DARIEN PUBLIC SCHOOLS

CURRICULUM GUIDE

Music Technology II

Grades 9-12

Approved by the Board of Education
on January 12, 2010

DARIEN PUBLIC SCHOOLS

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SECTION I - Course Information

STATEMENT OF PHILOSOPHY – Darien Public Schools Music Department

Music is an art form based on creating, performing and responding where one's enjoyment increases exponentially with one's understanding.

Music offers unique learning opportunities to explore individual creativity, artistic expression and a more in-depth understanding of past and present cultures in our diverse world community.

A comprehensive music education will enable students to make more informed aesthetic choices, develop their musical abilities through self-discipline and focus and will provide a vehicle to increase their confidence in learning across the entire curriculum.

We believe that all students should have a comprehensive, balanced, sequential curriculum of in-school instruction in music education in accordance with national, state and local standards, and that an education in music and the arts will develop the life-long learning abilities and aesthetic skills necessary to improve the quality of life in a more cultured, educated society.

PROGRAM GOALS

The Darien Public Schools Music Department Curriculum directly reflects the National Standards for Arts Education. We have subsequently adopted the nine standards as our departmental goals and have incorporated them into our K-12 Music program.

Upon graduation from the Darien Public Schools the students who study music should be able to demonstrate skills and knowledge in each of the following content standards:

- Singing, alone and with others, a varied repertoire of music
- Performing on instruments, alone and with others, a varied repertoire of music
- Improvising melodies, variations, and accompaniments
- Composing and arranging music within specified guidelines
- Reading and notating music
- Listening to, analyzing, and describing music
- Evaluating music and music performances
- Understanding relationships between music, the other arts and disciplines outside the arts
- Understanding music in relation to history and culture

OVERVIEW

Music Technology II is a one semester, half-credit elective course offered by the music department to students in grades nine through twelve at Darien High School. The program is designed to broaden the arts education opportunities of students, to offer musical experiences beyond those of the traditional performing ensembles, and to provide students with real-world applications of technologies and best practices currently used in the music industry. The course content is linked to the Grade 8 Music Technology curriculum and to the prerequisite Music Technology I course currently being taught at Darien High School, but has greater emphasis on creating, applying and presenting original music with the use of technology.

Each section of *Music Technology II* meets seven days of each eight day rotation for one semester. Computer workstations, electronic keyboards, and related software and hardware peripherals are provided by the district for in-school use. In addition, students will be trained in the use of audio reinforcement equipment used by the music department and in the high school auditorium. Students may opt to augment their projects with additional instruments, vocal recording, equipment and resources from home; additional equipment/resources may be brought in by the instructor or outside presenters from time to time to further the students' experience with currently available technology.

Instruction will be primarily be hands-on exploration and creating, guided individual and group projects, with some lecture/demonstrations and supplemental reading assignments. The course will explore sound production, recording and transmission, electronic music composition and arranging, live audio reinforcement, multi-track studio recording, editing, mixing and mastering. There will also be an examination of current legal and ethical issues regarding digitally recorded music, publishing, marketing and the recording industry.

The activities in this course will provide students with a foundation in the materials and techniques of current music technology while pointing toward real-life applications and curriculum-related career paths.

ESSENTIAL QUESTIONS

- How does the study of music provide essential ways to understand and express life experiences?
- How does the study of music develop deeper understandings of past and present cultures and prepare students for active participation in creating culture of the present and future?
- How does music develop imagination and creativity and help students to develop the full range of their abilities?
- How does music enable students to make informed aesthetic choices and prepare them for enjoyable recreation and leisure time?
- How does participation in music develop self-discipline, organization and focus and develop the capacity to refine work that aspires to high quality standards?
- How does the deeper understanding of the music making process and the music recording industry prepare students for possible career choices and a life-long involvement in the arts?

PROCESS SKILLS

Throughout the course of studies in *Music Technology II,* students will use the following process skills

- Reading (Comprehending) – Instructions, articles, reference manuals
- Reading (Analyzing) – Equipment specification sheets, articles
- Critical Listening – Commercial recordings, original compositions, live performances
- Demonstrating Knowledge of Technology as a Creative Tool
- Working Independently and Collaboratively on Assignments and Projects
- Evaluating Music and Music Production Based on Established Criteria
- Designing – Audio systems, microphone plots, recording setups
- Creating – Original compositions, arrangements, audio mixes and recordings
- Performing and Presenting Original Compositions, Arrangements, and Projects
- Problem Solving – Application-specific sound design and musical decisions

STUDENT PERFORMANCE SUMMARY

Demonstration – Successful completion of projects demonstrating understanding of required skills and concepts.

Oral Presentation with Visuals (Power Point, Internet site, etc.) (Final project)

Portfolio including audio and video files of original compositions, arrangements, and sound engineering projects.

GRADING GUIDELINES

Category	Expectations of Students	% of Report Card Grade
In-Class Projects/ Homework	100% of all assignments are completed by their respective due dates, and meet criteria defined by rubrics developed for each assignment.	80% of quarter grade
Class Participation	Students are actively engaged in all class discussions and tasks, demonstrating behavior and respect appropriate to the collaborative classroom setting.	20% of quarter grade
Final Exam	In-class presentation of capstone project.	5% of semester grade (combined with final project for 20% total)
Capstone Project	Students create (alone or collaboratively) a project/presentation demonstrating synthesis and application of concepts and techniques learned throughout the course.	15% of semester grade (combined with semester exam for 20% total)

SECTION II – Units of Study

SUMMARY OF UNITS

Unit	Title	Duration (Weeks)
Unit 1:	**Review of essential terminology and concepts**	1
Unit 2:	**Studio techniques – production and effects processing**	2
Unit 3:	**Studio techniques - mixing**	2
Unit 4:	**Studio techniques - mastering**	1
Unit 5:	**Music business – preparing an album for release**	2
Unit 6:	**Film scoring – creating mood and narrative for images**	2
Unit 7:	**Studio techniques – multi-track recording**	2
Unit 8:	**Capstone project**	6

Unit 1. Review of Essential Terminology and Concepts

Essential Questions

- What fundamental vocabulary, skills and understandings are necessary to work effectively with music studio technology?
- How does the study of music provide essential ways to understand and express life experiences?
- How does participation in music develop self-discipline and focus and develop the capacity to refine work and aspire to high quality standards?

Expectations from Mission Statement

In a variety of ways the DHS student will:

- Listen actively and critically.
- Reason effectively and solve problems.
- Demonstrate the skills and real-world contextual knowledge to meet the demands of a changing world.
- Participate effectively and efficiently in groups to pursue and generate information.

CONTENT KNOWLEDGE OBJECTIVES

Initial Understanding

Students will **identify and explain** the various methods and materials covered in Music Technology I, and **describe** how they are applied.

Developing an Interpretation

Students will **examine** various methods and materials of music technology and electronic music composition and **analyze** how they may be appropriately utilized in various situations.

Making Connections

Students will **compare and contrast** various methods and materials of music technology and examine how they are being used in real-world applications.

Taking a Critical Stance

Students will **evaluate** methods and materials of music technology for various real-world applications in terms of practicality, reliability, and versatility.

VOCABULARY

All relevant vocabulary from Music Technology I curriculum units.

ACTIVITIES

- Pre-learning assessment test based on final exam for Music Technology I.
- Walkthroughs of software packages to reacquaint students with user interfaces and processes
- In-class lecture/discussion review of important terminology and concepts evidenced by performance on pre-learning assessment.

PERFORMANCE ASSESSMENT

- Written and verbal assessment of pre-learning test.
- Verbal assessment of performance on software modules.

CAREER AWARENESS (where appropriate)

Producer, studio engineer, recording engineer, composer, arranger, performing musician

MATERIALS AND SUPPLIES

Pre-learning assessment exam (written), Computer workstations and associated software, assorted audio reinforcement gear (as needed)

Unit 2. Studio Techniques – Production and Effects Processing

Essential Questions

- How can performances be transformed once they are recorded?
- How does the study of music develop deeper understandings of past and present cultures and prepare students for active participation in creating culture of the present and future?
- How does music enable students to make informed aesthetic choices and prepare them for enjoyable recreation and leisure time?
- How does participation in music develop self-discipline and focus and develop the capacity to refine work and aspire to high quality standards?

Expectations from Mission Statement

In a variety of ways the DHS student will:

- Listen actively and critically.
- Reason effectively and solve problems.
- Demonstrate the skills and real-world contextual knowledge to meet the demands of a changing world.
- Analyze problems from multiple perspectives by understanding past and present cultures.

CONTENT KNOWLEDGE OBJECTIVES

Initial Understanding

Through lecture and demonstration, students will **identify and explain** the mechanics of sound processing and explore history of studio effects processing.

Developing an Interpretation

Students will **examine** various methods of sound processing and **analyze** benefits and limitations of various methods.

Making Connections

Students **compare and contrast** various methods of sound processing used in contemporary commercial recordings.

Taking a Critical Stance

Students **make judgments** as to best methods of sound processing for various aesthetic, practical and technologically necessary reasons.

VOCABULARY

Compressor, limiter, expander, gate, reverb, delay, chorus, distortion, EQ, pan, flanger, phaser, amp emulator, vocal transformer.

ACTIVITIES

- Real World™ Remix advanced project
- Classroom lectures/discussions

PERFORMANCE ASSESSMENT

Student Creation and Presentation of remix project

CAREER AWARENESS (where appropriate)

Recording engineer, recording artist, producer, performing artist.

MATERIALS AND SUPPLIES

Music Tech lab workstations: 1GHz eMac G4s with dual-layer SuperDrive™, installed software Garage Band™, Safari™, and iTunes™. Sample packs downloaded from http://realworldremixed.com. Darien school webmail system (for creation of student accounts at above website). Korg X5D MIDI controllers/keyboard synthesizers, M-Audio USB Uno™ MIDI interfaces, Korg GEC audio network, blank CD-R discs for production and archiving of student projects.

Unit 3. Studio Techniques - Mixing

Essential Questions

- How do technical musical choices made post-performance affect the quality of the final recorded product?
- How does the study of music develop deeper understandings of past and present cultures and prepare students for active participation in creating culture of the present and future?
- How does music enable students to make informed aesthetic choices and prepare them for enjoyable recreation and leisure time?
- How does participation in music develop self-discipline and focus and develop the capacity to refine work and aspire to high quality standards?

Expectations from Mission Statement

In a variety of ways the DHS student will:

- Listen actively and critically.
- Reason effectively and solve problems.
- Demonstrate the skills and real-world contextual knowledge to meet the demands of a changing world.
- Analyze problems from multiple perspectives by understanding past and present cultures.
- Participate effectively and efficiently in groups to pursue and generate information.
- Access and evaluate multi-media and print information efficiently and critically.
- Explore, discuss and question the moral issues that arise within the context of his/her day.

CONTENT KNOWLEDGE OBJECTIVES

Initial Understanding

Students will **describe** various methods of presenting a musical recording.

Developing an Interpretation

Students will **explain** the effects of different mixes on the sound of a recording.

Making Connections

Students **explore** relationships between quality of mixing and commercial reception.
Students **discuss** contemporary remixes and remixed rereleases of commercial recordings.

Taking a Critical Stance

Students **make judgments** as to the aesthetic pros and cons of various mixing choices.

VOCABULARY

Fader, pan, balance, dynamics, presence

ACTIVITIES

- In-class listening and discussion of commercial recordings.
- Digital Performer™ mix of multi-track live audio.

PERFORMANCE ASSESSMENT

Presentation/submission of finished multi-track mix.

CAREER AWARENESS (where appropriate)

Recording engineer, studio engineer, performing artist.

ADDITIONAL TEXTS/ RESOURCES FOR USE BY STUDENTS

Various articles and essays from contemporary print and online sources.

MATERIALS AND SUPPLIES

Music Tech lab workstations: 1GHz eMac G4s with dual-layer SuperDrive™, MOTU Digital Performer™, and iTunes™. Korg GEC audio network, lab reference monitors, pre-recorded multitrack audio files, blank CD-R discs for production and archiving of student projects.

Unit 4. Studio Techniques - Mastering

Essential Questions

- How do technical aspects of music post-production impact the final product?
- How does the study of music provide essential ways to understand and express life experiences?
- How does participation in music develop self-discipline and focus and develop the capacity to refine work and aspire to high quality standards?

Expectations from Mission Statement

In a variety of ways the DHS student will:

- Listen actively and critically.
- Reason effectively and solve problems.
- Demonstrate the skills and real-world contextual knowledge to meet the demands of a changing world.
- Participate effectively and efficiently in groups to pursue and generate information.

CONTENT KNOWLEDGE OBJECTIVES

Initial Understanding

Through demonstration, experimentation and lecture, students will **define and explain** common techniques of post-production mastering.

Developing an Interpretation

Students will **examine** various methods and materials used in mastering and **analyze** benefits and limitations of each.

Making Connections

Students will **compare and contrast** various techniques in mastering different genres of real-world music recordings.

Taking a Critical Stance

Students will **evaluate** quality of mastering of commercially released musical recordings with regard to technological and aesthetic effectiveness.

VOCABULARY

Compression, EQ, edge edits, distortion, clipping, mastering, post-production, normalization, peak limit, loudness

ACTIVITIES

- Listening to various mastered and raw recordings
- Mastering of a previously mixed stereo file

PERFORMANCE ASSESSMENT

Presentation/submission of finished mastered track.

CAREER AWARENESS (where appropriate)

Studio engineer, recording artist

ADDITIONAL TEXTS/ RESOURCES FOR USE BY STUDENTS

Various contemporary print and online articles on the subject.

MATERIALS AND SUPPLIES

Music Tech lab workstations: 1GHz eMac G4s with dual-layer SuperDrive™, installed software Audacity™ and iTunes™. Korg GEC audio network, lab reference monitors, blank CD-R discs for production and archiving of student projects.

Unit 5. Music Business – Preparing Music for Release

Essential Questions

- How do legal and procedural practices of the music publishing and distribution business impact performing and recording artists?
- How does the study of music provide essential ways to understand and express life experiences?
- How does participation in music develop self-discipline and focus and develop the capacity to refine work and aspire to high quality standards?

Expectations from Mission Statement

In a variety of ways the DHS student will:

- Read and listen actively and critically.
- Reason effectively and solve problems.
- Demonstrate the skills and real-world contextual knowledge to meet the demands of a changing world.
- Participate effectively and efficiently in groups to pursue and generate information.

CONTENT KNOWLEDGE OBJECTIVES

Initial Understanding

Through demonstration, experimentation and lecture students will **describe** essential steps in preparing a recording for commercial release

Developing an Interpretation

Students will **assess** advantages and limitations of various strategies in product development.

Making Connections

Students will **compare and contrast** various forms of musical product and methods of development/preparation.

Taking a Critical Stance

Students **make judgments** as to best practices and formats for commercial music release and **evaluate** pros and cons of different formats and retail venues.

VOCABULARY

Copyright, mechanical license, synchronization license, track sheet, graphic layout, credits, master recording, replication, duplication, digital delivery, proof, promotion

ACTIVITIES

- Mock securing of mechanical license through Harry Fox agency.
- Design of pre-press media package for commercial CD release.

PERFORMANCE ASSESSMENT

- Demonstration of correct filing for mechanical license
- Presentation/submission of pre-press media package for commercial CD release

CAREER AWARENESS (where appropriate)

Performing/recording artist, graphic designer, music business attorney, agent, manager, producer, engineer, retail sales representative, promoter.

MATERIALS AND SUPPLIES

Various web-based resources for rights management and CD production, graphic design tools.

Unit 6. Film Scoring – Creating Mood and Narrative for Images

Essential Questions

- How can music be used to support and enhance visual images?
- How does the study of music provide essential ways to understand and express life experiences?
- How does participation in music develop self-discipline and focus and develop the capacity to refine work and aspire to high quality standards?

Expectations from Mission Statement

In a variety of ways the DHS student will:

- Listen actively and critically.
- Reason effectively and solve problems.
- Demonstrate the skills and real-world contextual knowledge to meet the demands of a changing world.

CONTENT KNOWLEDGE OBJECTIVES

Initial Understanding

Through demonstration and lecture students will **identify and explain** the process of creating musical accompaniment for visual images on film.

Developing an Interpretation

Students will **describe** various techniques and strategies for creating a musical soundtrack for a variety of film styles.

Making Connections

Students will **compare and contrast** scores used in historical and contemporary films.

Taking a Critical Stance

Students will **create** their own scores for film scenes based on their interpretations of mood and action. Students will **critically assess** existing film scores.

VOCABULARY

Spotting, hit points, frame rate, musical mode, tempo, pacing, dynamics, instrumentation

Student Composition/Arrangement Projects

- Critical analysis discussion of professionally scored film excerpts
- Film scoring spotting session
- Creation of original score for public domain film clip

PERFORMANCE ASSESSMENT

Submission/presentation of completed film score.

CAREER AWARENESS (where appropriate)

Composer, arranger, producer, director

ADDITIONAL TEXTS/ RESOURCES FOR USE BY STUDENTS

Public domain film clips from the online Archive of the Moving Image, "Spotting" unit from Berklee College of Music's free online curriculum.

MATERIALS AND SUPPLIES

Music Tech lab workstations: 1GHz eMac G4s with dual-layer SuperDrive™, installed software Garage Band™, MOTU Digital Performer™, and iTunes™. Korg X5D MIDI controllers/keyboard synthesizers, M-Audio USB Uno™ MIDI interfaces, Korg GEC audio network, blank CD-R discs for production and archiving of student projects.

Unit 7. Studio Techniques – Multitrack Recording

Essential Questions

- How does technology impact music performance?
- How does the study of music provide essential ways to understand and express life experiences?
- How does participation in music develop self-discipline and focus and develop the capacity to refine work and aspire to high quality standards?

Expectations from Mission Statement

In a variety of ways the DHS student will:

- Listen actively and critically.
- Reason effectively and solve problems.
- Demonstrate the skills and real-world contextual knowledge to meet the demands of a changing world.

CONTENT KNOWLEDGE OBJECTIVES

Initial Understanding

Students will **identify and explain** methods of digital recording and production, using knowledge acquired from the previous units.

Developing an Interpretation

Students will **examine** various tools for music recording and production and **analyze** benefits and limitations of various methods.

Making Connections

Students will **compare and contrast** recording and production techniques used in current popular music.

Taking a Critical Stance

Students use various recording, production and compositional techniques selectively to **create and produce** an original musical work.

VOCABULARY

Mix, master, balance, pan, compression, track bouncing, peak level, normalize

ACTIVITIES

- Listening Activity – Evaluation of commercially produced recordings
- Recording engineering – selection of proper microphones, cables and equipment to adequately record a live ensemble
- Individual and group recording/production projects – Combine loops, MIDI, and live audio to produce an original musical work that meets industry standards for production

PERFORMANCE ASSESSMENT

Assessment of actual production projects by teacher, peers, and student.

CAREER AWARENESS (where appropriate)

Recording engineer, producer, performing/recording artist

MATERIALS AND SUPPLIES

Music Tech lab workstations: 1GHz eMac G4s with dual-layer SuperDrive™, installed software Garage Band™, MOTU Digital Performer™, and iTunes™. Korg X5D MIDI controllers/keyboard synthesizers, M-Audio USB Uno™ MIDI interfaces, Korg GEC audio network, blank CD-R discs for production and archiving of student projects. Microphones and accessories as needed to record, MOTU 828 FireWire audio interface, Mackie 1604-VLZ mixing board with channel direct outs.

Unit 8. Capstone Project

Essential Questions

- How can the various methods and materials of music technology be used to create an original artistic and/or commercial work?
- How does the study of music provide essential ways to understand and express life experiences?
- How does participation in music develop self-discipline and focus and develop the capacity to refine work and aspire to high quality standards?

Expectations from Mission Statement

In a variety of ways the DHS student will:

- Listen actively and critically.
- Reason effectively and solve problems.
- Demonstrate the skills and real-world contextual knowledge to meet the demands of a changing world.
- Participate effectively and efficiently in groups to pursue and generate information.

CONTENT KNOWLEDGE OBJECTIVES

Initial Understanding

Through demonstration and lecture students will **identify and explain** the process of **creating** and realizing a complete creative work.

Developing an Interpretation

Students will **describe** various techniques and strategies for **creating** an original work utilizing music technology.

Making Connections

Students will **compare and contrast** various strategies, materials and methods used to produce an original work.

Taking a Critical Stance

Students will **create**, independently or collaboratively, an original musical work. Students will **critically assess** their own and their peers' final projects.

VOCABULARY

To be determined by nature of the individual project selected.

ACTIVITIES

- Brainstorming of project ideas
- Conferencing with teacher to develop project plan
- Creation of original work
- Presentation of original work to class

PERFORMANCE ASSESSMENT

Presentation and submission of original work.

CAREER AWARENESS (where appropriate)

To be determined by nature of project selected

MATERIALS AND SUPPLIES

Will vary with nature of project selected.

SECTION III Goals and Standards

RELATED GOALS and STANDARDS

CONNECTICUT AND NATIONAL STANDARDS FOR MUSIC EDUCATION

1. Students will sing, alone and with others, a varied repertoire of music.
2. Students will play, alone and with others, a varied repertoire of instrumental music.
3. Students will improvise melodies, variations and accompaniments.
4. Students will compose and arrange music.
5. Students will read and notate music.
6. Students will listen to, analyze and describe music.
7. Students will evaluate music and music performances.
8. Students will make connections between music, other disciplines and daily life.
9. Students will understand music in relation to history and culture.

The goals for Arts Education as stated in the State of Connecticut Board of Education are as follows:
As a result of education in Grades K-12, students will:

1. create (imagine, experiment, plan, make evaluate, refine and present/exhibit) art works that express concepts, ideas and feelings;
2. perform (select, analyze, interpret, rehearse, evaluate, refine and present) diverse art works in each art form;
3. respond (select, analyze, describe, experience, interpret and evaluate) with understanding to diverse art works and performances in each art form;
4. understand and use the materials, techniques, forms (structures, style, genres), language, notation (written symbol system) and literature/repertoire of each art form;
5. understand the importance of the arts in expressing and illuminating human experience, beliefs and values;
6. identify representative works and recognize the characteristics of art, music, theater and dance from different historical periods and cultures;
7. develop sufficient mastery of at least one art form to continue lifelong involvement in that art form not only as a responder (audience), but also as creators or performers;
8. develop sufficient mastery of at least one art form to be able to pursue further study, if they choose, in preparation for a career;
9. seek arts experiences and participate in the artistic life of the school and community; and

10. understand the connections among the arts, other disciplines and daily life.

SECTION IV - Learning Resources

DHS Music Lab – Macintosh PowerPC computers equipped with dual-layer DVD/CD burners, Korg MIDI workstations, and Garage Band™, Digital Performer™ and Audacity™ composition, arranging, and production software. Also, GEC3 Group Controller, LCD Projection System, M-Audio Room Speakers

SUPPLEMENTAL RESOURCES

Various materials available on the web, as well as readings excerpted from contemporary music industry publications. Relevant guest speakers and field trips related to the recording industry may be incorporated as resources and availability allow.

Link to Glossary of Music Technology Terminology

The following link may be useful to clarify many of the terms specific to the field of Music Technology.

http://classes.berklee.edu/ms/classsupport/glossary.htm