I

Audio Production II extends the content of Audio Production I to expand students' production skills with emphasis on live recording and real-time audio production. The course covers pre-production and production phases of the recording process in various live audio situations; career preparation; and industry concepts. The course is designed to prepare students for post-secondary study in audio production.

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AUDIO PRODUCTION II
CONTENT STANDARDS

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Pre-Production	1	Compare and contrast elements of various audio and musical genres. *Examples: soundscapes, effects, instruments, equipment, setup*
	2	Compare and contrast mixing and mastering of live sound and studio recording sessions. *Examples: configuration (set-up), equipment, settings on the equipment*
	3	Configure instrumentation, processes, and methods for sound production, synchronization, and data and control applications for live performances.
Live Production	4	Apply principles of audio acoustics to set up, mix, and master in a live sound environment. *Examples: front-of-house monitoring, recording desk operations, equalization of space, ringing out microphones*
	5	Demonstrate instrumental and vocal techniques for producing live setting recordings. *Examples: music performance, podcast, streaming, guest speaker; presence, vocal timbre, pacing*
	6	Demonstrate industry-standard selection, application, and usage of audio signal processors and effects for live setting.

		Examples: timbre shaping, modulation, ambient, delay, reverb, compression
	7	Identify, diagnose, and troubleshoot audio issues within the analog or digital mix in a live setting. *Examples: dropouts during playback, distortion, clipping, hiss, low frequency rumble, radio frequency interference, hum, feedback*
Career Preparation	8	Describe how production processes, cycles, and deadlines affect media businesses and career pathways. *Examples: Explain the importance of pacing a project to complete it on time.* *Explain why audio technicians' skills must evolve as new technology is developed in the industry.*
	9	Collaborate with colleagues to delegate responsibilities and develop cohesive workflow and timeframes to complete projects successfully.
	10	Compare various business models for generating income in the audio production field. *Examples: employment, entrepreneurship, the gig economy, social media monetization*
Industry Concepts	11	Compare and contrast the application of copyright laws to both live and pre-recorded situations.
	12	Investigate and report on the impact and role of the audio production industry on the economy.

Broadcasting Production I

Course Credit	1.0
Grade Levels	9-12
Prerequisites	Media Production Foundations

Broadcasting Production I presents the basic elements of radio, television, and web-based broadcasting for the dissemination of information or for entertainment through standard journalistic practices. This course expands upon basic concepts in Media Production Foundations with emphasis on scriptwriting, storyboarding, camera and microphone techniques, video and audio editing, and on-camera presentation. Content also includes the history of broadcasting, various broadcast mediums, and the roles and responsibilities of professionals in the industry. The course provides hands-on experience creating and producing broadcast projects in multiple formats and incorporates creativity and important communication and critical thinking skills.

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BROADCASTING PRODUCTION I
CONTENT STANDARDS

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History and Culture	1	Describe the positive and negative impacts of radio, television, Internet, and social media platforms on families and communities.
	2	Research and share information regarding the influence that government, public opinion, labor management processes, and diverse local and cultural perspectives may have upon broadcast and media communications.
	3	Compare and contrast recent technological developments in broadcast production and predict how ongoing technical improvements will impact the future of broadcast communications.
Safety	4	Research and report on ethical guidelines for using social media to gather and disperse data in broadcasting.
	5	Identify methods for addressing safety hazards and apply precautions to safeguard personnel and equipment in various adverse conditions. *Examples: extreme weather, hostile spectators*

Basic Camera Operation	6	Identify and explain the purpose of each component of the camera. *Examples: lens, focus, zoom control, tilt, pan*
	7	Demonstrate and explain the rationale for video camera setup, movement, and operation. *Examples: proper handling, care, transport, and storage techniques for cameras, power sources, tripods, and accessories*
	8	Demonstrate the types of angles and camera movements used in shooting video. *Examples: low angle, high angle, Dutch angle, eye shot, overhead, shoulder, closeup, following a moving subject while keeping the subject properly framed.*
Audio	9	Explain and demonstrate procedures for addressing audio quality problems in broadcast production.
	10	Properly position equipment and demonstrate audio techniques for a variety of broadcast production scenarios. *Examples: background sound sources, voice and audio tracking, sound on tape, sound bites, audio level, and interruptible foldback (IFB), microphone position and placement*
Lighting	11	Demonstrate studio and general lighting for television production, including back, key, fill, natural light, three-point lighting, and camera lighting functions.
Production	12	Research and select a topic for a broadcast and determine the focus or objective of the subject matter.
	13	Construct a conceptual outline of a story to achieve objectives for a given scenario within a given time constraint.
	14	Interview a subject both on-camera and off-camera to obtain information about a chosen subject.
	15	Write a television script using industry-standard format and correct grammar. *Examples: news, audio and video, screenplay, storyboard*
	16	Perform on-camera, using clear speech, correct diction, eye contact, gestures, posture, and appearance.

	17	Capture and edit content with audio and video-editing software.
	18	Develop and present a short broadcast story in front of a camera and a microphone, exhibiting professional demeanor.
Career Preparation	19	Develop a personal career plan to meet career goals and objectives in the field of broadcasting and media.
	20	View and critique a recent on-air newscast, addressing attire, language patterns, prop and background usage, relevant content, and demeanor.
Industry Concepts	21	Describe the types and functions of business organizations within the broadcast industry.
	22	Explain the functions and interactions of common departments within a broadcast business. *Examples: human resources, public relations, accounting, executive management*
	23	Summarize broadcasting laws and regulations, including FCC regulations on content, advertising, and obscenity.

Broadcasting Production II

Course Credit	1.0
Grade Levels	10-12
Prerequisites	Broadcasting Production I

Broadcasting Production II builds on concepts presented in Broadcasting Production I by providing expanded broadcasting skills and opportunities. Topics include audience research, developing a creative vision for programming, advanced video production techniques, and broadcast journalism. Students will also have the opportunity to work on larger-scale projects and explore their own creative interests within the broadcasting field.

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Each foundational standard completes the stem *"**Students will**..."*

Foundational Standards

1. Incorporate safety procedures in handling, operating, and maintaining tools and machinery; handling materials; utilizing personal protective equipment; maintaining a safe work area; and handling hazardous materials and forces.
2. Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork.
3. Explore the range of careers available in the field and investigate their educational requirements and demonstrate job-seeking skills including resume-writing and interviewing.

	4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway. 5. Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

BROADCASTING PRODUCTION II
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

Broadcast Writing	1	Implement skills in broadcast writing, including researching, scripting, and producing news stories, features, and short documentaries, using the 4 Cs of broadcast writing (correctness, clarity, conciseness, and color). *Examples: including progressive detail in a story, developing different viewpoints of same story, determining alternative story endings*
	2	Compare and contrast broadcast writing to formal academic writing.
Advanced Production	3	Demonstrate advanced techniques in broadcast production. *Examples: multi-camera setups, color separation, focus lighting, audio mixing*
	4	Design and implement lighting plans for studio and remote production, utilizing a variety of tools and techniques. *Examples: focused, background, frontal, indirect, scrims, gels*
	5	Demonstrate audio techniques of voice over (VO), sound on tape (SOT), voice over sound on tape (VOSOT), and B-roll.
	6	Demonstrate advanced news reporting skills, including investigation and data journalism,

		cross-platform content production, site compassion, and audience engagement. *Examples: Track metrics to monitor engagement. Craft a story that respects privacy, avoids sensationalism and portrays subjects accurately.*
	7	Create surveys to collect and analyze data for use in a broadcast story.
	8	Coordinate and manage broadcast productions from start to finish, including scheduling, budgeting, equipment operation, and project management.
	9	Create and engage in live studio and remote productions, using remote communication technologies and networking multiple locations.
	10	Produce live sports events, write sports commentary, and host live action sports broadcasts.
Post-Production	11	Perform post-production tasks to complete projects, including digital editing, color grading, and sound design.
	12	Demonstrate effective, industry-standard editing workflows. *Examples: preview and trim media, create rough cuts and transitions, tighten sequence, graphics, keyframe animations, exporting*
	13	Use graphic elements and apply design principles to enhance broadcast presentations. *Examples: lower thirds, computer-generated text and font styles, colors, title safe area, focal-point placement, computer-generated design, text box placement, still images*
Ethical and Legal Issues	14	Research and summarize ethical and legal considerations that arise in broadcast productions, including fair use, costs of copyrighted materials, and privacy laws. *Examples: federal, state, and local copyright laws, ethics, legal issues*
Social Media	15	Utilize social media platforms to identify current trends, target audiences, and demographics for broadcast production. *Examples: polls, surveys, live chat*

	16	Manage social media presence for broadcast platforms within industry and local norms.
Career Preparation	17	Summarize the benefits of engaging in a variety of activities to promote professional networking. *Examples: join clubs, attend networking events, connect through online platforms, form professional relationships, volunteer at community events*
	18	Demonstrate proficiency in product branding by creating a production with a distinct identity. *Examples: name and logo creation, visual design, tone of voice, target audience*
	19	Outline the responsibilities of crew members, including producer, director, technical director, audio technician, video playback, teleprompter operator, floor director, camera operator, announcers, and talent, and explain how these personnel work together as a team.
	20	Describe the appropriate attire to wear as an anchor, an on-air reporter, a field reporter, and a specialized reporter for television broadcasting, basing criteria on the organization's requirements, demographics, and community standards. *Examples: avoid patterns, oversized jewelry, clothing not suited to current weather conditions; use solid colors, tailored (not tight or baggy) clothing, appropriate undergarments and makeup, clean clothing without bold details or logos*
	21	View and critique a recent on-air newscast looking for bias in wording and tone, reviewing for propaganda techniques, and assessing the appropriateness of images accompanying the story.
Portfolio	22	Create and assemble a portfolio of professional quality video work, with a statement of purpose for a career in television production.

Career Pathway Project in Arts, A-V Technology, and Communications

Course Credit	1.0
Grade Levels	10-12
Prerequisites	Successful completion of two or more full-credit courses in the Arts, A-V Technology, and Communications cluster

Career Pathway Project (CPP) in Arts, A-V Technology, and Communications is a capstone course which allows students to utilize the knowledge and skills gained through their secondary coursework in a practical, real-world experience that showcases their learning. It provides an opportunity for a student to choose an area of interest and explore it in depth while demonstrating problem-solving, decision-making, and independent learning skills. The CPP contributes to an educational plan of challenging courses and practical experiences that prepares students for the workplace or for pursuing further education.

During this course, the student works with his or her coordinating teacher, academic teachers, and a product or process mentor who has expertise in the student's field of study. At the conclusion of the Career Pathway Project, the student presents or demonstrates the knowledge gained to an audience consisting of the coordinating teacher, academic teachers, the mentor, peers, and community and business representatives.

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Each foundational standard completes the stem *"**Students will**..."*

Foundational Standards	1. Incorporate safety procedures in handling, operating, and maintaining tools and machinery; handling materials; utilizing personal protective equipment; maintaining a safe work area; and handling hazardous materials and forces. 2. Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork. 3. Explore the range of careers available in the field and investigate their educational requirements and demonstrate job-seeking skills including resume-writing and interviewing. 4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway. 5. Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

CAREER PATHWAY PROJECT IN ARTS, A-V TECHNOLOGY, AND COMMUNICATIONS CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

Project Proposal	1	Create a formal, narrative proposal that communicates a specific concept, creates a process, or develops a product related to Arts, A-V Technology, and Communications. *Examples: Create an advertising campaign for a customer that meets a specific need, serves a specific population, or markets a specific product.*
	2	Conduct and record independent research related to the selected Arts, A-V Technology, and Communications project. *Examples: Internet research, related reading, surveys*

Project Report	3	Write a detailed summary report on the chosen Arts, A-V Technology, and Communications project, following established conventions for format, grammar, usage, and citation of sources.
Presentation	4	Produce an original, engaging multimedia presentation based upon career pathway project research and results. *Examples: producing a digital presentation and oral explanation, creating a documentary, presenting a project model and explanation*
Portfolio	5	Design and create a digital project portfolio that documents all components of the chosen Arts, A-V Technology, and Communications pathway project and demonstrates the validity of the process.

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CTE Lab in Arts, A-V Technology, and Communications

Course Credit	1.0
Grade Levels	10-12
Prerequisites	Successful completion of two or more full-credit courses in the Arts, A-V Technology, and Communications cluster

CTE Lab in Arts, A-V Technology, and Communications is designed to enhance the student's general understanding and mastery of the Arts, A-V Technology, and Communications program. This course is designed as a learning laboratory to support students' individual interests and goals. This laboratory may take place in a traditional classroom, in an industry setting, or in a virtual learning environment.

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4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to

the industry pathway.

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CTE LAB IN ARTS, A-V TECHNOLOGY, AND COMMUNICATIONS CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

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Occupational Expertise	1	Demonstrate expertise in a specific occupation within the Arts, A-V Technology, and Communications cluster.
	1a	Meet benchmarks selected by the instructor from the appropriate curriculum frameworks, based upon the individual student's assessed needs.
Research and Presentation	2	Conduct investigative research on a selected topic related to arts, A-V technology, and communications using approved research methodology, interpret findings, and prepare a presentation to present and justify results.
	2a	Select an investigative study based on research and prior knowledge.
	2b	Collect, organize, and analyze data accurately and precisely.
	2c	Report, display, and defend the results of investigations to audiences that may include professionals and technical experts.
	3	Demonstrate higher order critical thinking and reasoning skills appropriate for a career in the arts, A-V technology, and communications field.

		Examples: make inferences, explain connections, express an in-depth understanding of how the career connects to the arts, audio-visual technology, or communications field
	3a	Use mathematical and/or scientific skills to solve problems encountered in the chosen occupation.
	3b	Locate, evaluate, and interpret information related to the chosen occupation in oral, print, and digital formats.
	3c	Analyze and apply data and/or measurements to solve problems and interpret documents.
	3d	Construct charts, tables, or graphs using functions and data.
Leadership	4	Apply leadership and professional career skills needed in arts, A-V technology, and communications careers. *Examples: decision-making, time management, long-term planning, commitment, professional communication*
	4a	Develop and deliver a professional presentation offering potential solutions to a current issue.
	4b	Demonstrate leadership and career skills in job placement, job shadowing, entrepreneurship, or internship, or by obtaining an industry-recognized credential of value.
	4c	Participate in leadership development opportunities available through the appropriate student organization and/or professional organizations in the Arts, A-V Technology, and Communications cluster area.
	4d	Demonstrate written and oral communication skills through presentations, public speaking, live or virtual interviews, and/or an employment portfolio.

Digital File Prep for Printing

Course Credit	1.0
Grade Levels	9-12
Prerequisites	

Digital File Prep for Printing presents knowledge and skills related to preparing digital files for printing using industry standards and best practices, including how to use preflight software, apply color management, create PDF files, and troubleshoot common file problems. The ethical use of artificial intelligence is woven throughout the course of study. Course content also includes how to use variable data printing and web-to-print technologies to create personalized and customized print products.

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4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway.
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DIGITAL FILE PREP FOR PRINTING
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

File Preparation	1	Prepare digital files for printing, selecting and applying resolution, file format, color mode, bleed, trim, crop marks, and fonts.
	2	Create PDF files that meet the specifications and requirements of different print processes and products.
	3	Use industry-standard preflight software to check and correct common file problems, including missing fonts, low-resolution images, process colors, and overset text.
	4	Identify various desktop publishing applications and explain their uses for page layout.
	4a	Import text and images into a page-layout program, applying margins, formatting, guides, trims, and folds to create a multi-page document.
	5	Explain the difference between raster and vector graphics and edit both types using an image-editing program.

Data Merges	6	Use variable data printing and web-to-print technologies to create print personalized or custom products for various audiences and purposes.
Processes and Products	7	Explain the characteristics of different print processes and identify the types of products they are capable of producing. *Examples: offset lithography, digital printing, screen printing, flexography, gravure, letterpress*
File Types	8	Describe common file formats and explain their advantages and disadvantages in various printing scenarios. *Examples: TIFF, JPEG, PNG, EPS, PSD, INDD, PDF*
Color Modes and Management	9	Produce consistent and accurate color reproduction across different devices and media, utilizing color management techniques and principles. *Examples: standards from International Commission on Illumination (CIE) and International Color Consortium (ICC)*
	10	Describe different color modes and explain their applications for printing purposes. *Examples: CMYK (process color), RGB, spot color*
	10a	Create spot color in a page layout program and explain why design choices were made.
	11	Explain the advantages and disadvantages of different color management tools and systems for printing purposes. *Examples: ICC profiles, color spaces, color gamuts, color calibration, color conversion*
Prepress Terminology and Concepts	12	Utilize correct prepress terminology to explain the processes and concepts involved in selecting elements for printing purposes. *Examples: raster and vector graphics; bitmap and outline fonts; dpi, ppi, lpi, and spi; halftone and continuous tone images; trapping, overprinting, knockout, choke, and spread*

Digital Production Printing

Course Credit	1.0
Grade Levels	9-12
Prerequisites	Digital File Prep for Printing

Digital Production Printing introduces the principles and techniques of digital production printing using toner-based and inkjet printers, including how to operate, maintain, and troubleshoot digital printers and related equipment. Course content also includes how to select appropriate substrates, optimize print quality, and manage print workflows.

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DIGITAL PRODUCTION PRINTING CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

Digital Techniques	1	Explain the principles and techniques of digital production printing using electrostatic and inkjet printers.
Operations and Maintenance	2	Print various products by operating, maintaining, and troubleshooting digital production printers and related equipment according to manufacturer's instructions and safety guidelines. *Examples: binding, finishing, collation modules*
Substrates	3	Select substrates for various print products and processes, based on the characteristics and performance of the materials, and explain the rationale for each choice. *Examples: paper, cardstock, vinyl, canvas, fabric, metal*
Calibration	4	Adjust printer settings, calibrate color profiles, and perform quality control checks to optimize print quality.
Workflow	5	Manage print workflows, using software tools to organize, prioritize, schedule, and monitor print jobs. *Examples: RIPs (raster image processors), DAMs (digital asset management systems), MISs (management information systems), W2P (web-to-print) platforms*

Printer and Press Types	6	Compare and contrast the structure, operation, advantages, and disadvantages of electrostatic printers, including laser, electrophotographic, solid ink, and LED printers.
	7	Compare and contrast the structure, operation, advantages, and disadvantages of inkjet printers, including thermal, piezoelectric, continuous, and drop-on-demand inkjet printers.
	8	Explain how digital printing and offset printing are different.
Inkjet Inks	9	Select between dye-based and pigment-based inks for a given project, taking into account their properties and conventional uses in inkjet printers, and explain reasons for the choice.
Print Quality	10	Demonstrate and explain how to manage print-quality issues encountered in digital printing projects. *Examples: toner adhesion, ink drying, banding, streaking, ghosting, registration errors, paper path issues.*

Drone Flight Operations

Course Credit	1.0
Grade Levels	9-12
Prerequisites	Drone Licensure and Fundamentals

Drone Flight Operations extends the content of Drone Licensure and Fundamentals, providing students with the hands-on skills needed for aerial cinematography and commercial applications, including advanced piloting skills and creative camera techniques. The drone program is designed to prepare students for entry level positions in the UAS (Unmanned Aircraft Systems) industry by providing foundational knowledge and skills in mission planning, applications, maintenance, laws and regulations, data analytics, and project management using UAS platforms. This course expands instruction with kinetic learning to give students knowledge and experience applying skills needed for commercial applications.

Program content includes an introduction to drone flight, history, avionics, sensors, communications systems and selectable paths including data analysis and applications such as emergency response, geographic information systems, precision agriculture, and in commercial and government sectors. Students will prepare for and conduct unmanned flights similar to those commonly performed in the industry, observing Federal Aviation Administration's (FAA) regulations that govern drone operations.

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materials and forces.

2. Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork.
3. Explore the range of careers available in the field and investigate their educational requirements and demonstrate job-seeking skills including resume-writing and interviewing.
4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway.
5. Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

DRONE FLIGHT OPERATIONS
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**…"*

Advanced Drone Usage in Audiovisual Productions	1	Explain the historical context and evolution of drone usage in audio/video production.
	2	Explain key concepts and industry-standard procedures for employing drones in audiovisual productions. *Examples: altitude hold, autopilot, axis, bind, controller, payload, throttle, firmware, fly away*
	3	Compare and contrast various industry-standard drone models and accessories.
Aerial	4	Utilize principles of shot composition, framing, and visual storytelling in aerial cinematography.

Cinematography Principles	5	Demonstrate camera settings, exposure control, and white balance to optimize the quality of aerial footage.
	6	Analyze the impact of various lenses and filters on the overall visual aesthetic.
Advanced Drone Piloting Skills	7	Use advanced flight maneuvers for capturing desired shots to ensure smooth and cinematic footage. *Examples: orbits, reveals, fly-throughs*
	8	Summarize strategies for handling challenging weather conditions and mitigating risks during flight.
Creative Camera Work	9	Demonstrate dynamic camera movements in aerial cinematography. *Examples: tracking, dollying, jibbing*
	10	Apply innovative techniques for creative camera work. *Examples: aerial panoramas, hyperlapses, time-lapses*
	11	Summarize methods for using various camera stabilization systems to achieve professional-grade footage.
Post-Processing and Optimization	12	Edit and enhance aerial footage using post-processing software.
	13	Choose a variety of techniques for color grading, visual effects, and image correction to create the desired effects in aerial audiovisual footage.
Legal and Safety Considerations	14	Summarize drone regulations, permits, and flight restrictions relevant to audiovisual production.
	15	Outline safety protocols and risk management strategies for drone operations.
	16	Summarize insurance and liability considerations for professionals in the audio/video field.
Integration	17	Import and organize aerial footage using video-editing software.
	18	Create and synchronize drone footage with sound design and musical compositions.

of Aerial Footage into Audiovisual Projects	19	Generate artistic storytelling projects incorporating aerial shots.
	20	Use aerial footage to produce advanced outputs for commercial uses. *Examples: scans of agricultural fields to target aerial spraying, scans of buildings under construction to check progress, maps of traffic patterns*
Time in Flight	21	Complete five hours of flight time with a drone.
	22	Plan and complete a drone mission.

Drone Licensure and Fundamentals

Course Credit	1.0
Grade Levels	9-12
Prerequisites	

Drone Licensure and Fundamentals is designed to provide the introductory knowledge and skills students need to operate drones (small unmanned aircraft systems–sUAS) safely and responsibly. The course introduces licensing regulations, safety procedures, federal regulations, identification of effects of weather on navigation, communications in aviation, and critical decision-making processes. Additionally, students will explore the roles and responsibilities of professionals in the industry.

This course covers all information students will need to apply for a license under FAR Part 107c. Complete licensing information is available from the Federal Administration Agency (FAA).

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DRONE LICENSURE AND FUNDAMENTALS CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

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Licensing Regulation	1	Identify the requirements and applicability of a Part 107c license in relation to operation of a specific drone.
	2	Identify flight scenarios which require a Part 107c license.
	3	Explain the consequences of falsifying or reproducing a certificate or altering a license.
Accident Reporting	4	Determine the correct federal agency with which to file an accident report in given drone accident scenarios.
FAA Regulations	5	Summarize the Federal Aviation Agency (FAA) guidelines for drone operations under Part 107c. *Examples: the meaning of compensation for flight, how and when to register a drone with the*

		FAA
	6	Explain the conditions for safe drone operations as set forth by the FAA.
	7	Describe the working relationship between the pilot in command and the visual observer as outlined by the FAA.
Drone Categories	8	Compare and contrast the characteristics of Category 1, 2, 3, and 4 drones.
Remote ID	9	Summarize the requirements and functions of remote ID and explain how drone pilots can meet the requirements.
Airspace Classification, Operating Requirements, and Flight Restrictions	10	Compare and contrast the characteristics of different airspace classifications and explain where to locate real-time resources concerning flight restrictions. *Examples: Use an FAA-approved app to locate restricted airspace such as NOTAMs (Notices to Air Missions) and TFRs (Temporary Flight Restrictions).*
	11	Identify requirements and regulations for a drone flying inside a specific airspace.
	12	Give examples of the FAA terms and symbols for VFR (visual flight rules) and explain their meanings.
Charts	13	Describe the different types of FAA-approved aeronautical charts and explain their uses.
	14	Identify and explain symbols and navigational aids on a sectional chart.
	15	Read and interpret a sectional aeronautical chart.
Aviation Weather Sources	16	Determine where to obtain FAA approved sources of weather information for a specific location.
	17	Compile information from aviation weather service sources.

Effects of Weather on a Drone	18	Explain how temperature, altitude, wind, and specific types of weather affect the overall performance of a drone.
	19	Describe the effects of density altitude on the aerodynamics of a drone.
	20	Explain the effects of large buildings on wind direction and turbulence.
	21	Explain the ways in which atmospheric pressure affects drone performance.
Identifying Weather Conditions	22	Identify the different cloud types and explain how they indicate atmospheric conditions.
	23	Identify and explain the life cycle or phases of a thunderstorm.
	24	Explain and illustrate an atmospheric ceiling.
	25	Determine visibility using online resources and procedures as listed on the FAA website.
Loading and Performance	26	Diagram and explain the four forces of flight (weight, thrust, lift, and drag) and how loading affects drone performance for each of the four.
Airport Operations	27	Describe different types of airports and the characteristics of each, including controlled, uncontrolled, recreational, and private.
	28	Diagram and label airport traffic patterns and procedures in the air and on the ground.
Radio Communications	29	Explain and demonstrate FAA-approved radio procedures.
	30	Utilize the phonetic alphabet to simulate the transmission of information by radio.
	31	Explain traffic advisory practices at airports without operating control towers.

Aeronautical Decision-Making and Judgment	32	Plan drone missions, utilizing crew management resources. *Examples: using weather forecasting applications to get a weather outlook for flight time, using flight planning applications such as B4UFLY to get an airspace clearance*
	33	Describe and give examples of the decision-making processes followed by drone operators.
	34	Explain the importance and process of situational awareness and pre-flight planning.
	35	Identify potentially unsafe attitudes and behaviors exhibited by drone operators and explain ways to correct them.
Physiological Factors Affecting Pilot Performance	36	Determine physiological and medical factors that affect pilot performance, including the use of drugs and alcohol.
	37	Identify the effects of stress and fatigue during a mission.
	38	Describe the correct government approved procedures for preparing for a night flight. *Examples: adapting vision to darkness, using red instead white lights on headlamps*
	39	Explain the causes of hyperventilation and methods to prevent it.
Maintenance and Inspection Procedures	40	List and describe the equipment required for flying a drone at night.
	41	Perform maintenance procedures for a drone following the manufacturer's specifications.
	42	Conduct preflight checks prior to launching a mission.

Film Production I

Course Credit	1.0
Grade Levels	9-12
Prerequisites	Media Production Foundations

Film Production I provides an overview of basic film production skills. Course content includes pre-production, production, post-production, and distribution of film products, as well as historical background of the motion picture industry, legal and ethical considerations, and responsibilities of film production crew members.

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Foundational Standards	
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the industry pathway.

5. Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

FILM PRODUCTION I
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

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Fundamentals	1	Outline the history of moving picture production, including significant advancements in the film industry.
	2	Summarize ethical practices and copyright laws that pertain to the film industry.
	3	Describe key roles and responsibilities of various members of a film crew.
Pre-Production	4	Describe and design a logline and three-act structure in order to craft an idea into a film.
	5	Research and create a list of equipment appropriate for various production scenarios.
	6	Compose scripts and storyboards using terminology and formatting consistent with industry standards.
Production	7	Create a film using a variety of cinematography techniques and use industry terminology to explain why various techniques were selected. *Examples: exposure, frame rate, aperture, white balance, essential camera angles and movement (pan, tilt, dolly, track, pedestal), composition, rack focus, whip pan, dolly zoom*
	8	Design and record audio for film using applicable equipment.

		Examples: lavalier, omnidirectional, and shotgun microphones; boom poles, shock mounts, handheld recorders
	9	Create and implement a basic lighting setup for film production.
	10	Demonstrate proper use and care of filming and audio equipment.
Post-Production and Distribution	11	Complete and enhance a film using post-production techniques, including cuts and transitions. *Examples: cut on action, cut away, jump cut, cross cut, smash cut, match cut, invisible cut*
	12	Research and share information about film distribution options. *Examples: film festivals, online streaming*
Reflection	13	Critique peer-created films for artistic and technical elements to identify strengths and areas needing improvement to foster professional growth.

Film Production II

Course Credit	1.0
Grade Levels	10-12
Prerequisites	Film Production I

Film Production II builds on the concepts presented in Film Production I to extend students' production skills. Course content includes film genres, camera technique, color theory, casting, sets, costuming, props, music, visual effects, production design, finances, and marketing and distribution. Students will have the opportunity to create a professional portfolio as well as become more familiar with professions in the film industry. The course is designed to prepare students for post-secondary study in the field.

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FILM PRODUCTION II
CONTENT STANDARDS

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Genres	1	Outline film genres and movements, give examples of each, and describe their defining characteristics.
	1a	Explain the significance of film genres and movements to the motion picture industry.
Film Design	2	Design and create films, incorporating characteristics of various genres and/or movements. *Examples: comedy, drama, horror, sci-fi, experimental, documentary*
	2a	Utilize concepts of color theory in designing and editing film to set mood and tone. *Examples: balanced, discordant, associative, transitional*
	2b	Design and construct sets to enhance a film's scenes and tone.
	2c	Research, design, and procure costumes and props that are consistent with the film's period and tone.
Camera Technique	3	Determine effective camera angles for use in specific scenarios.
	4	Design and utilize staging and blocking movements to create dynamic shots.

Casting	5	Conduct casting calls and audition prospective cast members to secure talent needed for filming.
Audio and Visual Effects	6	Collect, select, and organize elements for the soundtrack for a short film.
	7	Use visual effects software to enhance motion graphics, color, and special effects in films.
Finance, Marketing, and Distribution	8	Prepare an itemized budget for a short film.
	9	Create marketing materials for a film. *Examples: posters, teasers, trailers, social media campaigns*
	10	Distribute completed projects through traditional or on-line channels. *Examples: film festivals, streaming platforms*
Portfolio	11	Preserve and display finished products. *Examples: digital portfolio, reel*
Career Preparation	12	Research and report on film schools and academies, including each school's ranking, faculty-to-student ratio, faculty qualifications, and curriculum.
	12a	Explain the role of unions and guilds in film industry careers.

Media Production Foundations

Course Credit	1.0
Grade Levels	9-12
Prerequisites	

Media Production Foundations provides an overview of media production across multiple disciplines, including drone photography, audio production, broadcasting, film production, and technical theatre. The ethical use of artificial intelligence is woven throughout the course of study. This course is the prerequisite for audio, broadcasting, film production, and technical theatre courses.

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MEDIA PRODUCTION FOUNDATIONS
CONTENT STANDARDS

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History and Culture	1	Describe the development of communications technologies from the 19th through 21st centuries, including telegraph, wireless, early radio and television, electronic and satellite news gathering, Internet broadcasting, and emerging technologies.
	2	Outline the evolution of basic modern formats of media consumption and explain their uses. *Examples: film, broadcast television, social media, podcasts, streaming services*
	3	Develop a SWOT (strengths, weaknesses, opportunities, and threats) analysis for future career pathways in the arts and audio/video fields.
Audience and Purpose	4	Identify the target audiences of various examples of media and the characteristics that make each media type a good match for its audience.
	5	Analyze the tone and purpose of various examples of media.
Production	6	Summarize the properties of a digital display and outline the advantages and disadvantages of various resolutions. *Examples: pixels, 480p, 720p, 1080p, 4k*

	7	Differentiate among various digital media file types and indicate why each is used. *Examples: JPEG, PNG, TIFF, MP3, WAV, MP4, MOV, AVI*
	8	Identify media production equipment and explain how it is used. *Examples: camera, microphone, lights, supports, software, cables, speakers*
	9	View and critique elements of multimedia performances created for various audiences. *Examples: clarity, diction, eye contact, posture, appearance, audio or video quality*
	10	Create an original media work for a specific purpose and audience, utilizing a variety of media production equipment. *Examples: speech, podcast, commercial, advertisement, musical, broadcast, theatre*
	11	Design technical theatre elements for various media settings, utilizing concepts of visual design. *Examples: stage design, lighting, sound, costumes, props; broadcast, film, theatre, and concert settings*
Audio	12	Select and configure sound equipment for a small audio project. *Examples: podcast, social media post, streaming, guest speaker, karaoke*
	13	Demonstrate and explain the use of mixing techniques to improve audio quality. *Examples: volume, gain, fading*
Film Production	14	Identify and describe the basic camera angles used in media production. *Examples: establishing, wide, full, medium, medium close up, close-up, extreme close-up*
	15	Create storyboards to visualize narratives for various multimedia productions. *Examples: short film, commercial, broadcast, music video*
Ethics	16	Identify and analyze the impact of artificial intelligence and emerging technologies on the media and communications landscape, including both positive and negative effects.

	17	Differentiate between copyrighted and public domain materials and locate examples of each type.

Offset Press Operations

Course Credit	1.0
Grade Levels	9-12
Prerequisites	

Offset Press Operations provides students with hands-on experience in operating offset presses and related equipment. Course content includes how to set up, run, and clean offset presses; perform quality control checks and make adjustments; select and handle different types of inks, papers, and coatings; and apply finishing techniques such as cutting, folding, binding, and laminating.

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OFFSET PRESS OPERATIONS
CONTENT STANDARDS

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Offset Press Principles	1	Explain the principles and techniques of offset printing using lithographic presses.
Maintenance and Safety	2	Operate, maintain, and troubleshoot offset presses and related equipment according to manufacturer's instructions and safety guidelines.
	2a	Operate, maintain, and troubleshoot binding and finishing equipment and tools according to manufacturer's instructions and safety guidelines.
Materials Selection	3	Produce a variety of offset print products, selecting and utilizing different types of inks, papers, and coatings based on their properties and compatibility.
Quality Control	4	Perform quality control checks and adjustments on offset presses to control factors that affect print quality, using industry-standard instruments and procedures. *Examples: densitometers, spectrophotometers, color bars, dot gain charts, registration marks*

	5	Perform quality control checks and adjustments on binding and finishing operations using relevant instruments. *Examples: rulers, gauges, scales, calipers*
Press Types	6	Compare and contrast different types of lithographic presses and their advantages and disadvantages for various printing purposes. *Examples: sheet-fed vs. web-fed presses, single-color vs. multicolor presses, and perfecting vs. non-perfecting presses*
Binding and Finishing	7	Select methods and materials for binding print products, considering the products' size, shape, thickness, and purpose. *Examples: saddle stitching, side stitching, loop stitching, perfect binding, case binding, coil binding, comb binding, stapling, gluing; papers, cardstocks, boards, vinyls, canvases, fabrics*
	8	Select methods and materials to finish print products to enhance the products' appearance, functionality, and durability. *Examples: cutting, trimming, perforating, slitting, creasing, scoring, die cutting, embossing, folding, laminating, coating, stamping; metals, inks, varnishes, aqueous coatings, UV coatings, laminations, foils*
	9	Bind and finish print products, selecting tools and equipment based on their functions and features. *Examples: guillotine cutters, rotary cutters, trimmers, perforators, slitters, creasers, scorers, die cutters, embossers, folders, stitchers, staplers, gluers, binders, laminators, coaters, foil stampers*

Photography I

Course Credit	1.0
Grade Levels	9-12
Prerequisites	

Photography I introduces the fundamentals of digital photography. It focuses on seeing photographically, operating automatic cameras, using light, capturing images, and producing digital images. The course also presents the history of photography and legal and ethical issues related to the industry, including the use of artificial intelligence.

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PHOTOGRAPHY I
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**…"*

Legal and Ethical Issues	1	Explain rules, laws, regulations, and ethical decisions related to photography and the First Amendment.
Photography Tools	2	Identify, describe, and use all parts of a digital camera set to automatic and manual modes. *Examples: MILC (mirrorless interchangeable-lens cameras), DSLR (digital single lens reflex camera)*
Creative Photography and Editing	3	Create original photographs for a variety of personal and creative outputs, using photographic equipment set to automatic modes. *Examples: headshots, group or team, macro, landscape, sports, event, architecture*
	3a	Manipulate photographic images, utilizing industry-standard photo-editing software.
	3b	Utilize the most efficient pathway to digitize images for editing purposes.
	3c	Enhance original photographic images using artificial intelligence.

Studio Skills	4	Research and implement composition and lighting techniques in a controlled studio environment. *Examples: single, three-point, butterfly, loop, Rembrandt, split, rim, broad, short*
	4a	Compose photographs utilizing the rule of thirds, depth of field, perspective, golden ratio, negative space, symmetry, and balance.
History	5	Research and share information about early inventions in photography and explain how they have impacted modern photographic techniques.
	5a	Identify a photographer who has influenced styles, themes, or trends in photography and explain the extent and significance of his/her impact on the field.
	5b	Analyze historical trends in photography to show how the craft has changed from early to modern images.
	5c	Research and explain how the increased availability of tools and technologies for amateur photographers has impacted the photography industry.
Maintenance	6	Demonstrate and explain maintenance procedures and describe safe storage for cameras and lighting equipment.
Lighting Techniques	7	Create photographs using natural light and a variety of lighting equipment.
	7a	Identify and select appropriate photography lighting equipment for various scenarios. *Examples: studio, portrait, event, macro lighting*
	7b	Research lighting theory and explain how the qualities of light relate to photography.
File Management and Printing	8	Manage the distribution and storage of physical and electronic photography files for efficiency of workflow.
	8a	Describe the size, quality, transfer capabilities, and storage efficiency of various digital photography file formats.

	8b	Adjust the size and resolution of images with image capture and photo-editing software.
	8c	Demonstrate color correction in the process of editing and printing digital photos. *Example: Adjust brilliance, highlights, contrast, saturation, warmth, and tint to calibrate output between RGB and CMYK.*
Careers in Photography	9	Compare and contrast corporate and freelance opportunities in the photography industry, outlining advantages and disadvantages of each.
	10	Research and describe connections between photography and related disciplines. *Examples: graphic design, journalism, social media, marketing, advertising, public relations*

Photography II

Course Credit	1.0
Grade Levels	9-12
Prerequisites	Photography I

Photography II extends the content of Photography I by providing instruction in the use of manual camera settings and the application of advanced photographic techniques and processes. Areas of study include photography and imagery tools, file management, editing and printing, studio skills, lighting techniques, post-production, and business plan development. The exploration of careers in photography is an integral part of this course.

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PHOTOGRAPHY II
CONTENT STANDARDS

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Ethical and Legal Issues	1	Research and report on legal cases related to professional photography. *Examples: First Amendment, copyright, expectation of privacy*
	1a	Research and draw conclusions on the impact of photography on society throughout history.
Photography and Imagery Tools	2	Demonstrate the manual use of current photography technology and equipment, including manual manipulation of camera controls and use of the exposure triangle (ISO, aperture, and shutter speed).
	2a	Select various manual camera modes and describe the anticipated results of their use.
Creative Photography and Editing	3	Create a variety of original photographs using manual mode. *Examples: portraits, landscapes, architecture, street scenes, action shots*
	3a	Edit original photographs using industry-standard software to make adjustments through cropping, saturation, brightness, color correction, and image artifact correction.
Studio Skills	4	Demonstrate different effects in images created in a controlled studio environment.

		Examples: silhouettes, shadows, reflection, movement
Lighting Techniques	5	Use artificial lighting to highlight elements of the subject or create mood in a variety of original photographs.
	5a	Use a variety of photography lighting equipment to achieve particular effects in photographs and explain the rationale for choosing certain equipment. *Examples: on-camera flash, studio lights, reflectors, light box, continuous lighting*
	5b	Utilize a variety of lighting set-ups to implement lighting theories. *Examples: front light, backlight, soft light, hard light, rim light, loop lighting, broad lighting, short lighting, butterfly lighting, split lighting, Rembrandt lighting, rechargeable studio lighting, constant lighting*
File Management and Printing	6	Prepare and display a portfolio of prints from images created with manual camera settings, using industry-standard electronic portfolio software. *Examples: physical and/or digital photography booklets, flipbooks, binders*
	6a	Explain the process and rationale for creating digital and/or physical photography portfolios.
Business Plan Development	7	Develop a basic plan for a photography business, including a marketing plan. *Examples: executive summary, product description, target marketing, assessment of competition, marketing strategies, pricing, operation strategies, budget, SWOT analysis, workflow timeline*
Careers in Photography	8	Identify and describe ways to monetize photography skills using original works.

Photography III

Course Credit	1.0
Grade Levels	10-12
Prerequisites	Photography II

Photography III, the final course in the photography pathway, provides photography students with the opportunity for software credentialing using industry-standard software. The ethical use of artificial intelligence is woven throughout the course of study. Course content requires the creation of a professional-quality photography portfolio and the exploration of photography career opportunities.

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PHOTOGRAPHY III
CONTENT STANDARDS

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Ethical and Legal Issues	1	Create original photography works that comply with laws, rules, regulations, and photographic ethics.
Photography and Imagery Tools	2	Take photographs using a variety of camera and lighting equipment, explaining why each piece of equipment was selected for a particular outcome.
Photo Editing	3	Justify decisions in photo editing, color correction, and photo restoration. *Examples: highlights, saturation, color grading, masking, filters*
Software Proficiency	4	Digitally enhance and restore photographs using industry-standard editing software. *Examples: removing or adding objects, sharpening, color grading, restoration*
Corporate Photography	5	Create and edit original photographs suitable for commercial use.
	5a	Meet with simulated or actual clients to examine corporate needs and suggest photography deliverables that meet the clients' needs and expectations.

	5b	Justify decisions regarding composition, orientation, style, lighting, and editing in original photographs suitable for corporate applications.
	5c	Present photographs to simulated or actual clients and explain how they meet identified corporate needs.
Photography Portfolio	6	Prepare and present a comprehensive, annotated portfolio of original, professional-quality photographic works, including information about camera settings, locations of the shoots, and the concept of the photograph(s) . *Examples: senior exhibit, mock interview portfolio presentation, performance review*
Careers in Photography	7	Develop and present a detailed business plan for a freelance photography enterprise. *Examples: executive summary, product description, target marketing, assessment of competition, marketing strategies, pricing, operation strategies, budget, SWOT analysis, workflow timeline*
	7a	Describe professional and freelance photography in niche markets. *Examples: wedding photography, portrait photography, photojournalism, fashion photography, landscape photography, real estate photography*

Screen Printing

Course Credit	1.0
Grade Levels	9-12
Prerequisites	

Screen Printing provides an introduction to the screen printing trade, allowing students to explore graphic preparation, mesh selection, frames, stencil systems, printing techniques, ink and substrate compatibility, and how screen printing affects the finishing processes. A combination of technical laboratory applications and theory provides the foundation for this course.

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3. Explore the range of careers available in the field and investigate their educational requirements and demonstrate job-seeking skills including resume-writing and interviewing.

	4.	Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway.
	5.	Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

SCREEN PRINTING
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

The Screen Printing Industry	1	Research and report on the scope of the screen printing industry, including the range of screen printed products. *Examples: signs, decals, specialty textiles, automotive items, electronics, sports equipment*
	2	Compare and contrast offset, flexo, gravure, and screen printing processes.
Graphics	3	Utilize the design process and industry-standard software to prepare graphics for screen printing applications.
Equipment	4	Identify the types of presses that are used in the screen printing industry and outline the characteristics of each. *Examples: manual tabletop, clamshell, four-post, cylinder, multi-station carousel, automatic, industrial, specialty presses*
	5	Identify and use various types of screen printing frames and explain the differences among them. *Examples: retensionable, stretch, glue*

	6	Select the correct screen mesh for given projects, considering composition, mesh count, diameter, weave, and percentage of open area.
	7	Identify and select the proper squeegee and flood bar for a screen-printed project, considering composition, profile, flex, length, angle, and pressure.
Materials	8	Utilize various substrates for screen printing. *Examples: papers, boards, plastics, industrial films, glass, ceramics*
	9	Select and use various stencil systems for screen printing to produce products on different substrates. *Examples: direct emulsions, capillary films, indirect films, knife-cut films*
	10	Select the inks for use in various screen printing projects and explain why they are chosen for each situation. *Examples: graphic inks, textile inks, industrial inks*
Finishing	11	Identify and use various drying methods and equipment for screen printing projects. *Examples: heated dryers, flash-curing, UV reactors*
	11a	Employ a variety of finishing processes, including folding, cutting, punching, slitting, and lamination.
Cost Analysis	12	Calculate the cost, selling price, and profit margin of a screen printing project, including equipment, materials, and labor.

Technical Theatre I

Course Credit	1.0
Grade Levels	9-12
Prerequisites	Media Production Foundations

Technical Theatre I provides an opportunity for students to explore the technical areas of theatre which establish the place, time, and mood of the production and add to the audience's understanding and enjoyment. Topics covered are history and culture, censorship and copyright, safety and rigging, theatre spaces, production staff roles, collaboration, and techniques (audio, lighting, digital set pieces). The ethical use of artificial intelligence is woven throughout the course of study.

Career and Technical Student Organizations are integral, co-curricular components of each career and technical education course. These organizations enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and access opportunities for personal and professional growth. Students in the Arts, A-V Technology, and Communications cluster affiliate with SkillsUSA.

Foundational standards, shown in the table below, are an important part of every course. Through these standards, students learn and apply safety concepts; explore career opportunities and requirements; practice the skills needed to succeed in the workplace; take advantage of leadership, teamwork, and personal growth opportunities afforded by Career and Technical Student Organizations; and learn and practice essential digital skills. The foundational standards are to be incorporated throughout the course.

Each foundational standard completes the stem *"**Students will**..."*

Foundational Standards	
	1. Incorporate safety procedures in handling, operating, and maintaining tools and machinery; handling materials; utilizing personal protective equipment; maintaining a safe work area; and handling hazardous materials and forces.
	2. Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork.
	3. Explore the range of careers available in the field and investigate their educational requirements and

	demonstrate job-seeking skills including resume-writing and interviewing. 4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway. 5. Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

TECHNICAL THEATRE I
CONTENT STANDARDS

Each content standard completes the stem *"**Students will**..."*

History and Culture	1	Research and share information on advances in technical aspects of theatre arts from various cultures and historical periods. *Examples: types of venues, audio and lighting technology from various time periods*
Ethical and Legal Issues	2	Identify and explain ethical and legal practices for engaging with and using theatrical resources and source materials. *Example: use of copyrighted materials and materials in the public domain*
	3	Explain and justify ethical decisions related to the use of artificial intelligence in theatre.
Safety	4	Describe and follow theatre safety procedures required by local regulations, including requirements regarding rigging, electrical equipment, and use of fire-retardant materials. *Examples: fire safety, building codes*
Theatre Spaces	5	Describe the different spaces within a theatre, indicating the purposes and specific design requirements for each. *Examples: stage type, backstage, scene shop, storage, front of house, orchestra pit*

	5a	Create a layout of a theatre space, including required elements for the space. *Example: Create a plan for an efficient, functional scene shop, including storage and work areas.*
Production Staff	6	Compare and contrast roles and responsibilities of the director and other technical production personnel. *Examples: assistant directors, technical director, lighting director, audio director, set designer, costumer, make-up artist*
	7	Identify and explain the basic elements and collaborative procedures involved in production design to support the technical aspects of the script. *Examples: basic knowledge of terminology for the different production areas, communication etiquette, research and script analysis, director's concept*
Sound and Lighting	8	Identify and describe various settings and techniques of audio equipment used in theatre productions. *Examples: various sound boards for special effects settings, placement of microphones for optimum sound effects, frequencies*
	8a	Create an audio plan for a given scene. *Example: Design sound effect cues for a scene that takes place in a storm.*
	9	Identify, select, and explain specific techniques and special effects lighting used in theatre productions based on the capabilities and characteristics of various lighting instruments.
	9a	Create a lighting plot for a given scene. *Example: Design general and special effects lighting for a night scene featuring lightning.*
Set Design	10	Identify and explain techniques of graphic design used with digital and traditional set pieces. *Example: interaction of digital backdrops and traditional movable set pieces*
	10a	Create a graphic design to be used with digital and traditional set pieces for a given scene. *Example: Design a digital backdrop that shows perspective in outdoor scenes.*

Technical Theatre II

Course Credit	1.0
Grade Levels	10-12
Prerequisites	Technical Theatre I

Technical Theatre II extends the content of technical Theatre I by providing students with opportunities to create and apply the technical aspects of theatre which establish the place, time, and mood of the production. Topics covered are stage management, set construction, rigging, audio, lighting, digital set pieces, set striking, properties, costuming, and sound.

Career and Technical Student Organizations are integral, co-curricular components of each career and technical education course. These organizations enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and access opportunities for personal and professional growth. Students in the Arts, A-V Technology, and Communications cluster affiliate with SkillsUSA.

Foundational standards, shown in the table below, are an important part of every course. Through these standards, students learn and apply safety concepts; explore career opportunities and requirements; practice the skills needed to succeed in the workplace; take advantage of leadership, teamwork, and personal growth opportunities afforded by Career and Technical Student Organizations; and learn and practice essential digital skills. The foundational standards are to be incorporated throughout the course.

Each foundational standard completes the stem *"**Students will**..."*

Foundational Standards	
	1. Incorporate safety procedures in handling, operating, and maintaining tools and machinery; handling materials; utilizing personal protective equipment; maintaining a safe work area; and handling hazardous materials and forces.
	2. Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork.
	3. Explore the range of careers available in the field and investigate their educational requirements and demonstrate job-seeking skills including resume-writing and interviewing.
	4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to

		the industry pathway.
	5.	Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.
	6.	<<Add Foundational Standard here>>

TECHNICAL THEATRE II
CONTENT STANDARDS

Please refer to "Directions for Interpreting Standards" on page 9.

Each content standard completes the stem *"**Students will**..."*

Stage Management	1	Communicate and collaborate across all technical theatre departments, including director and conductor, crew, rigging, audio, and lighting.
Set Construction	2	Identify the common components of stage sets. *Examples: proscenium, main curtain, backdrop, ground row scenery, teasers, legs, wings, stairs*
	2a	Create a series of drawings of a set for use in set construction, including preliminary sketches, detailed images, measurements, and computer-aided design and scale drawings.
	2b	Construct set pieces. *Examples: ground row scenery, stairs, platforms*
Rigging	3	Use and explain theatre rigging techniques and rigging theory. *Examples: dead hung, counterweight, motorized*

Sound and Lighting	4	Assemble and operate audio systems to enhance sound mix and balance. *Examples: mics, special sound effects, music*
	5	Create lighting diagrams to indicate the equipment and settings needed to produce desired effects.
	6	Assemble and operate lighting instruments according to a lighting diagram to enhance visual components of production. *Examples: aim and focus instruments, install gels and gobos*
	6a	Follow and enforce safety procedures required for production lighting. *Examples: lighting equipment safety manuals, safety procedures for the different venues, OSHA and local regulations*
Digital Set Pieces	7	Create and apply complex digital graphics for set pieces in various locations to enhance a theatrical production. *Example: digital backdrop upstage center, digital panel downstage right*
Properties and Costuming	8	Demonstrate techniques to create costumes for a theatre production, including pattern development, hand sewing, and machine sewing.
	9	Operate costume shop equipment to produce, alter, and maintain costume garments to industry standards.
	10	Construct theatrical props using a variety of materials and modify purchased props for a theatrical production. *Examples: papier-mâché, foam, plaster, wood*
Set Strike	11	Deconstruct, clear, recycle, and store set pieces to be repurposed for future productions.
	11a	Clean and sanitize the front and back of the house.

BIBLIOGRAPHY

Advanced Placement Studio Art 2D Portfolio: Photography. Highland High School, Lancaster, CA, [n.d.]

Alabama Course of Study: Career and Technical Education. Alabama State Department

*"*Animation History Timeline.*" Animation Career Review.*, n.d.. Retrieved

Arts, A-V Technology and Communications. Michigan Department of Education 2011.

Beck, J., and C. Smith. *The Art of Pixar: The Complete Color Scripts and Select Art from 25 Years of Animation*. Chronicle Books, 2011.

BYU Theatre Education Database. Brigham Young University, Department of Theatre and Media Arts, 2023. /tedb.byu.edu/?page_id=1200

Cohen, K., and E. R. Larkins. *Directing Animation*. Routledge, 2019.

Commercial Photography. Academic Standards Content Framework. Indiana Department of Education, 2014.
www.in.gov/doe/files/cf-arts-commercial_photography_7-7-14.pdf

Eisner, M. *Comics and Sequential Art: Principles and Practices from the Legendary Cartoonist.* W.W. Norton & Co., 2008.

Fine Arts Standards of Learning: Technical Theatre.Virginia Department of Education, 2020.
www.doe.virginia.gov/home/showpublisheddocument/2040/637949943158400000

Goldberg, H. *Character Animation Crash Course!* Silman-James Press, 2014.

Hershey, Christian J. "Teaching Technical Theater: Learning, not just Doing," Virginia Commonwealth University, 2015.

scholarscompass.vcu.edu/cgi/viewcontent.cgi?article=4996&context=etd

Kopcok, Darina. 10 Key Steps For Writing Your Photography Business Plan. Expert Photography, 2023. expertphotography.com/photography-business-plan/

Lasseter, J., and S. Daly. *The Art of Toy Story 3*. Chronicle Books, 2009.

Nevada Career and Technical Education Curriculum Framework, 2015. doe.nv.gov/uploadedFiles/ndedoenvgov/content/CTE/Programs/InfoMediaTech/CurriculumFramework/Graphic-Design-CFWK-ADA.pdf

Nevada Career and Technical Education Model Curriculum Standards. Nevada Department of Education, 2022. doe.nv.gov/uploadedFiles/ndedoenvgov/content/CTE/Programs/Arts_AV_Technology_andCommunicationsDocs/Standards/Graphic-Design-STDS-2023.pdf

Photography Curriculum Framework. Nevada Department of Education, 2015. doe.nv.gov/uploadedFiles/ndedoenvgov/content/CTE/Programs/InfoMediaTech/CurriculumFramework/Photography-CFWK-ADA.pdf

Pilling, J. *A Reader in Animation Studies*. John Libbey Publishing, 1997.

Precision Exams. Career and Technical Education Assessments, n.d.. Retrieved from www.precisionexams.com/

Ricart, Judit Ruiz. 10 Photography Careers You Can Actually Live Off Of. Expert Photography, 2019. www.wix.com/blog/photography/photography-careers

Technical Theatre (NY) [Assessment]. State of New York NOCTI Technical Theatre, 2007.

"10 Ideas to Cultivate Brand Transparency." The Branding Journal, 2023. www.thebrandingjournal.com/

Texas Essential Knowledge and Skills for Fine Arts; Technical Theatre *tea.texas.gov/sites/default/files/P2015_Technical%20Theatre%20I.pdf*

Theatre and Film: Georgia Standards of Excellence. Georgia Department of Education, 2018. *www.georgiastandards.org/Georgia-Standards/Documents/9-12-Theatre-and-Film-Georgia-Standards.pdf*

Thomas, F., and O. Johnston. *The Illusion of Life: Disney Animation*. Disney Editions, 1995.

Wells, Paul, and Samantha Moore. *The Fundamentals of Animation*. 2nd ed., Bloomsbury Visual Arts, 2017.

Williams, R.. *The Animator's Survival Kit*. Faber & Faber, 2009.

Wolfe, Lahle. "The Most Important Skills for Networking Successfully." The Balance, 2022. *www.thebalancemoney.com/valuable-networking-skills-3515560*

Yan, H. *The Animator's Eye: Adding Life to Animation with Timing, Layout, Design, Color and Sound*. Focal Press, 2009.