COURSE OUTLINE

Music 177
Introduction to Music Technology and Sequencing

Catalog Statement

MUSIC 177 offers an introduction to the current applications of computers and software used in music creation, music sequencing, and music notation. A thorough understanding of current practices in music technology is essential to a musician's success in today's creative world. Students learn how recording, synthesis, notation, and electronic music creation were practiced before the era of desktop computers. Students learn how to use current music software to create music with an emphasis on the musical instrument digital interface (MIDI), sequencing, and synthesis. Students also learn to use notation software to create and display readable music.

Total Lecture Units: 3.0
Total Laboratory Units: 0.0
Total Course Units: 3.0

Total Lecture Hours: 48.0
Total Laboratory Hours: 0.0
Total Laboratory Hours To Be Arranged: 0.0
Total Faculty Contact Hours: 48.0

Prerequisite: None.

Course Entry Expectations

Prior to enrolling in the course, the student should be able to:
N/A

Course Exit Standards

Upon successful completion of the required coursework, the student will be able to:

- describe music technology practices before desktop computers became available;
- identify various types of hardware and software used for music creation;
- complete simple demo projects using current sequencing/digital audio workstation (DAW) software;
- identify basic computer and music technology terminology;
- complete simple projects using music notation software;
- describe and use basic signal processing and synthesis techniques.

Course Content

Total Faculty Contact Hours = 48.0

Introduction to Music Technology **(3 hours)**
Computers and software
History of Technology 3 hours
Acoustic and electrical recording and editing

Electronic instruments and music synthesis
The modern digital age
Setting Up a Project Studio **(3 hours)**
Hardware
Software
Connections
Introduction to music performance data structures **(4 hours)**
MIDI data and networks
MIDI math, structures, and messages
Other music data protocols
Sequencing Concepts **(10 hours)**
Sequencer operation
Real-time and step-time entry and editing techniques
Sequencing bass and drum grooves
Using and editing controller data
Digital Recording Concepts **(4 hours)**
Sound and auditory perception
Analog versus digital
The signal chain and the mixing process
Music Synthesis **(6 hours)**
Synthesizer elements and signal flow
Synthesis methods
Sound creation and sound design
Loop-Based Music Production **(6 hours)**
Using loop software to create music
Loop creation
Music Notation Software **(9 hours)**
Music notation concepts
Entry methods
Workflow from score set-up to final output

Methods of Instruction

The following methods of instruction may be used in this course:

- lecture and demonstration;
- multimedia;
- peer review;
- discussion and review;
- listening and analysis of music;
- online materials.

Out of Class Assignments

The following out of class assignments may be used in this course:

- reading;

- listening and analysis (e.g. listening to Switched on Bach and providing a description of sounds and synthesis techniques that are heard);
- exercises;
- projects.

Methods of Evaluation

The following methods of evaluation may be used in this course:

- participation;
- project evaluations;
- midterm examinations;
- final examinations.

Textbooks

Hosken, Dan. *An Introduction to Music Technology*. New York: Routledge, 2011. Print.
12th Grade Textbook Reading Level. ISBN: 9780415997294.

Nahmani, David. *LogicPro 9 and Logic Express*. Berkeley: Peachpit Press, 2010. Print.
12th Grade Textbook Reading Level. ISBN: 9780321636805.

Humberstone, James. *Sibelius 7 Music Notation Essentials*. Boston: Cengage, 2012. Print.
12th Grade Textbook Reading Level. ISBN: 9781133788829.

Student Learning Outcomes

Upon successful completion of the required coursework, the student will be able to:

- describe music technology practices before desktop computers became available;
- identify various types of hardware and software used for music creation;
- complete simple demo projects using current sequencing/digital audio workstation (DAW) software;
- identify basic computer and music technology terminology;
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