COURSE OUTLINE

Course Number: CMN 153
Course Title: Digital Audio Production I
Credits: 3

Catalog description:
Students practice and develop audio production techniques used in broadcasting and other commercial applications. Theory of audio fundamentals combines with lab exploration of digital editing, digital multi-tracking, digital music creation, synchronizing audio with video. Students write and/or produce commercials, documentaries and short soundtracks for video and other entertainment venues.

General Education Category: Not GenEd
Course coordinator: Mitchell Canter
(609) 570-3755
canterm@mccc.edu

Required texts & Other materials:

High Quality, over-the-ear headphones.

Course Student Learning Outcomes (SLO):
Upon successful completion of this course the student will be able to:

1. Operate basic studio equipment and virtual devices that behave as studio equipment including:
   a. Microphones
   b. Audio consoles
   c. Audio Effects
      i. Reverb/Echo
      ii. Compressor/Limiter
      iii. Noise Gate
      iv. Phaser/Flanger

MCCC Course Outline; Approved by the Curriculum Committee Fall 2021
2. Apply theoretical concepts of sound and sound production using technology & digital editing workstations (DAWs)          [ILG #4, 10, 11]
3. Effectively edit audio waveforms and sequence audio files          [ILG #4]
4. Produce radio spots, imagers and news packages          [ILG #1, 4, 6, 10]
5. Produce a synchronized mix down of a live musical performance using multiple tracks of audio          [ILG #4, 6]
6. Identify visual “cues” and synch audio to a video sequence          [ILG #4, 6, 11]
7. Demonstrate a “discriminating ear” for audio quality and detail          [ILG #4, 6, 11]

Course-specific Institutional Learning Goals (ILG):

Institutional Learning Goal 1. Written and Oral Communication in English. Students will communicate effectively in both speech and writing.
Institutional Learning Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.
Institutional Learning Goal 6. Humanities. Students will analyze works in the fields of art, music, or theater; literature; philosophy and/or religious studies; and/or will gain competence in the use of a foreign language.
Institutional Learning Goal 10. Information Literacy: Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.
Institutional Learning Goal 11. Critical Thinking: Students will use critical thinking skills understand, analyze, or apply information or solve problems.

Units of study in detail – Unit Student Learning Outcomes:

Unit I The Physics of Sound & Acoustic Environments [SLO #2]

The student will be able to…
• Explain the principles of transduction.
• Demonstrate understanding of how ears, microphones, speakers and other devices function as transducers.

Unit II Basic Editing [SLO #3, 4]

The student will be able to…
• Perform basic digital audio editing using computer software
• Demonstrate understanding of timing and what makes a “good edit.”

Unit III Microphones & Loudspeakers [SLO #2]

The student will be able to…
• Identify different categorizations of microphones
• Analyze frequency response curves to make qualitative judgments
• Analyze polar pattern diagrams to make application judgments.
• Identify different categories of loudspeakers
Unit IV  Multi-track Sequencing  [SLO# 3, 4]

The student will be able to...
- Assemble several distinct audio tracks in audio editing software.
- Apply changes in audio levels to achieve a balanced end product.

Unit V  Consoles, Recording & Signal Processing  [SLO #1, 2]

The student will be able to...
- Trace an audio signals path through various audio components
- Identify the differences between on-air and production consoles
- Describe the differences between analog and digital recording

Unit VI  News Production & Interviewing for Actualities  [SLO #1, 3, 4, 7]

The student will be able to...
- Demonstrate ability to use AP Newsdesk
- Conduct an interview on a news topic
- Edit sound bites from interview audio
- Construct a long-form interview program

Unit VII  Composing music from loops  [SLO #2, 4]

The student will be able to...
- Demonstrate ability to build a song from the building blocks of music loops using multi-track software.
- Sequence and integrate music created with software into a production.

Unit VIII  Producing Dialog  [SLO #1, 3, 4]

The student will be able to...
- Construct a radio commercial using multiple voices.
- Demonstrate understanding of depth and presence of recorded subjects with the use of specific microphone placement.
- Sequence a final product by integrating recorded voices, sound effects and/or music.
- Listen to & objectively critique the work of others
**Unit IX  Sound Design**  
[SLO #1, 2, 3, 6, 7]

*The student will be able to…*
- Describe the different applications of Sound Design
- Design an audio sequence to work with a video sequence
- Define the difference between analytical and critical listening.

**Unit X  Multi-track Music Production**  
[SLO #3, 5, 7]

*The student will be able to…*
- Sequence and mixdown several tracks of audio into a song.
- Effectively use effects in a mixdown.
- Listen to & objectively critique the work of others

**Evaluation of student learning:**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points per Assignment</th>
<th>Grade Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic production eval/critique (Digital Audio Editing)</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>Digital editing w/multiple tracks</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Digital editing w/multiple tracks &amp; multiple clips</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Digital editing “news package”</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>Commercial production w/Sound effects &amp; music)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Adv. multi-track recording session (live band)</td>
<td>100</td>
<td>30</td>
</tr>
<tr>
<td>Adv. multi-track post-production (mixdown of band tracks)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Sound Design: Audio/Video Sync production</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Unit Exams</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>Written Homework /Blackboard Quizzes</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>Final Exam</td>
<td>100</td>
<td>10</td>
</tr>
</tbody>
</table>

**Note that if your major is: Audio Production, Communication: New Media, Digital Film, Television or Entertainment Technology, you must pass this course with a 'C' or better in order to advance to the next scheduled course.**