Career and Technical Education TEKS Review Draft Recommendations

Texas Essential Knowledge and Skills (TEKS) for Career and Technical Education Draft Recommendations
Arts, Audio Visual Technology, and Communications Career Cluster
Programs of Study: Digital Communications; Graphic Design and Interactive Media
Region 4 Education Service Center

The document reflects the draft recommendations to the career and technical education (CTE) Texas Essential Knowledge and Skills (TEKS) that have been recommended by subject matter experts facilitated by Region 4 Education Service Center for: **Digital Communications and Graphic Design and Interactive Media programs of study.**

Proposed additions and new courses are shown in green font with underline (additions). Proposed deletions are shown in red font with strikethroughs (~~deletions~~). Text proposed to be moved from its current student expectation is shown in purple italicized font with strikethrough (~~*moved text*~~) and is shown in the proposed new location in purple italicized font with underlines (*new text location*). Numbering for the knowledge and skills statements in the document will be finalized when the proposal is prepared to file with the *Texas Register*.

Comments in the right-hand column provide explanations for the proposed changes. The following notations may be used as part of the explanations.

Abbreviation	Description
KS	refers to knowledge and skills statement
SE	refers to student expectation

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§130.XX AI Video Editing (One Credit), Adopted 202X.		
	TEKS with edits	Work Group Comments/Rationale
(a)	Implementation. The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.	
(1)	No later than August 31, 2025, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.	
(2)	If the commissioner makes the determination that instructional materials funding has been made available, this section shall be implemented beginning with the 2025-2026 school year and apply to the 2025-2026 and subsequent school years.	
(3)	If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.	
(b)	General requirements. This course is recommended for students in Grades 9-10. Students shall be awarded one credit for successful completion of this course.	
(c)	Introduction.	
(1)	Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.	
(2)	The Arts, Audio Visual Technology and Communications career cluster focus on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content, including visual and performing arts and design, journalism, and entertainment services.	

(3)	AI Video Editing is designed to introduce students to the basics of artificial intelligence (AI) and its applications in video editing. Students will learn about machine learning, deep learning, and computer vision, and how these technologies can be used to generate unique effects, create virtual backgrounds, and even generate original video content. The course will also address the ethical implications of using AI in video editing and provide guidance on responsible usage.	
(4)	Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.	
(5)	Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.	
(d)	Knowledge and skills.	
(1)	The student demonstrates an understanding of how AI technology is integrated into the video editing process. The student is expected to:	
(A)	define AI video editing;	
(B)	explain the significance of AI video editing in the modern media production industry;	A. Positive Impact on varieties of roles within the Production Industry B. Negative Impact on varieties of roles within the Production Industry
(C)	research and describe the evolution of AI tools in video editing and their impact on the industry;	
(D)	identify significant AI video editing software and platforms used by professionals; and	
(E)	explain the impact of the significant AI video editing software and platforms used by professionals.	
(2)	The student examines ethical implications of using AI in video editing. The student is expected to:	
(A)	identify ethical concerns related to AI-generated content, including deepfakes and content authenticity;	
(B)	analyze the impact of AI on the creative processes and on the role of the human editor;	
(C)	analyze the potential impacts of AI on the creative process, including its influence on human judgment, job market implications, its role in ideation and streamlining workflows, addressing biases, concerns about a loss of individuality and intuition, and the legal and ethical implications related to copyright and plagiarism; and	

(D)	evaluate and apply the best practices for ethical AI use in video editing and content creation.	
(3)	The student collaborates on video projects using AI tools for project management and team coordination. The student is expected to:	
(A)	use AI-powered collaboration platforms to share video projects to track progress with task management, design cycle, and iterative testing;	
(B)	use AI-driven project management strategies, including task management, workflow processes, process improvement, and progress tracking, to manage project timelines; and	
(C)	discuss ways that AI can aid in collaborative editing sessions such merging and refining multiple editors' contributions, cloud-based editing, version controls, shared timelines and data storage, and live annotation.	
(4)	The student applies foundational video editing skills using AI-enhanced tools. The student is expected to:	
(A)	edit video clips using basic editing techniques, including trimming, cutting, and arranging;	
(B)	automate routine editing tasks and enhance productivity using AI tools, including speech-to-text transcriptions, object tracking with videos, and facial recognition;	
(C)	apply transition effects such as cross dissolve, cut, jump cut, iris, wipe, push, fade in, and fade out to achieve appropriate visual aesthetics; and	
(D)	apply AI-powered filtered effects, including clarendon, juno, valencia, gingham, skin softening of babydoll, and lark, to achieve appropriate visual aesthetics.	
(5)	The student uses AI tools for color correction and grading in video projects. The student is expected to:	
(A)	explain the principles of color grading, including temperature, contrast, saturation, exposure, color palette, white balance, and curves, and describe the impact of color grading on the visual tone of a video;	
(B)	use AI-powered color correction presets to ensure consistent color grading across scenes within a video project; and	
(C)	combine and customize pre-made AI color grading presets to achieve a specific artistic vision and aesthetic.	
(6)	The student creates and enhances video projects using AI-assisted audio editing. The student is expected to:	

(A)	use AI tools to refine audio tracks using AI tools to remove background noise and enhance clarity;	A. Noise Reduction B. Dialogue Enhancements C. Audio Restoration
(B)	synchronize audio with video footage using AI-based time alignment tools such as AI-powered mastering and mixing automation; and	AI-Powered mastering B. AI-powered mixing automation
(C)	use AI to generate sound effects and music that enhance the mood and atmosphere of your video content, including melody, rhythm, and genre.	
(7)	The student uses AI to add special effects to their video projects. The student is expected to:	
(A)	create and animate text, logos, and other graphic elements using AI tools in animated videos;	
(B)	enhance video content using AI visual effects such as scenes and settings, generative adversarial networks, and various rendering processes;	
(C)	describe and experiment with AI-driven modeling and animation techniques such as 3D models from images or sketches, composite facial expressions, face swaps, and special effects; and	
(D)	generate complex landscapes and environments using AI algorithms.	
(8)	The student uses AI tools to enhance storytelling in video projects. The student is expected to:	
(A)	explain the role of narrative structure in video editing and how AI can assist in storytelling;	Script Writing B. Story-board composition C. AI Prompts towards Storytelling, imagery, etc.
(B)	use AI-powered tools to analyze and enhance the pacing and flow of video narratives, including scene detection, cut detection, speech-to-text conversion, and dialogue timing; and	
(C)	create compelling video stories by leveraging AI suggestions for scene transitions, pacing, and content organization.	
(9)	The student uses AI for creating project-based videos. The student is expected to:	
(A)	use AI to create imagery, text, and sound to produce a video that connects to the real-world;	

(B)	develop a video using AI to form multi-camera edits and complex visual effects such as automated key framing, motion tracking, audio synchronization, and narrative dialogue; and	
(C)	generate ways to use AI to research, identify, and edit virtual reality (VR) and augmented reality (AR) content.	
(10)	The student integrates AI tools into the post-production workflow for efficiency and quality. The student is expected to:	
(A)	create a streamlined post-production process using AI tools for adaptation, exporting, and finalizing video projects;	
(B)	explain how AI can optimize post-production workflows, including live streaming of video production and real-time video editing; and	
(C)	evaluate the quality of AI-enhanced final products and make necessary adjustments to meet professional standards.	
(11)	The student explores career opportunities in AI-enhanced professions, including AI video editing and production. The student is expected to:	
(A)	research and identify various career paths in the AI video editing field;	AI Engineer B. AI Researcher C. Ethics D. etc.
(B)	develop a professional portfolio showcasing AI-enhanced video projects; and	
(C)	research and analyze industry trends and advancements in AI and video editing to identify future career opportunities.	Generative Models B. Workflow Optimization C. Bias Mitigation
(12)	The student engages in continuous learning to keep up with advancements in AI video editing. The student is expected to:	
(A)	research and describe the latest features and developments in AI video editing software;	Proficiency in AI Frameworks and Tools

(B)	describe ways to continue education in new AI editing techniques and tools; and	Knowledge of Neural Networks B. Machine Learning C. Programming Languages
(C)	discuss the importance of developing a growth mindset related to emerging AI technologies.	Data Sets and Visualizations B. Natural Language Processing C. Computer Vision

§130.XX AI Virtual Production (One Credit), Adopted 202X.		
	TEKS with edits	Work Group Comments/Rationale
(a)	Implementation. The provisions of this section shall be implemented by school districts beginning with the 2025-2026 school year.	
(1)	No later than August 31, 2025, the commissioner of education shall determine whether instructional materials funding has been made available to Texas public schools for materials that cover the essential knowledge and skills identified in this section.	
(2)	If the commissioner makes the determination that instructional materials funding has been made available, this section shall be implemented beginning with the 2025-2026 school year and apply to the 2025-2026 and subsequent school years.	
(3)	If the commissioner does not make the determination that instructional materials funding has been made available under this subsection, the commissioner shall determine no later than August 31 of each subsequent school year whether instructional materials funding has been made available. If the commissioner determines that instructional materials funding has been made available, the commissioner shall notify the State Board of Education and school districts that this section shall be implemented for the following school year.	
(b)	General requirements. This course is recommended for students in Grades 9-12. Students shall be awarded one credit for successful completion of this course.	
(c)	Introduction.	
(1)	Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.	
(2)	The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content, including visual and performing arts and design, journalism, and entertainment services.	
(3)	This course is designed to equip students with the essential skills and knowledge to harness the power of artificial intelligence (AI) and revolutionize your video editing workflow. Students will learn how to use AI-powered tools to streamline tasks, enhance creativity, and produce professional-quality videos with ease.	

(4)	Students are encouraged to participate in extended learning experiences such as AI video editing skills, create a portfolio showcasing your work, participate in online communities, attend industry events, take on freelance projects, explore advanced AI techniques, collaborate with others, teach others, and continuously learn and experiment.	
(5)	Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.	
(d)	Knowledge and skills.	
(1)	The student demonstrates an understanding of the fundamental concepts and applications of virtual production. The student is expected to:	Need to add employability skills.
(A)	define virtual production and explain its significance in modern media production;	Virtual production combines computer-generated imagery with real-world elements to create immersive and visually stunning scenes for film and television.
(B)	explore the evolution of virtual production technologies and their impact on the film, television, and gaming industries; and	History of Virtual Production – stop-motion, animatronics, CGI in film, virtual studios, current technology.
(C)	identify key tools and software used in virtual production such as real-time rendering engines and virtual cameras.	Unreal Engine, SceneForge Studio, Unity, Maya, Houdini, MotionBuilder, OBS Studio, etc.
(2)	The student understands the stages of the virtual production pipeline. The student is expected to:	1. Preproduction 2. Visualization 3. Virtual Production 4. Post-Production
(A)	describe the preproduction, visualization, virtual production, and postproduction stages specific to virtual production;	Visualization: Asset Creation, Virtual Scouting, Stunt Visualization, Pre Visualization, Tech Visualizations. Principal Photography: Green Screen, Led Wall ICVFX, Simulcam

(B)	outline the roles and responsibilities of team members involved in each stage of the virtual production process; and	Art Director: Designs the visual style and aesthetic of the virtual environment. 3D Artists: Create 3D models, textures, and animations for the virtual world. Technical Director: Manages the technical aspects of the production, including hardware, software, and workflow. Virtual Environment Operator: Controls the virtual environment and ensures it aligns with the live-action footage. Compositor: Combines live-action footage with computer-generated elements. Editor: Assembles the final video sequence and adds sound effects, music, and titles.
(C)	explain the integration of traditional and virtual elements within a production pipeline.	Hybrid Sets: Combining physical sets with virtual backgrounds to create unique and dynamic environments. Motion Capture: Using motion capture technology to capture actor performances and transfer them to digital characters. Real-Time Rendering: Combining live-action footage with real-time generated graphics to create seamless composites.
(3)	The student applies knowledge of real-time rendering techniques in virtual production. The student is expected to:	
(A)	create photorealistic renders and effects to demonstrate the use of real-time rendering engines;	Photorealistic renders can include environments, special effects, props, etc.
(B)	integrate visual effects, lighting, and textures into virtual environments in real-time; and	
(C)	evaluate the performance of real-time rendering systems and optimize them for specific production needs.	

(4)	The student demonstrates proficiency in motion capture and performance capture techniques. The student is expected to:	
(A)	set up and calibrate motion capture systems for use in virtual production;	
(B)	capture, process, and apply motion data to digital characters and assets; and	
(C)	analyze the integration of live-action performances with virtual characters in a production.	
(5)	The student creates and designs virtual environments for use in production. The student is expected to:	
(A)	design and construct virtual sets using 3-D modeling software and digital assets;	
(B)	apply principles of scale, perspective, and composition to virtual set design; and	
(C)	incorporate real-world elements into virtual sets using techniques such as photogrammetry and 360-degree photography.	
(6)	The student explores the use of virtual cameras and camera tracking systems in virtual production. The student is expected to:	
(A)	operate virtual cameras within a 3-D environment, simulating real-world camera movements;	
(B)	use camera tracking systems to synchronize physical and virtual camera movements; and	
(C)	experiment with different cinematographic techniques such as framing, depth of field, and camera angles, in a virtual setting.	
(7)	The student integrates interactive media into virtual production projects. The student is expected to:	
(A)	develop interactive elements that allow for real-time audience engagement within virtual environments;	
(B)	explore the use of augmented reality (AR) and virtual reality (VR) in enhancing the immersive experience of a production; and	
(C)	create interactive interfaces and controls for virtual production systems.	

(8)	The student collaborates effectively within a virtual production team. The student is expected to:	
(A)	participate in collaborative virtual production projects, contributing to different aspects of the production process;	
(B)	use project management tools and software to coordinate tasks, deadlines, and resources in a virtual production environment; and	
(C)	demonstrate effective communication and problem-solving skills within a team setting.	
(9)	The student applies postproduction techniques specific to virtual production. The student is expected to:	
(A)	edit and composite virtual and live-action footage to create seamless final products;	
(B)	use color grading, sound design, and visual effects to enhance the quality of virtual production projects; and	
(C)	evaluate the final production against project goals and industry standards, making adjustments as necessary.	
(10)	The student examines the legal and ethical considerations of virtual production. The student is expected to:	
(A)	identify intellectual property issues related to the use of digital assets and virtual environments;	
(B)	discuss the ethical implications of using virtual characters and deepfake technology in media production; and	
(C)	explore the legal responsibilities related to data security and privacy in virtual production workflows.	
(11)	The student creates a professional portfolio showcasing skills and projects in virtual production. The student is expected to:	
(A)	select and refine virtual production projects to include in a professional portfolio;	
(B)	create a digital portfolio that demonstrates proficiency in various aspects of virtual production, including real-time rendering, motion capture, and virtual set design; and	
(C)	present the portfolio in a professional manner suitable for job applications or further education opportunities.	

(12)	The student explores career opportunities in virtual production and its related fields. The student is expected to:	
(A)	research emerging career paths in virtual production such as virtual set designer, motion capture technician, and real-time rendering artist;	
(B)	identify the education and skills required for different roles within the virtual production industry; and	
(C)	develop a career plan that includes short- and long-term goals for entering the virtual production field.	