MUS A110: COMPUTERS IN MUSIC 1

Item	Value
Curriculum Committee Approval Date	03/23/2022
Top Code	100400 - Music
Units	3 Total Units
Hours	90 Total Hours (Lecture Hours 36; Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

Designed to introduce the layman or computer professional to the rapidly evolving use of computers and related digital technology in music. Emphasis will be given to professional music software, dedicated music systems, MIDI (Musical Instrument Digital Interface) and digital audio. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Create and perform a musical composition utilizing a standard scoring program.
2. Create a musical composition utilizing standard music production programs that demonstrate competency in the following techniques: a. Looping b. Sequencing c. Editing d. Virtual synthesis

Course Objectives

- 1. Learn the concepts and facts necessary to fully use MIDI (Musical Instrument Digital Interface) and digital audio in performance and recording situations.
- 2. Create musical compositions and arrangements to demonstrate their understanding of this digital medium.
- 3. Demonstrate applications of standard scoring programs.
- 4. Demonstrate applications of standard sequencing programs.
- 5. Demonstrate working knowledge of standard scoring programs.
- 6. Demonstrate working knowledge of standard sequencing programs.
- 7. Demonstrate knowledge of the history and development of computers in music.
- 8. Manipulate standard MIDI files.
- 9. Compare and contrast traditional scoring techniques with software based scoring techniques.

Lecture Content

Overview of computer music including MIDI and digital audio Overview of the MIDI Specification General MIDI MIDI messages MIDI controllers MIDI and SMPTE Time Code System Exclusive messages Introduction to the basic elements of music Pitch Rhythm Harmony Timbre Dynamics Introduction to professional music notation software Scoring Looping Sequencing Editing Synthesis Virtual synthesis Application programs Finale (PC and Mac) Preparation of tutorial piece Preparation of musical score Conversion of score to a Standard MIDI File (SMF) Introduction to professional Music Production software Application programs Sequencing techniques used in popular, jazz, rock, electronic and classical music Sonar (PC) Digital Performer (PC Mac) Cubase (PC and Mac) Acid FL Studio Orchestration of converted piano composition Introduction to sequencer editing functions Introduction to music synthesis Analog synthesis Digital synthesis Digital sampling Introduction to digital audio Application programs Sound Forge (PC) WaveLab (PC) Peak (Mac) Digital audio terminology Brief history of electronic music Introduction to the use of electronic music in film scores Standard MIDI Files Creating Manipulating Drum and rhythm sequencing

Lab Content

Finale: How to save to your folder on the desktop. Naming conventions: name schemes that allow instructor to ID student projects left on desktop. Numbering of measures of assigned piece. Focus on notes rhythms, leave articulations, dynamics tempo descriptors for phase 2. Deleting fermati. Identifying measures that require entering Layer 2. Indentifying pieces that use treble clef for the Left hand. The importance of playback. Transferring the Finale file (.mus) to the "house" flash drive. Finale to Cubase: Doing a Save As turning the Finale file (.mus) into a Standard MIDI File (SMF or .mid). Cubase: Importing the .mid file (SMF) into Cubase. Saving the .mid file as a Cubase file (.cpr). Preparing the 2 tracks that were imported for copying. Connecting the Virtual Studio Technology (VST) instrument to the tracks. Deleting superfluous controller data. Using the Split tool to create 1 or 2 measure "chunks." Drag Drop 3 copies of each track (4 RH/4 LH). Set each track to a unique MIDI channel (1-8). Selectively use the Mute tool to create a varied texture. DATT: D: Create drum track using the MIDI drum feature. A: How to import Digital Audio (loops) from license-free archives. T: Working with the Tempo track to create accelerandos, ritardandos, etc. T: Transpose MIDI track up or down to create a larger sonic field. Setting the L R locators for Audio Export. Copying the Audio Interchange File Format (.aif) to the "house" flash drive.

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)
- Lab (04)
- DE Live Online Lab (04S)
- DE Online Lab (04X)

Instructional Techniques

Detailed computer-generated lecture/demonstrations. Hands-on computer lab work. Instructional DVDs, CDs, QuickTime and YouTube clips, live performances and guest speakers.

Reading Assignments

Syllabus reading: Finale Cubase Tutorials.

Writing Assignments

Students must demonstrate proficiency in MIDI digital audio to the instructor s satisfaction through class projects to complete the course. Students are given a written Midterm and Final examination.

Out-of-class Assignments

Electronica performances, particularly those that feature alumni. Visiting SoundCloud BandCamp websites for current past students' projects.

Demonstration of Critical Thinking

Successful completion of individual student projects; periodic written testing.

Required Writing, Problem Solving, Skills Demonstration

Students must demonstrate proficiency in MIDI digital audio to the instructor s satisfaction through class projects to complete the course. Students are given a written Midterm and Final examination.

Eligible Disciplines

Music: Master's degree in music OR bachelor's degree in music AND master's degree in humanities OR the equivalent. Master's degree required.