Music Production 2

CTE Industry Sector: Arts, Media, And Entertainment

Career Pathway: B. Performing Arts Pathway

Career Pathway Occupations: Audio Engineer, Recording Engineer, Composer, Sound Technician, Live Sound Technician, Musician

CBEDS Code: 7235

Course Software: Cubase 11 Pro, Pro Tools

Course Description:
Students will deepen their knowledge of Music Production through building onto their foundation of music theory by exploring: advanced scales (chromatic, pentatonic, etc), scale modes, seventh chords, note types. They will embark on learning more advanced DAW (Digital Audio Workstation) functions and explore the mastering process as they build on their MIDI skills with implementing DAW functions. Students will have a choice of creating a lengthened song or an EP as their final first semester projects. More complex hardware and recording setups will be explored in semester 2, building from the basic knowledge they have obtained in Semester 1. Students will complete a more populated online portfolio with work they have completed from Music Production 1 and 2.

Course Hours: Monday-Friday 7:30-9:30 AM

Course Goals: Create an online portfolio featuring all projects from Music Production 1, in addition to 2. Understanding of Music Theory: the ability to correctly use advanced audio hardware/ technology; and applying skills to record live vocals and instruments: song composition using initial DAW concepts: and proper mixing & mastering of all tracks in a song

Overall Student Objectives: Gain practical experience of different aspects in standard music/audio industry, industry practices, and technology.

Course Standards

Industry Sector Anchor Standards

1.0 Academics

- 1.0 Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment.

2.0 Communications

- 2.3 Interpret verbal and nonverbal communications and respond appropriately.
- 2.5 Communicate information and ideas effectively to multiple audiences using a variety of media and formats.

3.0 Career Planning and Management

- 3.4 Research the scope of career opportunities available and the requirements for education, training, certification, and licensure.

4.0 Technology

- 4.1 Use electronic reference materials to gather information and produce products and services.
- 4.3 Use information and communication technologies to synthesize, summarize, compare, and contrast information from multiple sources.

5.0 Problem Solving and Critical Thinking

- 5.1 Identify and ask significant questions that clarify various points of view to solve problems.
- 5.2 Solve predictable and unpredictable work-related problems using various types of reasoning (inductive, deductive) as appropriate.

6.0 Health and Safety

- 6.3 Use health and safety practices for storing, cleaning, and maintaining tools, equipment, and supplies.
- 6.4 Practice personal safety when lifting, bending, or moving equipment and supplies.
- 6.6 Maintain a safe and healthful working environment.

7.0 Responsibility and Flexibility

- 7.3 Understand the need to adapt to changing and varied roles and responsibilities.
- 7.4 Practice time management and efficiency to fulfill responsibilities.

8.0 Ethics and Legal Responsibilities

- 8.4 Explain the importance of personal integrity, confidentiality, and ethical behavior in the workplace.
- 8.6 Adhere to copyright and intellectual property laws and regulations and use and appropriately cite proprietary information.

9.0 Leadership and Teamwork

- 9.2 Identify the characteristics of successful teams, including leadership, cooperation, collaboration, and effective decision-making skills as applied in groups, teams, and career technical student organization activities.
- 9.7 Participate in interactive teamwork to solve real Arts, Media, and Entertainment sector issues and problems.

10.0 Technical Knowledge and Skills

- 10.1 Interpret and explain terminology and practices specific to the Arts, Media, and Entertainment sector.
- 10.2 Comply with the rules, regulations, and expectations of all aspects of the Arts, Media, and Entertainment sector.
- 10.3 Construct projects and products specific to the Arts, Media, and Entertainment sector requirements and expectations.

11.0 Demonstration and Application

- 11.1 Utilize work-based/workplace learning experiences to demonstrate and expand upon knowledge and skills gained during classroom instruction and laboratory practices specific to the Arts, Media, and Entertainment sector program of study.
- 11.2 Demonstrate proficiency in a career technical pathway that leads to certification, licensure, and/or continued learning at the postsecondary level.

- 11.5 Create a portfolio, or similar collection of work, that offers evidence through assessment and evaluation of skills and knowledge competency as contained in the anchor standards, pathway standards, and performance indicators.

Career Pathway Standards:

Performing Arts Pathway

B2.0 Read, listen to, deconstruct, and analyze peer and professional music using the elements and terminology of music.

- B2.1 Read a full instrument or vocal score with a direct industry connection (Film score, Philharmonic score, commercial underscore).
- B2.2 Describe how the elements of music are used.
- B2.4 Sight-read music accurately and expressively.
- B2.6 Analyze and describe the use of musical elements in a given professional work that makes it unique, interesting, and expressive.

B5.0 Apply vocal and/or instrumental skill and knowledge to perform a varied repertoire of music appropriate to music industry application.

- B5.1 Sing or play a repertoire of musical literature representing various genres, styles, and cultures with expression and technical accuracy.
- B5.1 Sing or play a repertoire of musical literature representing various genres, styles, and cultures with expression and technical accuracy.
- B5.4 Employ a variety of music technology to record, integrate, or modify a live or recorded performance to produce a new artistic product.
- B5.5 Compose music in distinct styles.
- B5.6 Compose and arrange music for various combinations of voice and acoustic and digital/electronic instruments using appropriate ranges and traditional and nontraditional sound sources.

B9.0 Explore the connection between artistic preparation and professional standards and practices

- B9.2 Demonstrate effective knowledge and skills with the audiovisual equipment and technology used in professional performance
- B9.3 Demonstrate entry-level competencies for a career in an artistic or technical field in the theatrical arts
- B9.6 Create a career plan leading to professional performance in one of the performance disciplines

Key Academic Standards from the Academic Alignment Matrix

Language Standards - LS (Standard Area, Grade Level, Standard #)

- 11-12.6. Acquire and accurately use general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression (B1.0-B9.0)

Reading Standards for Literature - RSL (Standard Area, Grade Level, Standard #)

- 11-12.4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics (B4.0, B5.0, B9.0)

- 11-12.7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. ((B4.0, B5.0, B9.0)

Writing Standards - WS (Standard Area, Grade Level, Standard #)

- 11-12.6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information (B1.0-B9.0)

- 11-12.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. (B1.0-B9.0)

- 11-12.9. Draw evidence from literary or informational texts to support analysis, reflection, and research. (B1.0-B9.0)

Engineering, Technology, and the Applications of Science - ETS

- ETS1.A: Defining and Delimiting an Engineering Problem (B1.0-B5.0)

- ETS1.B: Developing Possible Solutions (B1.0-B5.0)

- ETS1.C: Optimizing the Design Solution (B1.0-B5.0)

Links Among Engineering, Technology, Science, and Society

- ETS2.B: Influence of Engineering, Technology, and Science on Society and the Natural World (B2.0-B9.0)

Industry Standards:

Music Theory, Digital Audio Workstations, Recording, Multitrack Recording, Audio/Recording Hardware

Instructional Units:

Unit 1	Intermediate Music Theory/Ear Training	Class Hrs.	15	Lab Hrs.	**15**

Description: Students will build on their foundation of music theory by learning about:

- Scales
  -Chromatic, Pentatonic Scales
  -Scale Modes (Ionian, Dorian, Phrygian, Lydian, Mixolydian, Aeolian, Locrian)
- Note Types
  -Sixteenth, Eighth-Sixteenth, Thirty-Second, Triplets
- Seventh Chords
  -Major, Minor, Half Diminished, Diminished, Dominant
  -Inversions

Through ear training exercises, students will improve auditory skills in identifying new note types and scales:

- Notes
- Scales

Anchor Standards: 1.0, 10.1
Pathway Standards: B2.1, B2.2, B2.4, B2.6
Academic Standards: Language Standard 11-12.6, Reading Standard 11-12.4

Unit 2	Review of Digital Audio Workstations (Basic Controls)	Class Hrs.	5	Lab Hrs.	**5**

Students will review the basic controls of a DAW (Digital Audio Workstation) such as:

- Transport Window (Stop, play, forward, reverse, etc)
  -Cycle (Repeat)
  -Record

- Metronome/Count-In Functions
- Adding Tracks
  -Audio, instrument
- Audio VS Instrument files
- Getting an audio signal into a DAW
  -Instruments/Microphones via Audio Interface
  -Basic Mic/Line inputs

Anchor Standards: 4.1, 4.3, 5.1, 10.1, 10.3
Pathway Standards: B5.4, B5.5, B5.6, B9.3
Academic Standards: Reading Standard 11-12.4, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C, ETS2.B

Unit 3	Digital Audio Workstations (Intermediate Layout and Controls)	Class Hrs.	10	Lab Hrs.	**10**

Students build on Cubase skills by exploring:
- Automations
  -Automation Types (Volume, Pan, Pitch, Velocity, Etc)
  -Adding Automations
  -Touch, Read, Write
  -Automation Panel
- Tool Bar Shortcuts
  -Number Key Shortcuts
- Inspector Panel
  -Track Versions, Chords, Instrument, MIDI Inserts/Modifiers, Quick Controls

Unit 4	Intermediate to VST's (Virtual Instruments)	Class Hrs.	10	Lab Hrs.	**10**

Students will learn about VST components and their effect on their sound such as:

- Envelopes (Attack, Decay, Sustain, Release)
- Oscillators
- LFO

Unit 5	Review of MIDI	Class Hrs.	10	Lab Hrs.	**10**

Review the basics of MIDI learned in part 1, such as:

- Piano Roll
  -Grid layout, recording MIDI, using pencil tool along with other tools to program MIDI notes)
- Drums in MIDI
  -Using Groove Agent to program drums
- Melody Writing using MIDI
  -Chord based, Scale based, Monotone melodies

Anchor Standards: 4.1, 4.3, 5.1, 10.1, 10.3
Pathway Standards: B5.4, B5.5, B5.6, B9.3
Academic Standards: Reading Standard 11-12.4, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C, ETS2.B

Unit 6	Intermediate MIDI	Class Hrs.	15	Lab Hrs.	**15**

Students will use MIDI to explore more complex functions in Cubase such as:

- Piano Roll Editor
  -Controller Selection/Functions
    -Controller Lane
  -Pitch Visibility
- Quantization
  -How Quantization Works
  -Read, Write, Touch, Latch
  -Quantization Panel
  -Scale Assistant (Inspector)
- Chord Pads (Editor)

Anchor Standards: 4.1, 4.3, 5.1, 10.1, 10.3
Pathway Standards: B5.4, B5.5, B5.6, B9.3
Academic Standards: Reading Standard 11-12.4, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C, ETS2.B

Unit 7	Sampling	Class Hrs.	15	Lab Hrs.	**15**

Students will create an original all sampled song to gain practical skills & demonstrate an understanding of:

- How field recorders work
- How to set levels to record a quality sample
- Editing samples in Digital Audio Workstations to create unique sounds

Anchor Standards: 4.1, 4.3, 5.1, 10.1, 10.3
Pathway Standards: B5.4, B5.5, B5.6, B9.3
Academic Standards: Reading Standard 11-12.4, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C, ETS2.B

Unit 8	Lyric Writing	Class Hrs.	10	Lab Hrs.	**10**

Students will be learning about the following in order to write effective and creative lyrics:

- Various types of rhyme schemes (AAAA, ABAB, AABB, etc)
- Different writing devices (Rhyming, repetition, similes, metaphors, etc)

Anchor Standards: 1.0, 10.1
Pathway Standards: B2.1, B2.2, B2.4, B2.6
Academic Standards: Language Standard 11-12.6, Reading Standard 11-12.4

Unit 9	Review Of Mixing	Class Hrs.	5	Lab Hrs.	**5**

Students will be reviewing the basics of the mixing process, such as:

- Creating a mix session
- EQ
  -Additive/Subtractive EQing
- Compression
- Effect Chains
- Leveling

Anchor Standards: 4.1, 4.3, 5.1, 5.2, 7.4, 9.7, 10.1, 10.3
Pathway Standards: B5.4, B5.6, B9.3
Academic Standards: Language Standard 11-12.6, Reading Standards 11-12.4, 11-12.7, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C

Unit 10	Introduction To Mastering	Class Hrs.	15	Lab Hrs.	**15**

After reviewing mixing, students will learn about the basics of the Mastering process, including:

- STEMS
  -What they are
  -Busses with STEMS
  -Exporting STEMS out of a DAW

- Creating a Mastering session
  - Importing STEMS
  -EQ, Compression, etc.

They will use these techniques in order to create their first Mastered Song

Anchor Standards: 4.1, 4.3, 5.1, 5.2, 7.4, 9.7, 10.1, 10.3
Pathway Standards: B5.4, B5.6, B9.3
Academic Standards: Language Standard 11-12.6, Reading Standards 11-12.4, 11-12.7, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C

Unit 11	Review of Audio Technology	Class Hrs.	10	Lab Hrs.	**10**

Students will be reviewing the basics of audio technology, including:

- Input Devices
  -Microphones
- Connectors and Cables
  -XLR, TS, TRS, RCA, MIDI
- Audio Interfaces/Mixers
- Output Devices
  -Speakers

They will create different live and recording set ups to refresh their understanding of the signal flow between these devices
Anchor Standards: 4.1, 4.3, 5.1, 6.3, 6.6, 10.1, 11.1
Pathway Standards: B5.4, B9.3
Academic Standards: Language Standards 11-12.6, 11-12.4, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C

Unit 12	Intermediate Live Sound	Class Hrs.	15	Lab Hrs.	**15**

Students will use their knowledge of audio technology and signal flow to delve deeper into Live Sound. Topics that will be covered include:

- Live Sound Boards
- Signal flow between input and output devices for live performances
- Miking techniques for live performances
- Pre-fader/Post-fader

Anchor Standards:4.1, 4.3, 5.1, 5.2, 7.3, 7.4, 9.2, 9.7, 10.1, 10.3, 11.1, 11.2
Pathway Standards: B2.6, B5.1, B5.4, B5.6, B9.3

Academic Standards: Language Standard 11-12.6, Reading Standards 11-12.4, 11-12.7, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C

Unit 13	Review of Multitrack Recording	Class Hrs.	10	Lab Hrs.	**10**

Students will review components of the recording process and the hierarchy of multitrack recording, including:

- Setting up a proper multitrack recording session
  -Setting up proper routing for input and outputs in Pro Tools
  -Adding tracks (Audio tracks; Stereo vs Mono)
  -Establishing Tempo/Count-In
- Setting up and routing microphones to the proper input in and out of 'the box'
- Record enabling and Input monitoring
- Recording and recording shortcuts

Anchor Standards: 4.1, 4.3, 5.1, 5.2, 7.3, 7.4, 9.2, 9.7, 10.1, 10.3, 11.1, 11.2
Pathway Standards: B2.6, B5.1, B5.4, B5.6, B9.3
Academic Standards: Language Standard 11-12.6, Reading Standards 11-12.4, 11-12.7, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C

Unit 14	Intermediate Multitrack Recording	Class Hrs.	15	Lab Hrs.	**15**

Students will expand on their basic knowledge of multitrack recording with practical experiences of intermediate concepts such as:

- Setting up recording sessions for live (small) bands
- Utilizing miking techniques
- Recording live in Pro Tools

Anchor Standards: 4.1, 4.3, 5.1, 5.2, 7.3, 7.4, 9.2, 9.7, 10.1, 10.3, 11.1, 11.2
Pathway Standards: B2.6, B5.1, B5.4, B5.6, B9.3
Academic Standards: Language Standard 11-12.6, Reading Standards 11-12.4, 11-12.7, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C

Unit 15	Mixing Live Performances	Class Hrs.	10	Lab Hrs.	10

Students will apply mixing techniques to their live performance recordings such as:

- EQ
- Compression
- Effects

Will demonstrate ability to create a final mixed product for their semester final.

Anchor Standards: 4.1, 4.3, 5.1, 5.2, 7.3, 7.4, 9.2, 9.7, 10.1, 10.3, 11.1, 11.2
Pathway Standards: B2.6, B5.1, B5.4, B5.6, B9.3
Academic Standards: Language Standard 11-12.6, Reading Standards 11-12.4, 11-12.7, Engineering, Technology, and the Applications of Science ETS1.A, ETS1.B, ETS1.C

Unit 16	Online Portfolio	Class Hrs.	10	Lab Hrs.	10

Second year students will prepare for job applications by creating an online portfolio consisting of their:

- Music Production 1 Semester 1 Final Project
- Music Production 1 Semester 2 Final Project
- Music Production 2 Semester 1 Final Project
- Music Production 2 Semester 2 Final Project
- Any other outstanding works

While completing their portfolio, they will create a professional resume and cover letter.

They will incorporate all of these elements to create a presentation showcasing their projects and skills to practice important interviewing skills

Anchor Standards: 3.0, 11.1, 11.2, 11.5
Pathway Standards: B9.3, B9.6
Academic Standards: Language Standard 11-12.6, Reading Standard 11-12.7, Writing Standard 11-12.7

Totals	**Class Hrs.**	**360**	**Lab Hrs.**	**180**	**Class Hrs.**	**180**

Unit 1: Upon completion of this unit, the student is able to:

1	Know the difference between Diatonic, Pentatonic, Chromatic Scales, and Scale Modes
2	Understand the different Seventh chords
3	Identify musical notes and scales by ear

Unit 2: Upon completion of this unit, the student is able to:

1	Utilize the basic functions of a Digital Audio Workstation
2	Properly set up a session in a Digital Audio Workstation
3	Understand Basic signal flow between an input device and a DAW

Unit 3: Upon completion of this unit, the student is able to:

1	Understand automations in Music Production
2	Grasp more advanced feature in Cubase

Unit 4: Upon completion of this unit, the student is able to:

1	Understand the importance of Envelopes
2	Manipulate Oscillators in a VST
3	Identify musical notes and scales by ear

Unit 5: Upon completion of this unit, the student is able to:

1	Utilize and comprehend the Piano Roll
2	Program drum tracks with MIDI
3	Compose melodies and chords

Unit 6: Upon completion of this unit, the student is able to:

1	Understand more advanced functions in the Piano Roll
2	Use Quantization

Unit 7: Upon completion of this unit, the student is able to:

1	Execute a field recording
2	Alter field recording samples

Unit 8: Upon completion of this unit, the student is able to:

1	Understand the different rhyme schemes
2	Write lyrics using different writing devices

Unit 9: Upon completion of this unit, the student is able to:

1	Utilize basic mixing techniques to mix a song
2	Understand the importance of EQ and Compression in the Mixing process
3	Identify the difference between Additive and Subtractive EQing

Unit 10: Upon completion of this unit, the student is able to:

1	Export STEMS from a mix session
2	Create a Mastering session from scratch

Unit 11: Upon completion of this unit, the student is able to:

1	Identify different audio hardware and their uses
2	Complete signal flows between audio hardware in order to set up recording and live sound sessions

Unit 12: Upon completion of this unit, the student is able to:

1	Operate a live sound board
2	Set up equipment for a live performance

Unit 13: Upon completion of this unit, the student is able to:

1	Set up and execute a multitrack recording session
2	Understand the importance of routing inputs properly

Unit 14: Upon completion of this unit, the student is able to:

1	Set up recording sessions for small bands
2	Record a small band using Pro Tools

Unit 15: Upon completion of this unit, the student is able to:

1	Make a polished mix of a small band

Unit 16: Upon completion of this unit, the student is able to:

1	Create an online portfolio of all their Music Production projects
2	Develop more presentation skills

Instructional Strategies:
- Group Instruction (Powerpoint/Lecture)
- Audio/Visual (Instructional Videos, Live Demonstrations)
- Group Discussions And Projects

Instructional Materials:
- Individual Computer Stations Per Student
- Diagrams of Audio Hardware
- Audio Hardware (Microphones, Cables & Connectors, Sound Boards, Speakers, Audio Interfaces, etc)

Assessments:
- Written Tests After Each Unit
- Performance Exams Per Necessary Units
- Final Compositions/Recording Sessions

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