

Objective 105.02

Understand digital audio production methods, software, and hardware.



Course Weight : 6%



ExplorNet CareerTech

from The Centers for Quality Teaching and Learning





Audio Production Methods

Three Phases for Producing Digital audio :

1. Pre-Production

define parameters of the audio project and make preliminary decisions

2. Production

record audio from original source

3. Post-Production

*use an audio editing software to edit the recorded audio;
optimize the audio output file for specific client needs*



1. Pre-Production

- ✓ Determine the overall **purpose** of the project
- ✓ Define the intended **target audience**
- ✓ Consult with the client and **write a script** that effectively conveys the intended message to the audience



1. Pre-Production (continued)

- ✓ Determine specific **hardware** needs
 - Computer
 - Appropriate Microphone
 - Audio Recording Device
 - Audio Board / Mixer (if necessary)



1. Pre-Production (continued)

✓ Determine specific **software** needs

- **Audio Editing Software**

captures audio from the original source and imports it into the editing software

manipulates audio clips and adds the desired tracks and effects to convey the intended message



2. Production

- ✓ **Record** audio from original source
- ✓ **Maintain audio levels** throughout recording to ensure quality
- ✓ **Save** recorded audio



2. Production (continued)

Audio Recording Terms : (continued)

- **Track**
separate layers of audio used to record sources individually
- **V.U. Meter (Volume Units Meter)**
a visual representation of the audio volume level; used to ensure all audio clips recorded are at the same level and not too loud
- **Master Level**
used to control the overall output volume of an audio recording



2. Production (continued)

Audio Recording Terms : (continued)

- Audio Panning

when audio is recorded through separate channels (left or right)

- Over-Modulation

sound interference that occurs during recording when audio levels are too high and causes the signal to distort or lose clarity



3. Post-Production

- ✓ **Import / Capture** audio clips into software
- ✓ **Edit the audio clips** according to the script and add desired effects and/or background audio to convey the intended message to the audience
- ✓ **Export** the audio into a portable format



3. Post-Production (continued)

Audio Editing Terms :

- **Clip**
a section of recorded sound used to create an audio production
- **Trim / Splice**
starting and stopping audio clips at a defined point in the recording
- **Fade**
a gradual change of volume used to change between clips of audio
Fade Up (In) and Fade Down (Out) : gradually increasing or decreasing the volume of an audio clip
Crossfade : a gradual volume transition from one audio clip to another



3. Post-Production (continued)

Audio Editing Terms : (continued)

- **Adjusting Track Levels**

increasing or decreasing the volume of individual tracks to ensure all tracks are audible and blend well together

- **Loop**

used to make a particular section of audio repeat

- **Audio Effects**

adjustments to audio clips used to change the original sound in order to reach the desired outcome



3. Post-Production (continued)

Audio Editing Terms : (continued)

- **Background Audio**

music and/or sounds used together with a voiceover (usually at a lower volume) to add interest and depth to an audio production

- **Voiceover**

a voice recording used to convey a message to the audience



3. Post-Production (continued)

Optimize the audio output file for specific client needs, including :

- ✓ Primary use of audio clip
- ✓ File size requirements
- ✓ File format requirements



3. Post-Production (continued)

Common Audio File Formats :

.MP3

- most popular audio file format
- standard for downloading and storing music files
- commonly used for streaming over the Internet

.WAV

- standard file format for PCs
- native sound format within the Windows® environment

.WMA

- uses Windows® Media Player for audio playback
- Microsoft® format used for streaming audio files



3. Post-Production (continued)

Common Audio File Formats : (continued)

.MIDI

- Musical Instrument Digital Interface
- standard file format used by digital instruments (keyboards, guitars, etc.)
- contains information about musical notes

.AAC / .M4A

- standard file format for Apple® Computers
- higher quality sound than .MP3
- standard file format used by mobile devices

