Objective 205

Apply production methods to plan and create advanced digital media audio projects.

Course Weight : 15%

ExplorNet CareerTech
from *The Centers for Quality Teaching and Learning*

Objectives are broken down into three sub-objectives : pre-production, production, and post-production. **Click the blue text for each sub-objective to jump to that particular part of the presentation.** The course weight for each sub-objective is written in green.

205.01 - Understand advanced **pre-production** (7%) methods for digital audio.

205.02 - Understand advanced **production** (4%) methods for digital audio.

205.03 - Understand advanced **post-production** (4%) methods for digital audio.

©ExplorNet/The Centers for Quality Teaching and Learning

Clicking this home icon will return to this slide

205.01

Course Weight : (7%)

Understand advanced **pre-production** methods for digital audio.

planning with the client to make preliminary decisions about the project; writing a script; choosing the correct microphones and cables

Meet with the client to create a **project plan** :

✓ Determine the **purpose** of the project

✓ Define a **target audience**

✓ Set overall **goals** of the audio project

✓ Agree on **deadlines** for phases of the project

✓ Create a **budget** for the project

✓ Decide what **equipment** will be necessary to create the audio project

Script Writing :

Whether the project is a radio advertisement, a recorded voiceover, or a music recording, there will be a script that determines who is performing at what time and what they will say, as well as what other sources of audio will be used and at when.

When writing the script, it is important to **consider the following :**

✓ The **overall goals** of the audio project

✓ The **target audience** of the project

✓ The accepted **vernacular** of the target audience

✓ The **readers** (performers) of the script

Choose appropriate microphone

Depending on the specific type of recording needed, location, and/or performer, there are different types of microphones that have particular characteristics and produce different results.

Choose necessary cables

According to the type of microphone that is chosen, as well as the recording device being used, certain cables are needed to connect all of the equipment correctly and record the original audio as effectively as possible.

A description of different microphone types and cable types are listed on the following slides.

Microphone Types

- Condenser Microphone

✓ requires an outside power source (phantom power)

✓ results in a high quality signal production

✓ commonly used to capture a person's voice or a musical instrument in a studio

Microphone Types (continued)

- Dynamic Microphone

✓ does not require an outside power source

✓ audio signal strengthened by an audio board or other amplifier

✓ commonly used to capture audio during live production

✓ durable microphone

Microphone Types   (continued)

- Lavaliere Microphone

✓ typically attached to the tie or shirt of the user

✓ used by performers on TV or on stage because their small size makes it easy to hide

✓ produce a relatively good sound quality

Microphone Types (continued)

- Shotgun Microphone

✓ usually long and skinny in appearance

✓ commonly found on high-end video cameras for capturing sound from the recording

✓ also referred to as a "boom" microphone

Audio Cable Types

- **-** RCA Cable

  ✓ very common audio (and video) cable used in professional and consumer settings alike

  ✓ color coded system makes it easy to distinguish left and right channels of audio

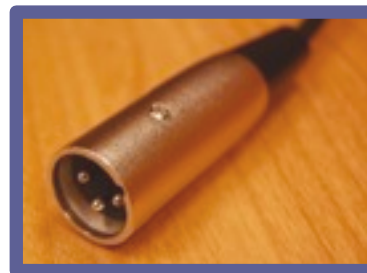# Audio Cable Types   (continued)

- Mini Cable

✓ found on virtually every consumer audio device

✓ relatively bad audio quality

✓ number of rings around the plug indicates if cable is mono (one ring) or stereo (two rings)

Audio Cable Types (continued)

- XLR Cable

✓ the best audio quality, making it common in the professional industry

✓ has a push-button locking system that keeps it from easily being unplugged

✓ very often used for microphones

Audio Cable Types (continued)

– 1/4" (Phono) Cable

- ✓ widely used to connect speakers, amplifiers, and guitars

- ✓ similar to mini plug with the rings indicating the number of channels

- ✓ better audio quality when compared to the mini

205.02

Course Weight : (4%)

Understand advanced **production** methods for digital audio.

recording the audio from the original source

Advanced Audio Production Terms

In audio production, **the production phase consists only of recording audio with a recording device (no editing).** Basic concepts of audio recording were covered in Digital Media (Level 1).

In order to best meet the needs of the client and to convey the intended message of an audio production to the audience most efficiently, more advanced terminology about recording audio and **microphone types** are necessary.

Microphone Pickup Patterns

Depending on the type of recording that is desired and the location of the performers, different microphone pickup patterns record the sound in varying methods.
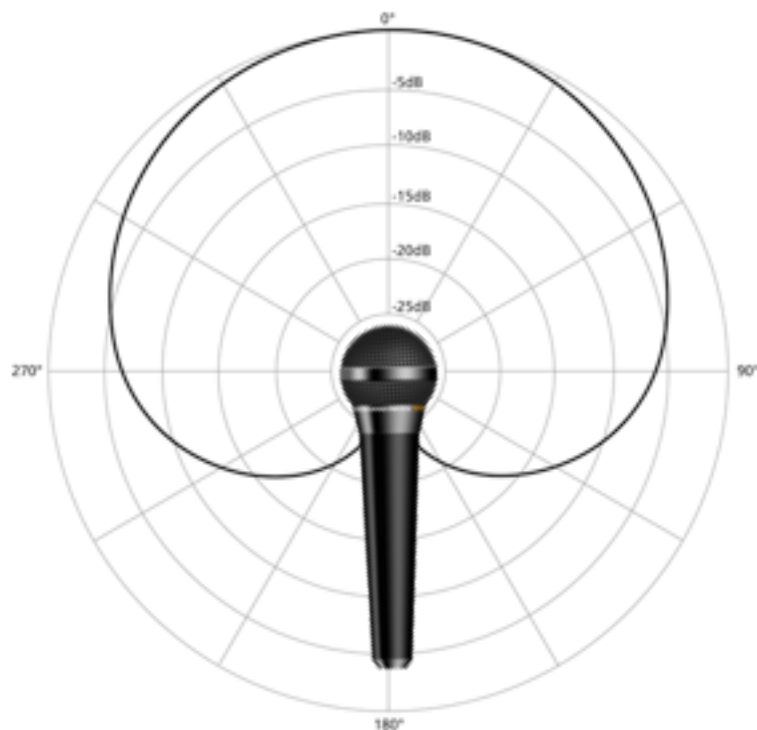
- Omnidirectional Pickup Pattern

✓ captures sound from all directions

✓ useful for capturing sound from all parts of a room

✓ commonly found on consumer video cameras

©ExplorNet/The Centers for Quality Teaching and Learning

Microphone Pickup Patterns (continued)

- Cardiod Pickup Pattern

✓ heart shaped

✓ audio sources in the front of the microphone and very close to the sides are captured

✓ very little sound is picked up from behind the microphone

Microphone Pickup Patterns (continued)

- Bi-Directional Pickup Pattern

✓ captures sound from in front of the microphone and behind it

✓ very little sound is picked up from the sides

✓ good microphone to use when recording a two-person conversation

©ExplorNet/The Centers for Quality Teaching and Learning

Microphone Pickup Patterns (continued)

- Shotgun Pickup Pattern
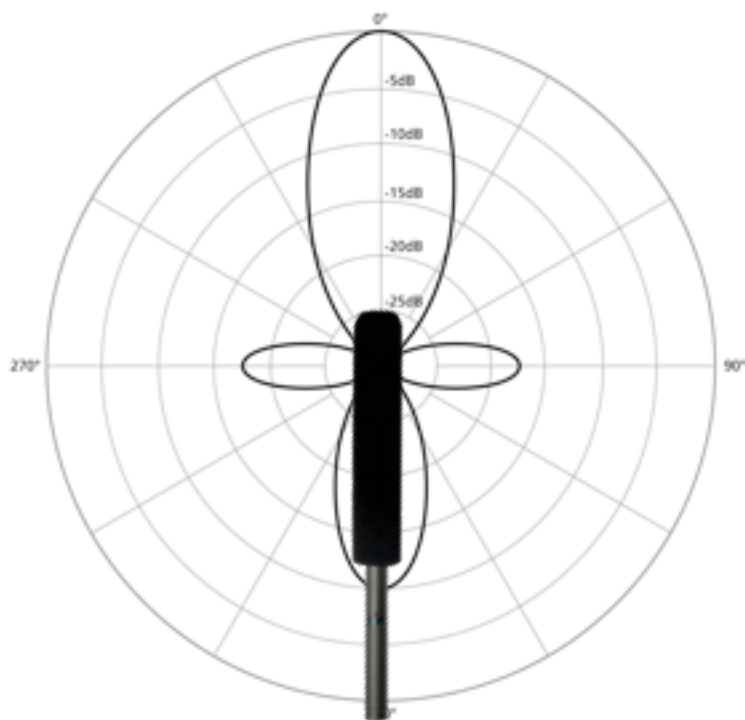
✓ captures sound from a pointed direction in a narrow range

✓ useful for recording sound from long distances away (during video shoots, in stadiums, recording wildlife, etc.)

✓ very little sound is picked up from the sides or behind the microphone

Setup the microphone and use the appropriate cables to connect to a recording device

Monitor the levels of the audio while the recording is taking place

✓ **Watch the V.U. meter** to make sure the audio is at the appropriate level throughout the entire recording

✓ **Adjust the volume of the recording to keep the signal from clipping** (producing a signal that is too loud for the amplifier to handle)

205.03

Course Weight : (4%)

Understand advanced **post-production** methods for digital audio.

editing the original audio clips in a software program; optimizing the output audio file based on specific client needs

©ExplorNet/The Centers for Quality Teaching and Learning

Advanced Audio Editing Terms

Basic concepts digital audio (characteristics of digital audio, editing terms, and file formats) were covered in Digital Media (Level 1).

In order to best meet the needs of the client and to accomplish the purpose of the audio project, more advanced terminology and editing techniques are necessary.

- Scrubbing

  clicking and dragging the playhead of an audio project through the timeline to get to a particular section; the user is able to hear the audio while scrubbing, making navigation of the project quicker and more efficient

Advanced Audio Editing Terms (continued)

- ## Ducking
  an editing feature that lowers the volume of a particular track when another audio source is present; commonly used for voiceovers with background music

- ## Equalization
  the process of adjusting the different levels (bass, treble, midtones, etc.) in an audio recording in order to produce the best sound

- ## Audio Gain
  adding gain to audio will increase the level of the output signal using power from an amplifier; increases the voltage output of the signal

- ## Normalization
  the process of making sure all of the audio levels throughout a project are at a consistent level and sound good together

Redesign the audio project based on client feedback (if necessary)

Preview the final version

✓ Listen to the audio levels and make sure they are consistent and do not over modulate

✓ Make sure the finalized audio project matches the script and accomplishes the overall goals

Optimize the audio file based on specific client needs

✓ File format requirements

audio files use a software called a **codec** that compresses the original file and then decompress it to play it; if an audio project is exported using a particular codec, the client must have the same one to be able to utilize the file

✓ File size requirements

the process of downloading an audio file or streaming it over the Internet uses **bandwidth** - the rate of transfer of files over a network; the bigger the file size, the longer it takes to download or begin streaming

✓ File name requirements

Submit the finalized version(s) of the digital audio to the client