STRANDS AND STANDARDS

DIGITAL AUDIO 1

Course Description

Digital Audio 1 is an introductory course designed to provide students with a comprehensive understanding of the fundamentals of digital audio production. In this course, students will explore the principles, techniques, and tools used in creating and manipulating digital sound.

Through a combination of hands-on projects, lectures, and demonstrations, students will learn the basic elements of sound theory, including pitch, amplitude, frequency, and waveforms. They will also be introduced to industry-standard digital audio workstations (DAWs).

Throughout the course, students will develop essential skills in recording, editing, mixing, and mastering audio tracks. They will learn how to use microphones effectively, set up recording sessions, and capture high-quality sound in various environments. Additionally, students will gain experience in editing audio clips, applying effects and plugins, and arranging tracks to create cohesive compositions.

Digital Audio 1 will explore the creative possibilities of sound manipulation. This course serves as an excellent introduction for students interested in pursuing further studies or careers in fields such as music producer, sound designer, game audio engineer, and other multimedia productions.

Intended Grade Level	10-12
Units of Credit	0.5
Core Code	40.01.00.00.040
Concurrent Enrollment Core Code	40.01.00.13.040
Prerequisite	N/A
Skill Certification Test Number	816
Skill Certification Cut Score	**67%**
Test Weight	0.5
License Area of Concentration	CTE and/or Secondary Education 6-12
Required Endorsement(s)	
Endorsement 1	Audio Video Production
Endorsement 2	Multimedia

STRAND 1

Students will explore audio related job titles and different types of audio production.

Standard 1

Job titles and employment opportunities.

- Producer
  - Studio Producer
  - Music Producer
- Front of House (FOH) Engineer
- Recording Engineer
- Mixing Engineer
- Monitor Engineer
- Theatrical Engineer
- Mastering Engineer
- Sound Designer
- Foley Artist
- Boom Operator
- Etc.

Standard 2

Students will understand types of audio production.

- Live music performance
- Recording a studio album (studio production) or EP
- Podcasts
- Post-Production
- Film/TV sound
- Audio Book
- Foley
- Etc.

STRAND 2

Students will explore the basics of sound and acoustics.

Standard 1

The basics of sound and acoustics.

- Frequency (Pitch) - The speed of the vibration measured in Hertz (cycles per second)
- Amplitude (Amplitude) - The amount of energy in the waveform often measured in decibels
- Wave length- The distance between peaks in a waveform
- Sound treatment - Adding or removing material to affect the sound in a room
- Sound Proofing - Prevents sound from passing out of or into the room
- Harmonics (Timbre) - The characteristic tone colour of an instrument or voice

STRAND 3

Students will demonstrate understanding of signal path and basic mixing and recording techniques.

Standard 1

Signal Path; students will demonstrate proper equipment setup for recording audio.

- Inputs/Outputs
- Preamp
  - Mic Level
  - Line Level
- Mixing Boards
- DAW
- Sample Rate
- Bit Depth

Standard 2

Students will demonstrate audio mixing using a mixing board or DAW (Digital Audio Workstation).

- Gain
- Compression
- Panning
- Clipping
- EQ
- Distortion

STRAND 4

Students will demonstrate proper setup and use of recording equipment.

Standard 1

Identify various types of audio cables and connectors.

- ¼”
- ⅛”
- MIDI/USB
- XLR
- TRS/TS
- Balanced
- Unbalanced

Standard 2

Students will Identify common microphone diaphragm types.

- Dynamic
- Condenser
  - Phantom Power

Standard 3

Microphone Techniques: Students will identify proper microphone placement for the following scenarios:

- Vocal
  - Dialogue
  - Pop Filter
- Sound Effects
- Stereo Miking
- 3 to 1 Rule
- Musical Vocal

STRAND 5

Students should collaborate and produce different types of audio.

Standard 1

Publication Selection – Students will identify the proper distribution outlet that is best suited for their content.

- Spotify
- Apple Music
- YouTube
- SoundCloud
- Social Media
- Etc.

Standard 2

Based on classroom resources, students should explore different types of audio productions.

- Recording studio album or EP
- Live music concert
- Music production
- Episodic podcast
- Series of related video blogs
- TV/Film sound design

STRAND 6

Students will be able to understand and obey basic copyright laws applicable to all media.

Standard 1

Define the laws around media recording and production.

- Define copyright
- Define Fair Use
- Define Public Domain

STRAND 7

Students will understand the importance of career readiness skills as it relates to participating in either TSA, SkillsUSA, Utah Broadcast Awards, or any other related CTSO.

Standard 1

Understand the basics of a job related to audio.

- Participate in a CTSO competitive event related to audio
- Watch a documentary on someone who succeeded in this industry and develop a three- to-five-minute presentation
- Interview someone who works in the field you would like to work in. Develop a three-to- five-minute presentation
- Job shadow a person who works in the field you would like to work in. Develop a written report about your experience

Performance Skills:

Students can record clean audio with basic equipment, avoid clipping, perform basic editing, and export high quality audio for the chosen area of focus.

Workplace Skills:

The following workplace skills should be discussed and modeled throughout the strands and standards of the course:

- Communication
- Teamwork
- Critical and Creative Thinking
- Problem Solving
- Dependability
- Legal Requirements and Expectations

Skill Certification Test Points by Strand

Test Name	Test #	Number of Test Points by Strand										Total Points	Total Questions
		1	2	3	4	5	6	7	8	9	10		
Digital Audio 1	816	7	6	9	9	0	2					33	27