Washington Township Public Schools

Office of Curriculum & Instruction

Curriculum Guide Checklist

Course Title: Advanced Music Technology: Electronic Music and Audio Engineering

Submitted By: Frank Appello **Date:** Summer 2014

(Elementary Director or /MS/HS Dept Supervisor please check)

Acceptable	Not Acceptable	N/A		Comments
✓			I. Cover Page (Course Description)	
✓			II. Demonstrable Proficiencies (MS & HS only)	
		✓	III. Scope & Sequence (Elementary only)	
✓			IV. List of Major Units of Study	
✓			V. (For each unit of study include the following A-E)	
✓			A. Unit Overview	
✓			B. Unit Graphic Organizer (Web)	
✓			C. Unit Plan	
✓			1. Topics/Concepts	
✓			2. Critical Content (Students Will Know)	
✓			3. Skill Objectives (Students Will Be Able To)	
✓			4. Instr./Learning Activities and Interdisciplin. Connections	
✓			5. Instructional Resources with Title and Page Number	
✓			6. Technology and 21st Century Skills Integration	
✓			7. NJCCCS with CPI References	
✓			8. Evaluation/Assessment	
		✓	D. Lesson Plan Detail (Elementary Only)	
✓			E. Cross-Content Standards Analysis Page	
✓			F. Curriculum Modification Page Insert	

Approval: Principal: _____ **Curriculum Director:** _____

Asst. Superintendent: _____

Department Supervisor: _____ **Board of Education:** _____

PLEASE NOTE: **A completed and signed checklist MUST accompany each course of study that is submitted for approval.**

Washington Township Public Schools
COURSE OF STUDY – CURRICULUM GUIDE

Course: Advanced Music Technology: Electronic Music and Audio Engineering

Written By: Frank Appello

Under the Direction of: Robert Frampton

Description: This course is for students who wish to undertake advanced study in music technology. Students will build on knowledge and skills gained in Introduction to Music Technology and will continue study in electronic music and audio engineering. Students will concentrate on both areas of study, such as electronic music (including effective use of MIDI and audio effects, programming of hardware MIDI controllers and instruments, principles of synthesis and sound design, and proficiency in the use of an electronic instrument), and audio engineering (including effective use of microphones, mixers, and other audio equipment; listening critically to recorded and live sound; and use of digital audio workstation software to mix, edit, and master audio). All students will collaborate to create major projects integrating multiple fields of study. Students taking this class will gain significant experience in the music technology field.

Joseph A. Vandenberg: *Assistant Superintendent for Curriculum & Instruction*
Barbara E. Marciano: *Director of Elementary Education*
Jack McGee: *Director of Secondary Education*

Written: August 2014
Revised:
BOE Approval: AUGUST 2014

DEMONSTRABLE PROFICIENCIES

COURSE TITLE: Advanced Music Technology: Electronic Music and Audio Engineering

I. CLASSWORK REQUIREMENTS

A. This elective course requires each student to work both as an individual and as a member of a small group as part of the learning process. Students will be responsible for songwriting and recording projects, tests and quizzes, and research projects. While most of the project work will occur during class time, students may occasionally be required to attend performances and recording sessions outside of class time.

II. ATTITUDE & BEHAVIOR

A. Students are expected to approach all aspects of their education in a positive manner. Students who have enrolled in this elective course are doing so because they want to be there. Students are expected to demonstrate those behaviors and attitudes that will promote quality learning and growth, both for the individual and the class.

III. COURSE OBJECTIVES/OVERVIEW

A. COURSE CONTENT

This course will cover electronic music programming and synthesis; audio engineering and sound design; processes of creative production; media and copyright law; and careers in the music industry.

B. SKILLS

Students will advance their ability to use technology in the art of modern music production. They will demonstrate advanced knowledge in a chosen field of music technology. Students will understand how various forms of music technology interact and will collaborate with other students to create advanced projects. Students will develop a basic understanding of the entertainment industry, including careers.

C. APPRECIATION OF CONCEPTS

Students will refine and increase their understanding and appreciation of the tools, techniques, and processes used in modern music production. They will understand and appreciate what is expected of a person who chooses to pursue a career in the music industry, and will be able to make informed choices about their own futures

IV. ATTENDANCE

Attendance: Refer to Board of Education Policy

V. GRADING PROCEDURES

A. 40% Projects, 20% Major Tests, 20% Quizzes, 20% Homework, Classwork, and Participation

MAJOR UNITS OF STUDY

Course Title: Advanced Music Technology: Electronic Music and Audio Engineering

I. Course Introduction / Review of Music Technology Concepts

II. Electronic Music Programming and Synthesis

III. Audio Engineering and Sound Design

IV. Processes of Creative Production

V. Media and Copyright Law

VI. Careers in the Music Industry

UNIT OVERVIEW

Course Title: Advanced Music Technology: Electronic Music and Audio Engineering

Unit #: **UNIT 1 OVERVIEW** **Unit Title:** Course Introduction / Review of Music Tech. Concepts

Unit Description and Objectives:

This unit will provide an introduction to Advanced Music Technology, including grading, expectations, and classroom resources. Students will be reintroduced to the materials to be utilized in class including the classroom computers, software, music and audio recording hardware. Concepts taught in Introduction to Music Technology will be reviewed and refreshed as necessary, as the material covered is vital for continued study.

Essential Questions and Enduring Understandings:

Essential Questions:	Enduring Understandings/Generalizations Students will understand that:	Guiding Questions
1. What did we learn in Introduction to music technology and how can I build on it?	1. Concepts learned in Introduction to Music Technology are relevant and needed for further study in music technology.	1.1 What are the expectations of this course? 1.2 What resources are available in the classroom? 1.3 What skills and concepts do we remember from last year? 1.4 What skills and concepts from last year will need to be reviewed for this year?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Identify course requirements, resources, and expectations:

- Grading
- Musical instruments and resources
- Computer systems

Sub-Concept/Topics:

Sub-Concept/Topics:

Theme:

Course Introduction / Review of Music Tech. Concepts

Conceptual Lens:

Class expectations and review of intro to music tech. concepts.

Sub-Concept/Topics:

Sub-Concept/Topics:

Review skills learned in Introduction to Music Technology:

- Basic music technology concepts
- Music hardware and software
- Basic audio recording and editing
- Musical composition, production, and performance
- Music technology history and literature

Sub-Concept/Topics:

CURRICULUM UNIT PLAN

Course Title/Grade: Advanced Music Technology 10-12

Unit Number/Title: Unit 1 Course Introduction / Review of Music Tech. Concepts

Conceptual Lens: Class expectations and review of intro to music tech. concepts

Appropriate Time Allocation (# of Days)**:** Approx. 3 weeks

Primary Core Content Standards referenced With Cumulative Progress Indicators

1.1.12.B.1-2	1.3.12.B.1-4		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
Identify course requirements, resources, and expectations: • Grading • Musical instruments and resources Computer systems Review skills learned in Introduction to Music Technology: • Basic music technology concepts • Music hardware and software • Basic audio recording and editing • Musical composition, production, and performance • Music technology history and	• The requirements, resources, and expectations for the course. • Basic music technology concepts • How to use music technology hardware and software. • Basic audio recording and engineering skills. • How to create a piece of music incorporating compositional, production and performance skills • Basic history and literature of music technology	• Identify course requirements, resources, and expectations. • Review skills learned in Introduction to Music Technology.	• Presentation, discussion and examples of all topics/concepts in unit. • Identification and creation of individual computer resources such as shared drive And individual document folders • Various teacher created projects and examples based on Introduction to Music Technology • Use of hardware and software based technology • Various examples from previous years • Review project using Propellerhead Reason Music Software and/or Apple Logic Pro	• Teacher-provided supplemental materials • Syllabus • Propellerhead Reason Music Software • Apple Logic Pro • Interactive Projective • Electronic instruments for use/review. • MIDI controllers • Computer systems • Audio hardware/software for use/review. • Projects from previous years for review	• Exercising sound reasoning in understanding • Making complex choices and decisions • Understanding the Interconnections among systems • Identifying and asking significant questions that clarify various points of view and lead to better solutions • Framing, analyzing and synthesizing information in order to solve problem and answer questions • Demonstrating originality and inventiveness in work • Acting on creative ideas to make a tangible and useful contribution to the domain in which innovation occurs • Accessing information efficiently and	RST Craft and Structure #4 WHST Text Types and purposes #1 Presentation of Knowledge and Ideas #4	**Formative Assessments:** • Question and answer • Aural and visual assessment • Homework • Classwork • Quiz **Summative Assessment(s)** • Unit Test • Student Projects • Class/Group Projects • Presentations • Benchmark Assessments • Critique • Mid-Term Project • Final Project

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
literature					effectively, evaluating information critically and competently, and using information accurately and creatively for the issue or problem at hand • Using technology as a tool to research, organize, evaluate, and communicate information and the possession of a fundamental understanding of the ethical/legal issues surrounding the access and use of information • Going beyond basic mastery of skills and/ or curriculum to explore and expand one's own learning and opportunities to gain expertise • Utilizing time efficiently and managing workload • Defining, prioritizing, and completing tasks without direct oversight		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Learners with an IEP	Learners with a 504
Modify pace, reword/explain in various ways.	Students may help struggling and/or ELL students when finished with own work.	Modify pace, reword/explain in various ways.	Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include: • Variation of time: adapting the time allotted for learning, task completion, or testing • Variation of input: adapting the way instruction is delivered • Variation of output: adapting how a student can respond to instruction • Variation of size: adapting the number of items the student is expected to complete • Modifying the content, process or product Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here. Teachers are encouraged to use the Understanding by Design Learning Guidelines (UDL). These guidelines offer a set of concrete suggestions	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.
Modify homework/classwork	Students may add additional material to a project and/or create a second project idea.	Modify homework/classwork		
Modify Tests and Quiz's at teachers discretion		Modify Tests and Quiz's at teachers discretion		
Modify Project criteria and rubric at teacher's discretion.		Modify Project criteria and rubric at teacher's discretion.		

			that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org	

UNIT OVERVIEW

Course Title: Advanced Music Technology: Electronic Music and Audio Engineering

Unit #: **UNIT 2 OVERVIEW** **Unit Title:** Electronic Music Programming, Synthesis and Effects.

Unit Description and Objectives:

This unit will build on knowledge of electronic music and electronic instruments acquired in Introduction to Music Technology. Students will learn programming of hardware MIDI controllers and instruments, principles of synthesis and sound design, and creative use of MIDI and audio effects. They will also become familiar with (and practice) the use of an electronic instrument of their choice.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. How can using electronic instruments, MIDI, and other music equipment allow for more creative performances and compositions?	1. Taking the time to learn the capabilities of an electronic instrument, MIDI controller, or other equipment allows them far more creative possibilities in performance and/or composition and allows them to express themselves in ways not previously possible.	1.1 How do I learn to customize the controls of a hardware instrument or controller? 1.2 How does customizing the interaction between hardware and software increase my creative abilities?
2. In what ways are synthesized sounds made?	2. Various synthesized sounds are created through the manipulation of wave forms and various sampled sounds.	2.1 What principles do I need to know to design a basic patch on a synthesizer? 2.2 How can I associate the settings I change on a synthesizer with the change in sound that I hear?
3. How do effects work to better my compositions?	3. Using effects in a song will help produce a more professional sounding song.	3.1 What does the use of effects do to improve my compositions?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Sub-Concept/Topics:

Learn and understand hardware instrument and MIDI controller programming

- MIDI keyboard controllers and synthesizers
- Alternative MIDI controllers / synthesizers
- Non-MIDI synthesizers / instruments

Sub-Concept/Topics:

Understand and apply principles of synthesis and sound design

- Review basics of synthesis
- Types of synthesis
- Basic sound design

Theme:

Electronic Music Programming, Synthesis and Effects

Conceptual Lens:

Creating your own sound through programming

Sub-Concept/Topics:

Sub-Concept/Topics:

Become familiar with an electronic instrument:

- Describe and understand the sonic capabilities of the chosen instrument
- Describe and understand the control interface of the chosen instrument
- Practice the instrument to increase performance skill

Sub-Concept/Topics:

Learn and understand creative use of MIDI and audio effects

- Types of effects
- Using effects to improve sound quality
- Using effects creatively
- Integrating effects into post-production
- Integrating effects into live performance / recording

CURRICULUM UNIT PLAN

Course Title/Grade: Advanced Music Technology 10-12
Unit Number/Title: Unit 2 Electronic Music Programming, Synthesis and Effects
Conceptual Lens: Creating your own sound through programming
Appropriate Time Allocation (# of Days)**:** Approx. 12 weeks

Primary Core Content Standards referenced With Cumulative Progress Indicators			
1.1.12.B.1-2	1.3.12.B.1-4		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
Learn and understand hardware instrument and MIDI controller programming: • MIDI controllers, Alternative MIDI controllers / synthesizers, and Non-MIDI synthesizers / electronic instruments • Basic operation • Customizing controls from the keyboard • Customizing controls using MIDI Learn functions • Interfacing the keyboards with music and audio software • Interfacing the keyboards with other instruments • Customizing controls from the instrument • Customizing	• How to program a MIDI controller, Alternative MIDI controllers / synthesizers, and Non-MIDI synthesizers / electronic instruments such as M-Audio Axiom, MicroKORG Vocoder, Yamaha WX5 Yamaha DTXPRESS III Yamaha PSR series keyboards and Moog Etherwave Theremin • The basic operations of the aforementioned devices. • How to customize the controls for the aforementioned	• Learn and understand hardware instrument and MIDI controller programming • Understand and apply principles of synthesis and sound design • Learn and understand creative use of MIDI and audio effects • Become familiar with an electronic instrument	• Presentation, discussion and examples of all topics/concepts in unit. • Various teacher created project examples based on Teaching Music with Reason and Logic Pro • Use of hardware and software based technology • Various examples from previous and current years • Student created original projects based on Teaching Music with Reason/ Logic Pro as well as teacher created project ideas. • Using a MIDI controller (keyboard or non-keyboard), design a custom control scheme and use it to perform a simple piece. • Incorporate control	• Teacher-provided supplemental materials • Syllabus • Propellerhead Reason Music Software • Apple Logic Pro • Interactive projector • Electronic instruments. • MIDI controllers • Computer systems • Audio hardware/software. • Product manuals. • Magazine articles • Internet and DVD tutorials • Projects from previous years for review	• Exercising sound reasoning in understanding • Making complex choices and decisions • Understanding the Interconnections among systems • Identifying and asking significant questions that clarify various points of view and lead to better solutions • Framing, analyzing and synthesizing information in order to solve problem and answer questions • Demonstrating originality and inventiveness in work • Acting on creative ideas to make a tangible and useful contribution to the domain in which innovation occurs • Accessing information efficiently and effectively, evaluating	RST Craft and Structure #4 WHST Text Types and purposes #1 Presentation of Knowledge and Ideas #4	**Formative Assessments:** • Question and answer • Aural and visual assessment • Homework • Classwork • Quiz **Summative Assessment(s)** • Unit Test • Student Projects • Class/Group Projects • Presentations • Benchmark Assessments • Critique • Mid-Term Project • Final Project

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
controls through attached synthesizers • Control options for non-MIDI instruments. Understand and apply principles of synthesis and sound design • Review basics of synthesis • Types of synthesis • Basic sound design Learn and understand creative use of MIDI and audio effects: • Using effects to improve sound quality • Using effects creatively • Integrating effects into post-production • Integrating effects into live performance / recording Become familiar with an electronic instrument: • Describe and understand the sonic capabilities of the instrument	devices from the keyboard and through MIDI learn functions • How to Interface the keyboards with other instruments • How to customize controls from the instrument • How to customize controls through attached synthesizers • What the control options are for non-MIDI instruments. • What a wave form is and the basics of synthesis are (Fundamentals and harmonics, Frequency ranges, Harmonic change over time, Amplitude change over time and ADSR envelope • The types of		changes into your performance to increase expressive potential and musicality. • Design a “soundscape” for an electronic music project. • Create synthesized patches (lead, pad, effect, and percussion sounds using at least three synthesizers and two types of synthesis. Ensure that each type of sound follows good sonic principles – i.e. a lead should have quick attack and be a prominent voice, a pad should fit a background role, but evolve over time to keep interest.) • Use various MIDI and audio effects to enhance the aural characteristics and musical appeal of the song. Demonstrate and justify your effect choices. • Student use of electronic instruments in projects and for practice. • Learn and perform a simple piece of music on a chosen electronic instrument. Perform		information critically and competently, and using information accurately and creatively for the issue or problem at hand • Using technology as a tool to research, organize, evaluate, and communicate information and the possession of a fundamental understanding of the ethical/legal issues surrounding the access and use of information • Going beyond basic mastery of skills and/ or curriculum to explore and expand one’s own learning and opportunities to gain expertise • Utilizing time efficiently and managing workload • Defining, prioritizing, and completing tasks without direct oversight		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
• Describe and understand the control interface of the chosen instrument • Practice the instrument to increase performance skill	synthesis including but not limited to Additive, Subtractive, Frequency modulation (FM), Sample-based, Physical modeling, and Granular • How to use Basic sound design to create various patches. • The Characteristics of leads, pads, bass and FX type patches • How to create harmonically interesting sounds/ patches • How to create dynamic change in sounds/ patches • Create sounds/patches that sound good together. • Incorporate created patches		this piece live for class, and record this piece into a project.				

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
	into a composition / production • Types of effects EQ (Gain, Frequency, Q), Dynamic Effects (Compressor, Limiter, Expander, Gate), Reverb (Analog, Digital, Convolution, Creating a chamber), Musical effects (Distortion, Auto-tune, etc…) • How to use effects to improve sound quality • How to use effects creatively • How to integrate effects into post-production • How to Integrate effects into live performance / recording • How to describe and understand						

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
	the sonic capabilities of the instrument • How to describe and understand the control interface of the chosen instrument • How to practice the instrument to increase performance skill						

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Learners with an IEP	Learners with a 504
Modify pace, reword/explain in various ways.	Students may help struggling and/or ELL students when finished with own work.	Modify pace, reword/explain in various ways.	Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include: • Variation of time: adapting the time allotted for learning, task completion, or testing • Variation of input: adapting the way instruction is delivered • Variation of output: adapting how a student can respond to instruction • Variation of size: adapting the number of items the student is expected to complete • Modifying the content, process or product Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here. Teachers are encouraged to use the Understanding by Design Learning Guidelines (UDL). These guidelines offer a set of concrete suggestions	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.
Modify homework/classwork	Students may add additional material to a project and/or create a second project idea.	Modify homework/classwork		
Modify Tests and Quiz's at teachers discretion		Modify Tests and Quiz's at teachers discretion		
Modify Project criteria and rubric at teacher's discretion.		Modify Project criteria and rubric at teacher's discretion.		

			that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org	

UNIT OVERVIEW

Course Title: Advanced Music Technology: Electronic Music and Audio Engineering

Unit #: **UNIT 3 OVERVIEW** **Unit Title:** Audio Engineering and Sound Design

Unit Description and Objectives:

This unit will build on knowledge of audio recording and editing acquired in Introduction to Music Technology. Students will learn and understand intricate technical capabilities of microphones, mixers, effects, and recording devices. They will understand industry standard procedures and techniques used to lead recording sessions and post-production work. They will also learn to listen critically to live and recorded sound. Students will be able to use their knowledge and capabilities to increase the creativity and quality of their work.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. How can I be successful as a recording engineer?	1. The keys to successfully creating a good recording include technical knowledge of the equipment being used.	1.1 What are the technical characteristics of the various types of equipment I will use in recording? 1.2 How will this knowledge help me record more effectively?
2. What can be done to manage a recording successfully?	2. The ability to manage a recording session and post-production process, and an ability to listen critically to sound and use knowledge and decision making will improve the final product.	2.1 What can I do to organize and manage a session in an efficient and effective manner? 2.2 What do I need to listen for in a recording project? 2.3 How will listening critically improve my projects?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Sub-Concept/Topics:

Learn and understand technical capabilities of audio equipment

- Microphones
- Mixers
- Effects
- Recording Devices

Sub-Concept/Topics:

Learn to listen critically to live and recorded sound:

- How to listen properly to sound
- Identifying poor sound
- Identifying specific characteristic problems

Theme:

Audio Engineering & Sound Design

Conceptual Lens:

A successful recording session

Sub-Concept/Topics:

Sub-Concept/Topics:

Understand industry standard session and post-production procedures and techniques

- Organizing a recording session
- Session documentation
- Proper equipment setup
- Session flow, behavior, and etiquette
- Post-production organization and setup
- Final product production and delivery
- Archival and storage

Sub-Concept/Topics:

Learn to listen critically to live and recorded sound cont.

- Identifying mistakes in production
- Problem-solving techniques

CURRICULUM UNIT PLAN

Course Title/Grade: Advanced Music Technology 10-12
Unit Number/Title: Unit 3 Audio Engineering & Sound Design
Conceptual Lens: A successful recording session
Appropriate Time Allocation (# of Days): Approx. 12 weeks

Primary Core Content Standards referenced With Cumulative Progress Indicators			
1.1.12.B.1-2	1.3.12.B.1-4		
1.2.12.A.1-2	1.4.12.B.1,3		
	1.4.12.A.1-4		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
Learn and understand technical capabilities of audio equipment • Microphones • Mixers • Effects • Recording Devices Understand industry standard session and post-production procedures and techniques • Organizing a recording session • Session documentation • Proper equipment setup • Session flow, behavior, and etiquette • Post-production	• How to use various audio equipment: such as Microphones • The various Design types, Pickup patterns and Dynamic range of the microphones studied • The Frequency response and common placement strategies and common selection choices for microphones. • How to use a Mixing board. • How to set up Input, output, and routing capabilities • How to set up in a DAW for recording	• Learn and understand technical capabilities of audio equipment • Understand industry standard session and post-production procedures and techniques • Learn to listen critically to live and recorded sound	• Presentation, discussion and examples of all topics/concepts in unit. • Various teacher created project examples based on Teaching Music with Reason and Logic Pro • Use of hardware and software based technology • Various examples from previous and current years • Student created original projects based on Teaching Music with Reason/ Logic Pro as well as teacher created project ideas. Listed below are examples of what could be done but the teacher should not be limited to just these ideas only the criteria in concepts, content and skill objectives.	• Teacher-provided supplemental materials • Syllabus • Propellerhead Reason Music Software • Apple Logic Pro • Interactive Projector • Electronic instruments. • MIDI controllers • Computer systems • Audio hardware/software. • Speakers/headphones • Product manuals. • Magazine articles • Internet and DVD tutorials • Various listening examples of good and bad recordings • Projects from previous years for review Microphones: • Roland DR-20,	• Exercising sound reasoning in understanding • Making complex choices and decisions • Understanding the Interconnections among systems • Identifying and asking significant questions that clarify various points of view and lead to better solutions • Framing, analyzing and synthesizing information in order to solve problem and answer questions • Demonstrating originality and inventiveness in work • Acting on creative ideas to make a tangible and useful contribution to the domain in which innovation occurs • Accessing information efficiently and effectively, evaluating	RST Craft and Structure #4 WHST Text Types and purposes #1 Presentation of Knowledge and Ideas #4	**Formative Assessments:** • Question and answer • Aural and visual assessment • Homework • Classwork • Quiz **Summative Assessment(s)** • Unit Test • Student Projects • Class/Group Projects • Presentations • Benchmark Assessments • Critique • Mid-Term Project • Final Project

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
organization and setup • Final product production and delivery • Archival and storage Learn to listen critically to live and recorded sound: • How to listen properly to sound • Identifying poor sound • Identifying specific characteristic problems • Identifying mistakes in production • Problem-solving techniques	purposes. • What the advanced operations for recording sessions and live sound reinforcement are. • The purpose and how to use effectively the following effects. (EQ (Gain, Frequency, Q), Dynamic Effects (Compressor, Limiter, Expander, Gate), Reverb (Analog, Digital, Convolution, Creating a chamber), Musical effects (Distortion, Auto-tune, etc…) • The different types of Recording devices such as Analog and Digital recorders 2-track versus		• Using various microphones, record the same source (instrument or voice) and Compare your recordings and comment on the similarities and differences in recording sound and quality • Demonstrate proper equipment setup for a recording. Show mic placements, musician placement within the performance space, proper location and setup of recording equipment, and preparation of proper documentation to organize the session. • Given an example audio recording project with poor sound quality, identify the major problems with the project and correct them. Students explain what you have done and why.	Shure SM-57, Shure SM-58 (dynamic) • Audio-Technica condenser microphones, AKG C-3000 B, (condensor) Mixers: • Mackie Onyx 1640 Audio recording hardware: • Zoom digital recorders • Pioneer RT-1011L reel-to-reel recorder • Tascam US-428 USB audio interface / control surface • Alpha Lexicon USB audio interface • Mackie Onyx 1640 Firewire audio interface Audio effects hardware: • dbx 266XL compressor/gate • dbx 166XL compressor/limi	information critically and competently, and using information accurately and creatively for the issue or problem at hand • Using technology as a tool to research, organize, evaluate, and communicate information and the possession of a fundamental understanding of the ethical/legal issues surrounding the access and use of information • Going beyond basic mastery of skills and/ or curriculum to explore and expand one's own learning and opportunities to gain expertise • Utilizing time efficiently and managing workload • Defining, prioritizing, and completing tasks without direct oversight		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
	multi-track recording and Digital audio workstations • The industry standard session and post-production procedures and techniques • How to organize and document a recording session • How to set up equipment properly for a recording session. • What Recording equipment and software can be used? • What types of musicians' equipment and microphones should be used. • How to help the recording Session flow smoothly • What the proper behavior, and etiquette is during a			ter • Lexicon MX200 reverb / delay			

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
	session. • How to organize Post-production and setup • How to finalize the product and deliver it to the artist. • What the proper archival and storage procedures are. • How to listen critically to live and recorded sound: • How to identifying poor sound and specific problems such as Channel problems, Level problems, Frequency problems(EQ), and Phasing problems • How to Identify mistakes in production such as Poor level control, Poor frequency control (EQ), Poor use of						

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
	effects, Poor dynamic control (compression, limiter, gate) • How to determine Sound problems versus performance problems • How to Problem-solve for various issues when they arise.						

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Learners with an IEP	Learners with a 504
Modify pace, reword/explain in various ways.	Students may help struggling and/or ELL students when finished with own work.	Modify pace, reword/explain in various ways.	Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include: • Variation of time: adapting the time allotted for learning, task completion, or testing • Variation of input: adapting the way instruction is delivered • Variation of output: adapting how a student can respond to instruction • Variation of size: adapting the number of items the student is expected to complete • Modifying the content, process or product Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here. Teachers are encouraged to use the Understanding by Design Learning Guidelines (UDL). These guidelines offer a set of concrete suggestions	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.
Modify homework/classwork	Students may add additional material to a project and/or create a second project idea.	Modify homework/classwork		
Modify Tests and Quiz's at teachers discretion		Modify Tests and Quiz's at teachers discretion		
Modify Project criteria and rubric at teacher's discretion.		Modify Project criteria and rubric at teacher's discretion.		

			that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org	

UNIT OVERVIEW

Course Title: Advanced Music Technology: Electronic Music and Audio Engineering

Unit #: **UNIT 4 OVERVIEW** **Unit Title:** Processes of Creative Production

Unit Description and Objectives:

This unit will be the culminating experience for all students in this course. Students will learn how to design and implement major collaborative projects integrating multiple fields of music technology. They will work with one another in small groups, serving in various roles, to gain experience working as a team to implement a creative plan.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. How is a collaborative project put together and made to be successful?	1. Creating a major collaborative project is a process that must be planned effectively and managed at all stages to be successful.	1.1 How do I successfully plan a collaborative project? 1.2 How do I execute this plan? 1.3 Is my project a success?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Sub-Concept/Topics:

Understand how to successfully plan a major collaborative project

- Develop an initial theme
- Specify creative requirements
- Specify technical requirements

Sub-Concept/Topics:

Understand how to successfully plan a major collaborative project cont.

- Develop a schedule
- Coordinate people, equipment, and facilities with schedule
- Review and revise if necessary

Theme:

Processes of Creative Production

Conceptual Lens:

Working with others to create a group project

Sub-Concept/Topics:

Sub-Concept/Topics:

Create a major collaborative project following a plan

- Create a plan
- Implement the plan
- Revise as necessary
- Complete project
- Reflection

Sub-Concept/Topics:

CURRICULUM UNIT PLAN

Course Title/Grade: Advanced Music Technology 10-12

Unit Number/Title: Unit 4 Processes of Creative Production

Conceptual Lens: Working with others to create a group project

Appropriate Time Allocation (# of Days): Approx. 10 weeks

Primary Core Content Standards referenced With Cumulative Progress Indicators			
1.1.12.B.1-2	1.3.12.B.1-4		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
Understand how to successfully plan a major collaborative project • Develop an initial theme • Specify creative requirements • Specify technical requirements • Develop a schedule • Coordinate people, equipment, and facilities with schedule • Review and revise if necessary Create a major collaborative project following a plan • Create a plan • Implement the plan • Revise as necessary • Complete project	• How to successfully plan a major collaborative project • How to develop an initial theme and specify creative requirements within the project such as People, Equipment, Facilities, melody, chord progression etc… • How to specify technical requirements such as People, Equipment, Facilities, Other • How to develop a schedule/ timeline – including but not limited to Composition / rehearsal,	• Understand how to successfully plan a major collaborative project • Create a major collaborative project following a plan	• Presentation, discussion and examples of all topics/concepts in unit. • Various teacher created project examples based on Teaching Music with Reason and Logic Pro • Use of hardware and software based technology • Various examples from previous and current years • Student created original projects based on Teaching Music with Reason/ Logic Pro as well as teacher created project ideas. • As an entire class, develop a plan for a collaborative project. Include details on creative and technical requirements, develop a schedule, and show how you will coordinate	• Teacher-provided supplemental materials • Syllabus • Propellerhead Reason Music Software • Apple Logic Pro • Interactive projector • Electronic instruments. • MIDI controllers • Computer systems • Audio hardware/software. • Product manuals. • Magazine articles • Internet and DVD tutorials • Projects from previous years for review Microphones: • Roland DR-20, Shure SM-57, Shure SM-58 (dynamic) • Audio-Technica	• Exercising sound reasoning in understanding • Making complex choices and decisions • Understanding the Interconnections among systems • Identifying and asking significant questions that clarify various points of view and lead to better solutions • Framing, analyzing and synthesizing information in order to solve problem and answer questions • Demonstrating originality and inventiveness in work • Acting on creative ideas to make a tangible and useful contribution to the domain in which innovation occurs • Accessing information efficiently and effectively,	RST Craft and Structure #4 WHST Text Types and purposes #1 Presentation of Knowledge and Ideas #4	**Formative Assessments:** • Question and answer • Aural and visual assessment • Homework • Classwork • Quiz **Summative Assessment(s)** • Unit Test • Student Projects • Class/Group Projects • Presentations • Benchmark Assessments • Critique • Mid-Term Project • Final Project

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
• Reflection	Recording, Postproduction (editing, mixing), Revision, Mastering, Final production & delivery • How to coordinate people, equipment, and facilities with a preconceived schedule • How to self-critique thus needing to review and revise if necessary • How to create a major collaborative project following a plan including Create a plan, Implementing the plan, revising the plan as necessary and completing a project reflection sheet.		classroom time, equipment and facility use, and available people both within your class and outside sources. • Using the plan your class created, execute your collaborative project in keeping with due dates established by the instructor • As small groups in class, develop a plan for a collaborative project. Include details on creative and technical requirements, develop a schedule, and show how you will coordinate classroom time, equipment and facility use, and available people both within your class and outside sources. • Using the plan your group has created, execute your collaborative project in keeping with due dates established by the instructor • Reflect on all aspects of both the class and group project with class discussion and with written self-critique.	condenser microphones, AKG C-3000 B, (condensor) Mixers: • Mackie Onyx 1640 Audio recording hardware: • Zoom digital recorders • Pioneer RT-1011L reel-to-reel recorder • Tascam US-428 USB audio interface / control surface • Alpha Lexicon USB audio interface • Mackie Onyx 1640 Firewire audio interface Audio effects hardware: • dbx 266XL compressor/gate • dbx 166XL compressor/limiter • Lexicon MX200 reverb / delay	evaluating information critically and competently, and using information accurately and creatively for the issue or problem at hand • Using technology as a tool to research, organize, evaluate, and communicate information and the possession of a fundamental understanding of the ethical/legal issues surrounding the access and use of information • Going beyond basic mastery of skills and/ or curriculum to explore and expand one's own learning and opportunities to gain expertise • Utilizing time efficiently and managing workload • Defining, prioritizing, and completing tasks without direct oversight		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Learners with an IEP	Learners with a 504
Modify pace, reword/explain in various ways.	Students may help struggling and/or ELL students when finished with own work.	Modify pace, reword/explain in various ways.	Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include: • Variation of time: adapting the time allotted for learning, task completion, or testing • Variation of input: adapting the way instruction is delivered • Variation of output: adapting how a student can respond to instruction • Variation of size: adapting the number of items the student is expected to complete • Modifying the content, process or product Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here. Teachers are encouraged to use the Understanding by Design Learning	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.
Modify homework/classwork	Students may add additional material to a project and/or create a second project idea.	Modify homework/classwork		
Modify Tests and Quiz's at teachers discretion		Modify Tests and Quiz's at teachers discretion		
Modify Project criteria and rubric at teacher's discretion.		Modify Project criteria and rubric at teacher's discretion.		

			Guidelines (UDL). These guidelines offer a set of concrete suggestions that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org	

UNIT OVERVIEW

Course Title: Advanced Music Technology: Electronic Music and Audio Engineering

Unit #: **UNIT 5 OVERVIEW** **Unit Title:** Media and Copyright Law

Unit Description and Objectives:

This unit will cover the basics of media and copyright law. Students will develop a basic understanding of the history and current state of copyright law and how it applies to music. Students will be able to make use of established systems of copyright permission for their own work and the work of others. They will be able to determine what copyright permission may be needed for a given use of music or other media, and will understand how to obtain this permission.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. What is the basis of copyright law?	1. Copyright law is a complex and constantly evolving field; however, a basic understanding of the copyright system in the United States is essential to work in the music industry.	1.1 What is copyright? 1.2 How does it apply to my work? 1.3 What steps do I need to take to use copyrighted work in my projects?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Sub-Concept/Topics:

Develop a basic understanding of copyright law as it applies to music

- History of copyright
- Copyright on published music
- Copyright on sound recordings
- Types of licensing

Sub-Concept/Topics:

Develop a basic understanding of copyright law as it applies to music cont.

- Fair Use
- Public Domain

Theme:

Media and Copyright Law

Conceptual Lens:

How copyright applies to each of us.

Sub-Concept/Topics:

Sub-Concept/Topics:

Understand how to claim rights and fulfill responsibilities under copyright law

- Copyright on student work
- Registering copyright
- Finding copyright holders
- Requesting licenses
- Royalty rates and payment

Sub-Concept/Topics:

CURRICULUM UNIT PLAN

Course Title/Grade: Advanced Music Technology 10-12

Unit Number/Title: Unit 5 Media and Copyright Law

Conceptual Lens: How copyright applies to each of us.

Appropriate Time Allocation (# of Days): ongoing

Primary Core Content Standards referenced With Cumulative Progress Indicators			
1.1.12.B.1-2	1.2.12.A.1-2		
1.4.12.B.3			

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
Develop a basic understanding of copyright law as it applies to music • History of copyright • Copyright on published music • Copyright on sound recordings • Types of licensing • Fair Use • Public Domain Understand how to claim rights and fulfill responsibilities under copyright law • Copyright on student work • Registering copyright • Finding copyright holders • Requesting	• The basic understanding of copyright law as it applies to music • The History of copyright • How the law applies to copyright on published music • How the law applies to copyright on sound recordings • What types of licenses are needed for Permission to perform, and arrange. • Why a Master Use, Mechanical, and Synchronization license are needed.	• Develop a basic understanding of copyright law as it applies to music • Understand how to claim rights and fulfill responsibilities under	• Presentation, discussion and examples of all topics/concepts in unit. • Various teacher created project examples based on Teaching Music with Reason and Logic Pro • Use of hardware and software based technology • Various examples from previous and current years Student created original projects based on Teaching Music with Reason/ Logic Pro as well as teacher created project ideas. • In-class and individual completion of reading and research activities • Student-lead permission requests and licensing fulfillment as necessary for	• Teacher-provided supplemental materials • Copyright reference materials (online and offline) • Internet articles • Internet and DVD tutorials • Recording archive • Teacher-provided supplemental materials • Worksheets on copyright history and concepts • Reprints of magazine articles and tutorials on copyright and entertainment law • Publisher and copyright holder contact information	• Exercising sound reasoning in understanding • Making complex choices and decisions • Understanding the Interconnections among systems • Identifying and asking significant questions that clarify various points of view and lead to better solutions • Framing, analyzing and synthesizing information in order to solve problem and answer questions • Demonstrating originality and inventiveness in work • Acting on creative ideas to make a tangible and useful contribution to the domain in which innovation occurs • Accessing information efficiently and effectively, evaluating	RST Key Ideas and details #1and 2 Craft and Structure #4 Integration of knowledge and ideas #9 WHST Text Types and purposes #1 Presentation of Knowledge and Ideas #4	**Formative Assessments:** • Question and answer • Aural and visual assessment • Homework • Classwork • Quiz **Summative Assessment(s)** • Unit Test • Student Projects • Class/Group Projects • Presentations • Benchmark Assessments • Critique • Mid-Term Project • Final Project

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
licenses • Royalty rates and payment	• What other types of license there are. • What Fair Use is and how it applies • What Public Domain is and how it can be beneficial. • How to understand, claim rights and fulfill responsibilities under copyright law • What the copyright is on student work • How to register copyright • How to find copyright holders • How to Request licenses • How to find Royalty rates and payment		student and school projects • For the group project recording in in Unit 4 identify the publishers of the performance repertoire (if applicable) and seek mechanical licenses for each piece. Keep in mind that publishers may charge for this permission. Have students decide what to do if this is the case.		information critically and competently, and using information accurately and creatively for the issue or problem at hand • Using technology as a tool to research, organize, evaluate, and communicate information and the possession of a fundamental understanding of the ethical/legal issues surrounding the access and use of information • Going beyond basic mastery of skills and/ or curriculum to explore and expand one's own learning and opportunities to gain expertise • Utilizing time efficiently and managing workload • Defining, prioritizing, and completing tasks without direct oversight		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Learners with an IEP	Learners with a 504
Modify pace, reword/explain in various ways.	Students may help struggling and/or ELL students when finished with own work.	Modify pace, reword/explain in various ways.	Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include: • Variation of time: adapting the time allotted for learning, task completion, or testing • Variation of input: adapting the way instruction is delivered • Variation of output: adapting how a student can respond to instruction • Variation of size: adapting the number of items the student is expected to complete • Modifying the content, process or product Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here. Teachers are encouraged to use the Understanding by Design Learning Guidelines (UDL). These guidelines offer a set of concrete suggestions	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.
Modify homework/classwork	Students may add additional material to a project and/or create a second project idea.	Modify homework/classwork		
Modify Tests and Quiz's at teachers discretion		Modify Tests and Quiz's at teachers discretion		
Modify Project criteria and rubric at teacher's discretion.		Modify Project criteria and rubric at teacher's discretion.		

			that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org	

UNIT OVERVIEW

Course Title: Advanced Music Technology: Electronic Music and Audio Engineering

Unit #: **UNIT 6 OVERVIEW** **Unit Title:** Careers in the Music Industry

Unit Description and Objectives:

This unit will cover the breadth of options available to students who wish to pursue a career in music and the music industry. Students will develop a basic understanding of the various types of careers that encompass the music industry, both in musical and non-musical roles, as well as the training necessary to pursue these careers. They will be able to evaluate and select colleges, jobs, and/or internships that match their career aspirations and will help them achieve their goals.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
1. What types of jobs are available in music technology?	1. There are many options for careers in the entertainment industry, spanning from creation and performance to engineering, business, marketing, and many other areas. Many of these areas can be vocations, avocations, or both.	1.1 What would I like to do as a career?
2. Are there avenues to pursue in the area of music technology to further my education?	2. There are many options for education in these fields, and anyone planning to continue in a music technology related field must do research to determine which option is best for them.	2.1 How do I further my education and/or create opportunities in this field?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Sub-Concept/Topics:

Develop and evaluate educational and/or career goal

- Identifying preferred and possible career options
- Determining education and/or training needed to achieve career goals
- Evaluating post-secondary educational programs for relevance to career goals and interests, and for quality of program

Sub-Concept/Topics:

Develop and evaluate educational and/or career goals cont.

- Evaluating career opportunities for appropriateness and relevance to career goals

Theme:

Careers in the Music Industry

Conceptual Lens:

Jobs in the music industry and how to purse them

Sub-Concept/Topics:

Sub-Concept/Topics:

Identify and understand the breadth of career options in the music industry

- Performance
- Education
- Production
- Technology
- Multimedia
- Business
- Publishing
- Healthcare

Sub-Concept/Topics:

CURRICULUM UNIT PLAN

Course Title/Grade: Advanced Music Technology 10-12
Unit Number/Title: Unit 6 Careers in the Music Industry
Conceptual Lens: Jobs in the music industry and how to purse them
Appropriate Time Allocation (# of Days): 3 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
1.1.12.B.1-2	1.4.12.B.3		
1.2.12.A.1-2			

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
Identify and understand the breadth of career options in the music industry • Performance • Education • Production • Technology • Multimedia • Business • Publishing Healthcare Develop and evaluate educational and/or career goal • Identifying preferred and possible career options • Determining education and/or training needed to achieve career goals • Evaluating post-	The following career options in the music industry such as In Performance: • Instrumentalist (pop/rock) • Vocalist (pop/rock) • Jazz (vocal/instrumental) • Classical (vocal/instrumental/conductor) • Musical Theater (vocal/instrumental/conductor) • Composer/Songwriter • Worship Music In Education: • K-12 Educator • Higher Educator • Private Instructor	• Identify and understand the breadth of career options in the music • Develop and evaluate educational and/or career goals	• Presentation, discussion and examples of all topics/concepts in unit. • Various teacher created project examples based on Teaching Music with Reason and Logic Pro • Use of hardware and software based technology • Various examples from previous and current years • Student created original projects based on Teaching Music with Reason/ Logic Pro as well as teacher created project ideas. • In-class and individual completion of reading and research activities • Visits, interviews, and/or discussion with practitioners of various music careers	• Teacher-provided supplemental materials • Internet articles • Internet and DVD tutorials • Teacher-provided supplemental materials • People employed in music careers • Reference works (online and offline) for group and independent research • Visits to colleges • Visits to job sites • Educational and internship programs • Stagehand Apprenticeship Program • Reprints of magazine articles on various careers in the entertainment industry	• Exercising sound reasoning in understanding • Making complex choices and decisions • Understanding the Interconnections among systems • Identifying and asking significant questions that clarify various points of view and lead to better solutions • Framing, analyzing and synthesizing information in order to solve problem and answer questions • Demonstrating originality and inventiveness in work • Acting on creative ideas to make a tangible and useful contribution to the domain in which innovation occurs • Accessing information efficiently and effectively, evaluating	RST Key Ideas and details #1and 2 Craft and Structure #4 Integration of knowledge and ideas #9 WHST Text Types and purposes #1 Presentation of Knowledge and Ideas #4	**Formative Assessments:** • Question and answer • Aural and visual assessment • Homework • Classwork • Quiz **Summative Assessment(s)** • Unit Test • Student Projects • Class/Group Projects • Presentations • Benchmark Assessments • Critique • Mid-Term Project • Final Project

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
secondary educational programs for relevance to career goals and interests, and for quality of program • Evaluating career opportunities for appropriateness and relevance to career goals	In Production: • Recording Engineer • Live Sound Engineer • Mastering Engineer • Sound Technician • Producer In Technology: • Repair Technician • Sound Designer • Programmer • Hardware Engineer • Instrument Designer • Instrument Repair / Restoration In Multimedia: • Film, Television, and/or Game Composer/Songwriter • Film & Television Sound Engineer • Game Audio Engineer • Foley Artist		• Discussion with mentor figures (teacher, parents/guardians, guidance counselors)	• College/educational informational materials	information critically and competently, and using information accurately and creatively for the issue or problem at hand • Using technology as a tool to research, organize, evaluate, and communicate information and the possession of a fundamental understanding of the ethical/legal issues surrounding the access and use of information • Going beyond basic mastery of skills and/ or curriculum to explore and expand one's own learning and opportunities to gain expertise • Utilizing time efficiently and managing workload • Defining, prioritizing, and completing tasks without direct oversight		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
	(Film, Television, and/or Game) • Disc Jockey / On-Air Personality • Radio Engineer • Radio Program / Music Director • Internet / Web Audio Engineer / Designer In Business: • Personal / Professional Manager • Business Manager • A&R Coordinator / Administrator • Publicist • Agent • Advertising Executive • Retail Sales • Entertainment Attorney • Tour Manager • Road Technician • Venue Manager • Arts Administration						

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
	(Profit or Non-Profit) In Publishing: • Music Publisher • Music Editor / Arranger • Music Librarian • Author • Critic • Historian • Journalist • Healthcare: • Music Therapist • Speech Pathologist • Voice Therapist How to develop and evaluate educational and/or career goals such as Identifying preferred and possible career options • How to Determine education and/or training needed to achieve career goals • How to Evaluate post-secondary educational						

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know:)	Skill Objectives (Students Will Be Able To:)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
	programs for relevance to career goals and interests, and for quality of program • How to Evaluate career opportunities for appropriateness and relevance to career goals						

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Learners with an IEP	Learners with a 504
Modify pace, reword/explain in various ways.	Students may help struggling and/or ELL students when finished with own work.	Modify pace, reword/explain in various ways.	Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include: • Variation of time: adapting the time allotted for learning, task completion, or testing • Variation of input: adapting the way instruction is delivered • Variation of output: adapting how a student can respond to instruction • Variation of size: adapting the number of items the student is expected to complete • Modifying the content, process or product Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here. Teachers are encouraged to use the Understanding by Design Learning Guidelines (UDL). These guidelines offer a set of concrete suggestions	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.
Modify homework/classwork	Students may add additional material to a project and/or create a second project idea.	Modify homework/classwork		
Modify Tests and Quiz's at teachers discretion		Modify Tests and Quiz's at teachers discretion		
Modify Project criteria and rubric at teacher's discretion.		Modify Project criteria and rubric at teacher's discretion.		

			that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org	

CROSS-CONTENT STANDARDS ANALYSIS

Course Title: Advanced Music Technology **Grade:** 10-12

Unit Title:	Visual and Performing Arts	Comp. Health & Physical Ed.	English Language Arts	Mathematics	Science	Social Studies	World Languages	Technology	21st Century Life & Careers
Course Introduction / Review of Music Technology Concepts	1.1.12.B.1-2 1.3.12.B.1-4	2.5.12.A.3-4	W.GR.11-12.6,8 RST.GR.11-12.7,9		5.1.12.C.1	6.1.12.D.14.f 6.2.12.D.4.k	7.1.NM.A.2 7.1.NM.B.2	8.1.12. A.4 8.1.12.D.1-2 8.1.12.F.2 8.2.12.F.1 8.2.12.F.3	9.1.12.A.1 9.1.12.E.1 9.1.12.F.2-4 9.1.12.C.3 9.3.12.C.6
Electronic Music Programming and Synthesis	1.1.12.B.1-2 1.3.12.B.1-4	2.5.12.A.3-4			5.1 Gr.12 A.1-2 5.2 Gr.12 A.1 5.2 Gr.12 B.2 5.3 Gr.12 C.1 5.7 Gr.12 B.1 5.7 Gr.12 B.4			8.1.12. A.4 8.1.12.D.1-2 8.1.12.F.2 8.2.12.F.1 8.2.12.F.3	9.1.12.A.1 9.1.12.E.1 9.1.12.F.2-4 9.1.12.C.3 9.3.12.C.6
Audio Engineering and Sound Design	1.1.12.B.1-2 1.2.12.A.1-2 1.3.12.B.1-4 1.4.12.A.1-4 1.4.12.B.3	2.5.12.A.3-4	W.GR.11-12.6,8 RST.GR.11-12.7,9		5.1.12.C.1	6.1.12.D.14.f 6.2.12.D.4.k	7.1.NM.A.2 7.1.NM.B.2	8.1.12. A.4 8.1.12.D.1-2 8.1.12.F.2 8.2.12.F.1 8.2.12.F.3	9.1.12.A.1 9.1.12.E.1 9.1.12.F.2-4 9.1.12.C.3 9.3.12.C.6
Processes of Creative Production	1.1.12.B.1-2 1.3.12.B.1-4	2.5.12.A.3-4	W.GR.11-12.6,8 RST.GR.11-12.7,9		5.1.12.C.1	6.1.12.D.14.f 6.2.12.D.4.k	7.1.NM.A.2 7.1.NM.B.2	8.1.12. A.4 8.1.12.D.1-2 8.1.12.F.2 8.2.12.F.1 8.2.12.F.3	9.1.12.A.1 9.1.12.E.1 9.1.12.F.2-4 9.1.12.C.3 9.3.12.C.6
Media and Copyright Law	1.1.12.B.1-2 1.3.12.B.1-4 1.4.12.B.3	2.5.12.A.3-4				6.1.12.D.14.f 6.2.12.D.4.k		8.1.12. A.4 8.1.12.D.1-2 8.1.12.F.2 8.2.12.F.1 8.2.12.F.3	9.1.12.A.1 9.1.12.E.1 9.1.12.F.2-4 9.1.12.C.3 9.3.12.C.6
Careers in the Music Industry	1.1.12.B.1-2 1.2.12.A.1-2 1.4.12.B.3	2.5.12.A.3-4				6.1.12.D.14.f 6.2.12.D.4.k	7.2 Gr.12 A.1 7.2 Gr.12 A.4	8.1.12. A.4 8.1.12.D.1-2 8.1.12.F.2 8.2.12.F.1 8.2.12.F.3	9.1.12.A.1 9.1.12.E.1 9.1.12.F.2-4 9.1.12.C.3 9.3.12.C.6

Washington Township Public Schools
Department of Student Personnel Services

CURRICULUM MODIFICATION

The regular curriculum is modified for Special Education students enrolled in both self-contained and resource center classes.

Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include:

- Variation of time: adapting the time allotted for learning, task completion, or testing
- Variation of input: adapting the way instruction is delivered
- Variation of output: adapting how a student can respond to instruction
- Variation of size: adapting the number of items the student is expected to complete
- Modifying the content, process or product

Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here.

Teachers are encouraged to use the Understanding by Design Learning Guidelines (UDL). These guidelines offer a set of concrete suggestions that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org