

HILLSBOROUGH TOWNSHIP PUBLIC SCHOOLS
HILLSBOROUGH, NJ 08844

NEW REVISED CURRICULUM

DATE: JUNE 2012

CONTENT AREA: FINE & PERFORMING ARTS – HHS – ADVANCED MUSIC
TECHNOLOGY AND APPLICATIONS

SUPERVISOR:	CURRICULUM REVISION TEAM:
Olga Zarestky	Jonathan Klizas

WHY WAS THIS CURRICULUM REVISION COMPLETED?

Revise and update to 2009 NJ Core Curriculum Content Standards

HOW IS THIS RELATED TO THE DISTRICT PLAN FOR CURRICULUM DEVELOPMENT?

As scheduled on the five-year curriculum revision cycle

Other

WERE THE FINANCIAL RESOURCES BUDGETED FOR THIS REVISION?

Yes

No (please explain) _____

OTHER COMMENTS: _____

APPROVAL DATES:

AS 12/23/13 Approved by Assistant Superintendent

JA 12/11/14 Approved by Education Committee

Board of Educ. Approved
12/22/14

Course Overview

"It occurred to me by intuition, and music was the driving force behind that intuition. My discovery was the result of musical perception." (When asked about his theory of relativity) - Albert Einstein

"During the Gulf War, the few opportunities I had for relaxation I always listened to music, and it brought me great peace of mind. I have shared my love of music with people throughout this world, while listening to the drums and special instruments of the Far East, Middle East, Africa, the Caribbean, and the Far North, and all of this started with the music appreciation course that I was taught in a third-grade elementary class in Princeton, New Jersey. What a tragedy it would be if we lived in a world where music was not taught to children."

- General H. Norman Schwarzkopf— United States Army

NJCCCS 1.2 History of the Arts and Culture: All students will understand the role, development, and influence of the arts throughout history and across cultures.

Advanced Music Technology & Applications provides students with a music experience that will take place in one forty-eight minute class period every school day for half the year. Advanced Music Technology and Applications is designed with the experienced music student in mind, who has successfully completed Music Technology and Applications or who has received approval from the teacher to enroll in the class. The thrust of this course is in the creation of music and the study of audio production techniques in a contemporary computer-based, digital audio environment. The students use concepts of musical form, rhythm, melody and harmony, orchestration and texture as they progress through the projects of this course. Software synthesizers, sample libraries and student recordings become the tools and objects of the projects. At the same time, these projects utilize and explore audio production techniques and strategies. Advanced Music Technology and Applications explores the world of sound and music in further depth and is an excellent platform for combining the creation and production of musical projects. Advanced Music Technology and Applications offers the conscientious student a creative experience unique in their music education.

The curriculum is aligned to the New Jersey Core Curriculum Content Standards for Visual and Performing Arts which are:

- **Standard 1.1 The Creative Process:** All students will demonstrate an understanding of the elements and principles that govern the creation of works of art in dance, music, theatre, and visual art.
- **Standard 1.2 History of Arts and Culture:** All students will understand the role, development, and influence of the arts throughout history and across cultures.
- **Standard 1.3 Performance:** All students will synthesize those skills, media, methods, and technologies appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art.
- **Standard 1.4 Aesthetic Responses and Critique Methodologies:** All students will demonstrate and apply an understanding of arts philosophies, judgment, and analysis to works of art in dance, music, theatre, and visual art.

The interdisciplinary and experiential nature of the Arts (where rigorous academic concepts are coupled with real-world hands-on lessons) allows connections to many NJ standard areas. As such, where applicable, integrations to the other New Jersey Core Curriculum Content Standards and Cumulative Progress Indicators have been noted (including the NJCCCS areas of Comprehensive Health and Physical Education, Science, Social Studies, World Languages, Technology, and 21st Century Life and Careers), along with integrations to the Common Core State Standards for English Language Arts and Mathematics.

This 2.5 credit half-year course helps fulfill the state mandate contained in N.J.A.C. 6A:8-5.1(a)lvii for "at least 5 credits in Visual and Performing Arts" for all students who entered high school in 2010 or later.

Enduring Understandings	<p>An appreciation and understanding of music as an art form. An appreciation and understanding of music production and audio processing as an art form. The discipline and dedication necessary to create and perform music effectively. The ability to constructively analyze and critique musical compositions and performances. The ability for the individual to analyze his or her own musical creations and to create intelligent strategies to address areas of need. Fluency in communicating ideas through contemporary technology. Practicing a positive work ethic, modeling constructive behaviors for others.</p>
Days	<p>7</p>
NJCCCS	<p>1.1 The Creative Process All students will demonstrate an understanding of the elements and principles that govern the creation of works of art in dance, music, theatre, and visual art. 1.3 Performance All students will synthesize those skills, media, methods, and technologies appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art.</p>
NJCCCS CPI	<p>1.1.12.B.1 Examine how aspects of meter, rhythm, tonality, intervals, chords, and harmonic progressions are organized and manipulated to establish unity and variety in genres of musical compositions. 1.3.12.B.2 Analyze how the elements of music are manipulated in original or prepared musical scores.</p>
Essential Questions	<p>What is computer-based audio production? How does a computer interface enhance or detract from the workflow? When does sound become music?</p>
Skills The Student Will...	<p>Differentiate between analog and digital. Distinguish MIDI from digital audio. Navigate a multi-tracking software program. Identify basic elements of music such as form, rhythm, melody. Create a vocabulary of digital audio processing techniques and jargon. Describe the signal flow from source to output.</p>
Assessment	<p>The student will complete various commands displaying fluency with computer interfaces used in the classroom. The student will recognize and describe various elements of music. The student will define a range of musical and audio processing terminology. Students will map the signal flow from input to final output.</p>
Literacy Integration	<p>SL.11-12.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.</p>
World Language Integration	<p>7.1.NM.A.2 Demonstrate comprehension of simple, oral and written directions, commands, and requests through appropriate physical response.</p>

<p>Technology Integration 21st Century Life & Careers</p>	<p>8.1 Educational Technology All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge. 9.4.12.C.(1).3 Employ knowledge and skills related to audio production equipment to demonstrate an understanding of basic tools used in this pathway.</p>
<p style="text-align: center;">Unit/Skill: II. Student Journal</p>	
<p>Days</p>	<p>Ongoing</p>
<p>Content</p>	<p>1.4 Aesthetic Responses & Critique Methodologies All students will demonstrate and apply an understanding of arts philosophies, judgment, and analysis to works of art in dance, music, theatre, and visual art.</p>
<p>Core Content</p>	<p>1.4.12.A.4 Evaluate how exposure to various cultures influences individual, emotional, intellectual, and kinesthetic responses to artwork. 1.4.12.B.1 Formulate criteria for arts evaluation using the principles of positive critique and observation of the elements of art and principles of design, and use the criteria to evaluate works of dance, music, theatre, visual, and multimedia artwork from diverse cultural contexts and historical eras. 1.4.12.B.2 Evaluate how an artist's technical proficiency may affect the creation or presentation of a work of art, as well as how the context in which a work is performed or shown may impact perceptions of its significance/meaning.</p>
<p>Essential Questions</p>	<p>What influences contribute to a style of music? How does writing about music contribute to an understanding of music? How do you, the student, see your musicianship evolving throughout this course and beyond?</p>
<p>Skills The Student Will...</p>	<p>Maintain a journal, documenting their experience and growth through the projects of the course. Give examples of different genres of music and different artistic disciplines and describe how they contribute to a cohesive aesthetic. Relate their ongoing experience with their evolving perception of themselves as a creative artist. Discuss their evolving understanding of audio processing techniques and how to utilize them in their projects.</p>
<p>Assessment</p>	<p>Monitor the student's development throughout the course and self-evaluation.</p>
<p>Literacy Integration</p>	<p>SL.11-12.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.</p>
<p>World Language Integration</p>	<p>7.1.NM.A.2 Demonstrate comprehension of simple, oral and written directions, commands, and requests through appropriate physical response.</p>
<p>Technology Integration</p>	<p>8.1 Educational Technology All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.</p>
<p>21st Century Life & Careers</p>	<p>9.4.12.C.(1).3 Employ knowledge and skills related to audio production equipment to demonstrate an understanding of basic tools used in this pathway.</p>

Unit/Skill: III. Complex Rhythm Inputting	
Days	15
NJCCCS	1.3 Performance All students will synthesize those skills, media, methods, and technologies appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art.
NJCCCS CPI	1.3.12.B.2 Analyze how the elements of music are manipulated in original or prepared musical scores.
Essential Questions	How does time exist with music? How is rhythm expressive in music?
Skills The Student Will...	Convert written rhythms into digital commands (MIDI) creating audio files as an output. The student will replicate the staggered entrances of the different percussion parts as in West Ghana drumming for example.. Apply digital processing techniques to various audio tracks. Produce a stereo file from various audio tracks.
Assessment	The students will be judged on accuracy of their audio files regarding rhythm and audio processing techniques (panning, equalization, volume levels)
Literacy Integration	SL.11-12.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.
World Language Integration	7.1.NM.A.2 Demonstrate comprehension of simple, oral and written directions, commands, and requests through appropriate physical response.
Technology Integration	8.1 Educational Technology All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.
21 st Century Life & Careers	9.4.12.C.(1).3 Employ knowledge and skills related to audio production equipment to demonstrate an understanding of basic tools used in this pathway.
Unit/Skill: IV. Censorship in Music	
Days	10
NJCCCS	1.1 The Creative Process All students will demonstrate an understanding of the elements and principles that govern the creation of works of art in dance, music, theatre, and visual art. 1.2 History of the Arts and Culture All students will understand the role, development, and influence of the arts throughout history and across cultures.

Unit/Skill: IV. Censorship in Music	
<p>1.3 Performance All students will synthesize those skills, media, methods, and technologies appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art.</p> <p>1.4 Aesthetic Responses & Critique Methodologies All students will demonstrate and apply an understanding of arts philosophies, judgment, and analysis to works of art in dance, music, theatre, and visual art.</p>	<p>1.1.12.B.1 Examine how aspects of meter, rhythm, tonality, intervals, chords, and harmonic progressions are organized and manipulated to establish unity and variety in genres of musical compositions.</p> <p>1.2.12.A.2 Justify the impact of innovations in the arts (e.g., the availability of music online) on societal norms and habits of mind in various historical eras.</p> <p>1.3.12.B.2 Analyze how the elements of music are manipulated in original or prepared musical scores.</p> <p>1.4.12.B.2 Evaluate how an artist's technical proficiency may affect the creation or presentation of a work of art, as well as how the context in which a work is performed or shown may impact perceptions of its significance/meaning.</p>
<p>Essential Questions</p>	<p>How is music with text expressively different from absolute music? How does art and music reflect the culture of its time? Why do political, religious or governmental factions censor music and other art forms?</p>
<p>Skills The Student Will...</p>	<p>Use the Internet to select an artist or artists persecuted by their government for ideas expressed in their music. Define censorship. Write a podcast script explaining the events leading to the persecution of the artist. Summarize the outcome of the event – what changes, if any, occurred because of the artist's issues. Produce a 3-minute podcast interweaving musical selections with their script. Mix down their various tracks to a stereo output file.</p>
<p>Assessment</p>	<p>Evaluation is based primarily on the student's accuracy in following the requirements of the project. Students present their project: first, by a brief oral description, and secondly, by the class listening to the project. Description of how musical elements of the piece are used to underscore the meaning of the music. Evaluation of the overall technical and content quality of the 3-minute podcast.</p>
<p>Literacy Integration</p>	<p>SL.11-12.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.</p>
<p>World Language Integration</p>	<p>7.1.NM.A.2 Demonstrate comprehension of simple, oral and written directions, commands, and requests through appropriate physical response.</p>
<p>Technology Integration</p>	<p>8.1.12.D.2 Demonstrate appropriate use of copyrights as well as fair use and Creative Commons guidelines. 8.1.12.D.3 Compare and contrast international government policies on filters for censorship.</p>
<p>21st Century Life & Careers</p>	<p>9.4.12.C.(1).3 Employ knowledge and skills related to audio production equipment to demonstrate an understanding of basic tools used in this pathway.</p>

Unit/Skill: V. Form, Phrasing, Mixing	
Days	13
NJCCCS	<p>1.1 The Creative Process All students will demonstrate an understanding of the elements and principles that govern the creation of works of art in dance, music, theatre, and visual art.</p> <p>1.3 Performance All students will synthesize those skills, media, methods, and technologies appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art.</p>
NJCCCS CPI	<p>1.1.12.B.1 Examine how aspects of meter, rhythm, tonality, intervals, chords, and harmonic progressions are organized and manipulated to establish unity and variety in genres of musical compositions.</p> <p>1.3.12.B.4 Arrange simple pieces for voice or instrument using a variety of traditional and nontraditional sound sources or electronic media, and/or analyze prepared scores using music composition software.</p>
Essential Questions	<p>How does form play a unifying element in musical compositions?</p> <p>How does the mixing of an audio file represent the live rendition of a performance?</p>
Skills The Student Will...	<p>Create a piece of music in ternary form (ABA') with a coda in the following format:</p> <ul style="list-style-type: none"> • A – at least two 8-bar phrases using a major or minor mode. • B –Using contrasting mode (if a major mode was used in A, use a minor mode and vice versa) • A' – recapitulation of A with variation. • Coda – a brief and final ending. <p>Design an orchestration utilizing a melody instrument, harmony instruments, a bass line and percussion.</p> <p>Convert the MIDI tracks to audio and apply processing to them.</p> <p>Produce a stereo file as output.</p>
Assessment	<p>Students are evaluated on their accuracy in following the requirements of the project.</p> <p>Evaluation of the audio quality of the final output with special attention to rhythmic and harmonic accuracy, volume balances, panning and equalization.</p> <p>Students present their project: first, by a brief oral description, and secondly, by the class listening to the project.</p>
Literacy Integration	<p>SL.11-12.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.</p>
World Language Integration	<p>7.1.NM.A.2 Demonstrate comprehension of simple, oral and written directions, commands, and requests through appropriate physical response.</p>
Technology Integration	<p>8.1 Educational Technology All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.</p>
21 st Century Life & Careers	<p>9.4.12.C.(1).3 Employ knowledge and skills related to audio production equipment to demonstrate an understanding of basic tools used in this pathway.</p>

Unit/Skill: VI. Theme and Variations	
Days	15
NJCCCS	<p>1.1 The Creative Process All students will demonstrate an understanding of the elements and principles that govern the creation of works of art in dance, music, theatre, and visual art.</p> <p>1.3 Performance All students will synthesize those skills, media, methods, and technologies appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art.</p>
NJCCCS CPI	<p>1.1.12.B.1 Examine how aspects of meter, rhythm, tonality, intervals, chords, and harmonic progressions are organized and manipulated to establish unity and variety in genres of musical compositions.</p> <p>1.3.12.B.4 Arrange simple pieces for voice or instrument using a variety of traditional and nontraditional sound sources or electronic media, and/or analyze prepared scores using music composition software.</p>
Essential Questions	<p>How does music maintain the listener's interest? How do elements of music (melody, rhythm, harmony, texture, etc.) work together to create a coherent entity?</p>
Skills The Student Will...	<p>Select an appropriate, simple theme to use for a set of variations. Enter the theme into music notation software and exported as MIDI. Import the MIDI file into multi-tracking software. Follow the form of the piece:</p> <ul style="list-style-type: none"> • The theme is presented first. The student is then required to create three variations on the theme using some of the following ideas: <ul style="list-style-type: none"> ○ Altering the original tempo; ○ Changing the rhythm - duple to triple, dotted, etc.; ○ Altering the key – minor to major or vice versa; ○ Changing the instrumentation; ○ Contrasting the “mood” – e.g. lively to grave, serious to humorous, etc. ○ Changing the intensity of the attack ○ Changing the style or genre. • Create a finale, or coda- an ending section, which recaps the main theme. • Produce a stereo file as output.
Assessment	<p>The student's initial theme file is examined for accuracy. Students are evaluated on their accuracy in following the requirements of the project. Evaluation of the audio quality of the final output with special attention to rhythmic and harmonic accuracy, volume balances, panning and equalization. Students present their project: first, by a brief oral description, and secondly, by the class listening to the project.</p>
Literacy Integration	<p>SL.11-12.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.</p>

Unit/Skill: VI. Theme and Variations	
World Language Integration	7.1.NM.A.2 Demonstrate comprehension of simple, oral and written directions, commands, and requests through appropriate physical response.
Technology Integration	8.1 Educational Technology All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.
21st Century Life & Careers	9.4.12.C.(1).3 Employ knowledge and skills related to audio production equipment to demonstrate an understanding of basic tools used in this pathway.

Unit/Skill: VII. The Final Project	
Days	30
NJCCCS	<p>1.1 The Creative Process All students will demonstrate an understanding of the elements and principles that govern the creation of works of art in dance, music, theatre, and visual art.</p> <p>1.2 ADD THIS</p> <p>1.3 Performance All students will synthesize those skills, media, methods, and technologies appropriate to creating, performing, and/or presenting works of art in dance, music, theatre, and visual art.</p> <p>1.4 Aesthetic Responses & Critique Methodologies All students will demonstrate and apply an understanding of arts philosophies, judgment, and analysis to works of art in dance, music, theatre, and visual art.</p>
NJCCCS CPI	<p>1.1.12.B.1 Examine how aspects of meter, rhythm, tonality, intervals, chords, and harmonic progressions are organized and manipulated to establish unity and variety in genres of musical compositions.</p> <p>1.1.12.B.2 Synthesize knowledge of the elements of music in the deconstruction and performance of complex musical scores from diverse cultural contexts.</p> <p>1.3.12.B.2 Analyze how the elements of music are manipulated in original or prepared musical scores.</p> <p>1.3.12.B.3 Improvise works through the conscious manipulation of the elements of music, using a variety of traditional and nontraditional sound sources, including electronic sound-generating equipment and music generation programs.</p> <p>1.3.12.B.4 Arrange simple pieces for voice or instrument using a variety of traditional and nontraditional sound sources or electronic media, and/or analyze prepared scores using music composition software.</p> <p>1.4.12.A.4 Evaluate how exposure to various cultures influences individual, emotional, intellectual, and kinesthetic responses to artwork.</p>
Essential Questions	<p>How does form and texture create interest for the listener?</p> <p>How is variation an important tool for formal organization in music?</p> <p>How does the manipulation of audio frequencies enhance or detract from the overall effect of a piece of music?</p>

Unit/Skill: VII. The Final Project	
Skills The Student Will...	<p>Synthesize the audio processing techniques used throughout the course. Create at least three sections of music of a contrasting nature totaling ten minutes. Utilize all processing techniques studied in class. Keep to predefined time deadlines.</p>
Assessment	<p>Original project proposal is approved by the teacher and must be presented in a timely manner. Students must adhere to time deadlines and project structure. Project workspace must be meticulously organized. Examples of all mixing techniques studied in class must be present. Evaluation of the audio quality of the final output with special attention to rhythmic and harmonic accuracy, volume balances, panning and equalization. Students present their project: first, by a brief oral description, and secondly, by the class listening to the project.</p>
Literacy Integration	<p>SL.11-12.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.</p>
Health & Phys Ed Integration	<p>2.2.12.A.2 Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts.</p>
World Language Integration	<p>7.1.NM.A.2 Demonstrate comprehension of simple, oral and written directions, commands, and requests through appropriate physical response.</p>
Technology Integration	<p>8.1 Educational Technology All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.</p>
21st Century Life & Careers	<p>9.4.12.C.(1).3 Employ knowledge and skills related to audio production equipment to demonstrate an understanding of basic tools used in this pathway.</p>

Bibliography

There are no textbooks for Advanced Music Technology and Applications. The students use two software programs.

Mixcraft Version 5

Sibelius Student Version 6

Webliography

<http://www.soundonsound.com/>

<http://music.tutsplus.com/>

<http://www.synthtopia.com/>

<http://www.emusician.com/index>

<http://www.kaosaudio.com/>

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