# Scope & Sequence

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| Course Name: Digital Audio Technology I**TSDS PEIMS Code:** 13009950 | **Course Credit:** 1.0**Course Requirements:** This course is recommended for students in Grades 9-12. **Prerequisites:** None.**Recommended Prerequisites:** Principles of Arts, Audio/Video Technology, and Communications or Digital and Interactive Media (DIM) or both Audio/Video Production l and Audio/Video Production l Lab. |
| **Course Description:** Digital Audio Technology I was designed to provide students interested in audio production careers such as audio for radio and television broadcasting, audio for video and film, audio for animation and game design, music production and live sound, and additional opportunities and skill sets. Digital Audio Technology I does not replace Audio/Video Production courses but is recommended as a single credit, co-curricular course with an audio production technical emphasis. This course can also be paired with Digital and Interactive Media. Students will be expected to develop an understanding of the audio industry with a technical emphasis on production and critical-listening skills. |
| **NOTE:** This is a suggested scope and sequence for the course content. This content will work with any textbook or instructional materials. If locally adapted, make sure all TEKS are covered. |
| **Total Number of Periods****Total Number of Minutes****Total Number of Hours** | 175 Periods.7,875 Minutes.131.25 Hours.\* | \*Schedule calculations based on 175/180 calendar days. For 0.5 credit courses, schedule is calculated out of 88/90 days. Scope and sequence allows additional time for guest speakers, student presentations, field trips, remediation, extended learning activities, etc.  |
| **Unit Number, Title, and Brief Description** | **# of Class Periods\***(assumes 45-minute periods)Total minutes per unit | **TEKS Covered****130.91. (c) Knowledge and Skills** |
| **Unit 1: History and Evolution of Digital Audio Production**Students will understand and summarize the history and evolution of the audio production industry. Additionally, students will describe how technology is impacting the industry, explain current practices, and predict future trends. The culminating activity for the unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion. | 10 periods450 minutes |  (6) The student understands the evolution and current trends of the audio industry. The student is expected to:(A) summarize the history and evolution of the audio production industry; and(B) analyze the current trends of the audio production industry.(12) The student develops a basic understanding of the audio production industry. The student is expected to:(C) understand the history, current practices, and future trends for audio production careers such as radio and television broadcasting, video and film, animation and game design, music production, and live sound; |
| **Unit 2: Application of ELA and Math in Audio/Video Projects**Strong ELA and Math skills are critical components of high–level audio technology productions. Skills learned will be applied as projects and presentations are created and shared. The culminating activity for the unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion. | 10 periods450 minutes | (2) The student applies academic knowledge and skills in audio and video projects. The student is expected to:(A) apply English language arts knowledge and skills by demonstrating use of content, technical concepts, and vocabulary; using correct grammar, punctuation, and terminology to write and edit documents; and composing and editing copy for a variety of written documents such as scripts, captions, schedules, reports, and manuals; and(B) apply mathematics knowledge and skills in invoicing and time-based mathematics by demonstrating knowledge of arithmetic operations and applying measurement to solve problems. |
| **Unit 3: Ethical Decision Making**In this unit, students will apply the standards of ethical conduct, the legal requirements of ethical behavior, and liabilities associated for failure to meet those expectations. Students will discuss the constructs of confidentiality, copyright laws and will analyze the impact of the audio production industry on society. The culminating activity for this unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion. | 15 periods675 minutes |  (9) The student applies ethical decision making and complies with laws and regulations regarding use of technology in audio production. The student is expected to:(A) demonstrate an understanding of ethical conduct related to interacting with others and providing proper credit for ideas;(B) model respect for intellectual property;(C) analyze the ethical impact of the audio production industry on society;(D) understand and comply with all copyright and fair use laws; and(E) understand and comply with all applicable rules and regulations of the associated governing authority such as the Federal Communications Commission (FCC), local school district, or client. |
| **Unit 4: Technology Applications, Problem Solving, and Efficiency**Technology applications are key to the efficient design and delivery of digital audio technology productions. In this unit, students will use advanced critical thinking and problem–solving skills independently and in groups to increase the quality of their presentations and projects. Additionally, students will utilize time–management skills and planning to increase the efficiency of the design and delivery processes for completing assigned projects. The culminating activity for this unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion. | 15 periods675 minutes | (5) The student applies technology applications and processes. The student is expected to:(A) use technology applications such as social media, email, Internet, writing and publishing, presentation, and spreadsheet or database applications for audio production projects; and(B) use processes such as personal information management, file management, and file sharing.(4) The student understands and examines problem-solving methods. The student is expected to:(A) employ critical-thinking skills independently and in groups; and(B) employ interpersonal skills in groups to solve problems.(11) The student applies technical skills for efficiency. The student is expected to:(A) employ planning and time-management skills to complete work tasks; and(B) use technology to enhance productivity. |
| **Unit 5:** **Professional Communications**Students will build upon their prior knowledge of sound communications techniques and utilize skills previously learned to communicate clearly —both orally and in writing. Students will appropriately adapt the language used to deliver formal and informal presentations and will work to exhibit public relations skills as required. As the basis for formal and informal presentations. The culminating activity for this unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion. | 10 periods450 minutes | (3) The student understands professional communications strategies. The student is expected to:(A) adapt language such as structure and style for audience, purpose, situation, and intent;(B) organize oral and written information;(C) interpret and communicate information, data, and observations;(D) deliver formal and informal presentations;(E) apply active listening skills;(F) listen to and speak with diverse individuals; and(G) exhibit public relations skills. |
| **Unit 6:** **Safety**Students will learn and follow all emergency procedures. Additionally, they will learn the personal and workplace safety rules and regulations as appropriate in the digital animation technology field. The culminating activity for this unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion. | 10 periods450 minutes | (7) The student applies safety regulations. The student is expected to:(A) implement personal and workplace safety rules and regulations; and(B) follow emergency procedures. |
| **Unit 7:** **Employability and Career Development**In this unit, students will demonstrate the positive work behaviors and personal qualities needed to secure employment and to stay employed. Additionally, students will seek out and participate in training and education that leads to certification and/or employment. Students will complete job applications, create resumes, develop cover/application letters and demonstrate effective interview skills. The culminating activity for this unit will be the creation of a career portfolio that includes, work experience, licenses held, certifications obtained, and samples of student work. | 15 periods675 minutes | (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:(A) participate in training, education, or certification for employment;(B) demonstrate professional standards and personal qualities needed to be employable such as oral and written communication, leadership, teamwork, appreciation for diversity, conflict management, customer service, work ethic, and adaptability;(C) demonstrate skills related to seeking and applying for employment; and(D) create a resume and cover letter/letter of interest to document information such as work experiences, licenses, certifications, and work samples.(10) The student develops career-building characteristics. The student is expected to demonstrate skills in evaluating and comparing employment opportunities. |
| **Unit 8:** **Leadership**This 20-period unit enables the student to identify, develop, and employ the characteristics of leadership. Additionally, students will learn to work in teams, to solve conflicts as they arise in meetings and various activities and, when appropriate, participate in mentoring activities. The culminating activity for this unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion. | 10 periods450 minutes | (8) The student develops leadership characteristics. The student is expected to:(A) employ leadership skills;(B) employ teamwork and conflict-management skills;(C) participate in meetings; and(D) participate in mentoring activities. |
| **Unit 9: Audio Production and Audio Production Elements**Students will understand the roles of various industry audio professionals and identify the various careers and job opportunities in the audio production industry. Additionally, students will define and appropriately use industry terminology and develop and demonstrate an understanding of audio production elements. The skills and knowledge gained through this unit will serve as background information for all subsequent units and will inform all aspects of production.  | 20 periods900 minutes | (12) The student develops a basic understanding of the audio production industry. The student is expected to:(A) identify various career pathways and job opportunities in the audio production industry;(B) understand the roles of various industry audio professionals such as producers, editors, engineers, and talent as they apply to specific audio production career pathways; (D) describe how the changing technology is impacting the audio industry; and(E) define and appropriately use terminology associated with the audio production industry.(14) The student develops an understanding of audio production elements. The student is expected to:(A) identify key elements (stems) of an audio production such as dialogue, sound effects, music, and environmental;(B) understand how music styles, sound effects, or vocal performance can create a specific emotional impact;(C) identify key technical elements of audio production for effect such as panning, ducking, track doubling, retiming, and auto-tune; and(D) understand and identify digital audio codecs and compression standards such as Waveform Audio (WAV), MP3, and advanced audio coding (AAC). |
| **Unit 10: Audio Production Equipment**Students will develop and demonstrate a basic understanding of the equipment necessary to deliver a quality digital audio production. The skills and knowledge gained through this unit will serve as background information for all subsequent units and will inform all aspects of production. | 20 periods900 minutes | (13) The student develops a basic understanding of audio production equipment. The student is expected to:(A) understand types and application of microphones such as dynamic, condenser, ribbon, pressure zone (PZM), universal serial bus (USB), and wireless;(B) understand pick-up patterns and application of microphones such as cardioid, omni-directional, and figure eight;(C) understand the operation and application of audio consoles (mixers) such as broadcast consoles, live sound consoles, and recording consoles;(D) understand the operation and application of audio processing equipment or software such as equalizer (EQ), dynamic compressor, noise gate, band pass filters, reverb, and delays;(E) understand the operation and application of analog and digital audio recording devices such as handheld recorders, USB interfaces, multi-track devices, and digital audio workstations (DAW);(F) understand the application of audio interconnect cabling and connectors such as XLR balanced, TRS balanced, TS unbalanced, RCA, ¼" TRS/TS, and mini TRS/TS;(G) understand the operation and application of additional audio hardware such as musical instrument digital interface (MIDI) controllers, direct boxes, audio splitters, and analog to digital converters as needed; and(H) understand the types and applications of audio speakers such as broadcast monitors, studio monitors, and live sound speakers. |
| **Unit 11**: **Audio Assets**In this unit, students will identify key elements and apply writing skills to develop and deliver an effective audio script. Additionally, students will create and/or obtain the audio assets required for productions through various means. The skills and knowledge gained through this unit will serve as background information for all subsequent units and will inform all aspects of production. | 20 periods900 minutes | (15) The student identifies, creates, and obtains required assets for audio production projects. The student is expected to:(A) identify key elements required in audio scripts;(B) apply writing skills to develop an audio script; and(C) create or obtain required audio assets through recording, synthesis, or permissions. |
| **Unit 12:** **Audio Editing**Students will develop and demonstrate an understanding of audio editing and a Digital Audio Workstation (DAW). The skills and knowledge gained through this unit will serve as background information for all subsequent units and will inform all aspects of production. | 20 periods900 minutes | (16) The student develops a basic understanding of a DAW and audio editing. The student is expected to:(A) understand how to record or import various types of audio content such as audio files, MIDI data or automation;(B) understand types and application of audio track such as instrument track, master track, auxiliary track, and global attributes track;(C) understand audio editing tools and transitions such as cut, trim, and fade;(D) understand the use and application of software plug-ins such as EQ, dynamic compression, reverb, and software instruments;(E) understand the use and application of software automation; and(F) understand the various delivery formats such as disk, broadcast, cellular, portable device, electronic, and online delivery. |