

Digital Audio 1

Exam Information	Description
Exam number 816 Items 25 National Career Cluster Arts, A/V Technology, & Communication Certification available Yes	The Digital Audio 1 industry certification exam assesses a comprehensive understanding of the fundamentals of digital audio production. Learners demonstrate knowledge of principles, techniques, and tools for creating and manipulating digital sound. The exam covers the basic elements of sound theory, including pitch, amplitude, frequency, and waveforms, and the use of industry-standard digital audio workstations (DAWs). Essential knowledge of recording, editing, mixing, and mastering audio tracks are evaluated, including effective use of microphones, setting up recording sessions, and capturing high-quality sound in various environments. Learners' knowledge of editing audio clips, applying effects and plugins, and arranging tracks to create cohesive compositions are also assessed. Additionally, the exam tests knowledge of the creative possibilities of sound manipulation, providing a foundation for those interested in careers in this field, such as music producer, sound designer, game audio engineer, and other multimedia productions.

Exam Blueprint and Performance Skills

Standard	Percentage of exam score
1. Types Of Audio Production	20%
2. Basics Of Sound & Acoustics	17%
3. Mixing & Recording Techniques	29%
4. Equipment Setup & Use	29%
5. Collaboration & Production	0%

6. Copyright Laws	6%
7. Copyright Laws	0%

*Includes performance skill evaluation

Standard 1 - Types Of Audio Production

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

Objective 1 Job titles and employment opportunities.

1. Producer
 - a. Studio Producer
 - b. Music Producer
2. Front of House (FOH) Engineer
3. Recording Engineer
4. Mixing Engineer
5. Monitor Engineer
6. Theatrical Engineer
7. Mastering Engineer
8. Sound Designer
9. Foley Artist
10. Boom Operator
11. Etc.

Objective 2 Candidates will understand types of audio production.

1. Live music performance
2. Recording a studio album (studio production) or EP
3. Podcasts
4. Post-Production
5. Film/TV sound
6. Audio Book
7. Foley
8. Etc.

Optional: Standard performance evaluations on the final page of this document

Standard 2 - Basics Of Sound & Acoustics

Candidates will explore the basics of sound and acoustics.

Objective 1 The basics of sounds and acoustics.

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

Standard 3 - Mixing & Recording Techniques

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

Objective 1 Signal Path; candidates will demonstrate proper equipment setup for recording audio.

1. Inputs/Outputs
2. Preamp
 - a. Mic Level
 - b. Line Level
3. Mixing Boards
 - a. DAW
 - b. Sample Rate
 - c. Bit Depth

Objective 2 Candidates will demonstrate audio mixing using a mixing board or DAW (Digital Audio Workstation).

1. Gain
2. Compression
3. Panning
4. Clipping
5. EQ
6. Distortion

Standard 4 - Equipment Setup & Use

Candidates will demonstrate proper setup and use of recording equipment.

Objective 1 Identify various types of audio cables and connectors.

1. ¼" 2.
2. ⅛"
3. MIDI/USB
4. XLR
5. TRS/TS
6. Balanced
7. Unbalanced

Objective 2 Candidates will Identify common microphone diaphragm types.

1. Dynamic
2. Condenser
 - a. Phantom Power

Objective 3 Microphone Techniques: Candidates will identify proper microphone placement for the following scenarios:

1. Vocal
 - a. Dialogue
 - b. Pop Filter
2. Sound Effects
3. Stereo Miking
4. 3 to 1 Rule
5. Musical Vocal

Standard 5 - Collaboration & Production

Candidates should collaborate and produce different types of audio.

Objective 1 Publication Selection – Candidates will identify the proper distribution outlet that is best suited for their content.

1. Spotify
2. Apple Music
3. YouTube
4. SoundCloud

5. Social Media
6. Etc.

Objective 2 Based on classroom resources, candidates should explore different types of audio productions.

1. Recording studio album or EP
2. Live music concert
3. Music production
4. Episodic podcast
5. Series of related video blogs
6. TV/Film sound design

Standard 6 - Copyright Laws

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

Objective 1 Define the laws around media recording and production.

1. Define copyright
2. Define Fair Use
3. Define Public Domain

Standard 7 - Career Readiness

Candidates 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.

Objective 1 Understand the basics of a job related to audio.

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

Performance Skills Evaluation

Exam name: Digital Audio 1

Candidate Name: _____

Performance assessments may be completed and evaluated any time before the certification is issued. The following performance skills can be used in connection with the associated standards and exam. The evaluator will function as the subject matter expert to determine if the candidate meets the skills requirements with a Yes/No for passing.

Performance Skills

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

Pass:

Evaluator Name:

Date:
