

**MUSC 50 Course Outline as of Fall 2015****CATALOG INFORMATION**

Dept and Nbr: MUSC 50 Title: INTRODUCTION TO MIDI

Full Title: Introduction to MIDI

Last Reviewed: 11/9/2020

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	2.00	17.5	Lab Scheduled	35.00
		Contact DHR	1.00		Contact DHR	17.50
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

An introduction to music sequencing and production with MIDI (Musical Instrument Digital Interface). Students will receive a solid technical foundation in MIDI, synthesis, and computer-based music notation, as well as hands-on experience with state-of-the-art industry software. Designed for students with an interest in composition, songwriting, digital audio, and/or multimedia.

**Prerequisites/Corequisites:****Recommended Preparation:****Limits on Enrollment:****Schedule of Classes Information:**

Description: An introduction to music sequencing and production with MIDI (Musical Instrument Digital Interface). Students will receive a solid technical foundation in MIDI, synthesis, and computer-based music notation, as well as hands-on experience with state-of-the-art industry software. Designed for students with an interest in composition, songwriting, digital

audio, and/or multimedia. (Grade Only)

Prerequisites/Corequisites:

Recommended:

Limits on Enrollment:

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:

<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
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<b>CSU Transfer:</b>	Transferable	Effective:	Fall 2009	Inactive:
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<b>UC Transfer:</b>		Effective:		Inactive:
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### **CID:**

CID Descriptor: CMUS 100X Introduction to Music Technology

SRJC Equivalent Course(s): MUSC50

### **Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Upon completion of this course, students will be able to apply a working knowledge of MIDI terminology, sequencing, and synthesis to produce musical sequences and compositions on a MIDI workstation.

### **Objectives:**

Upon completion of this course, students will be able to:

1. Explain the theoretical basis of MIDI and trace its historical development.
2. Utilize and apply a working vocabulary of MIDI terminology.
3. Demonstrate hands-on proficiency with a MIDI sequencer.
4. Explain and apply the concepts of hardware- and computer-based synthesis.
5. Demonstrate working knowledge of keyboard synthesizers, virtual synths, samplers, drum modules, and other MIDI sound generators.

### **Topics and Scope:**

I. The History and Development of MIDI

II. The MIDI Specification

A. MIDI Devices

B. MIDI Channels (1-16)

C. MIDI Hardware signal path

D. MIDI Channel messages

1. Channel voice messages

- 2. Channel mode messages
- E. MIDI System messages (global)
  - 1. System common messages
  - 2. System real-time messages
  - 3. System exclusive messages
- F. Global functions
- G. The General MIDI Spec
- III. MIDI In a Digital Audio Workstation
  - A. The basics
    - 1. Starting a New Project & Saving
    - 2. Audio & MIDI Tracks
      - a. Record/play/mute/solo
      - b. Softsynths (instruments)
  - B. Recording modes
  - C. Converting audio to MIDI
  - D. Work flow schemes: Freeze & Resample
  - E. Elastic Audio: Warping
  - F. Working with grooves
- IV. Hardware- vs. Computer-Based Synthesis
  - A. Analog (subtractive) synthesis
    - 1. Three elements of sound: pitch, timbre, and amplitude
    - 2. Voltage-Controlled Oscillators (VCOs): pitch
    - 3. Basic waveforms
    - 4. Filters (timbre)
    - 5. Amplifiers (amplitude)
    - 6. Modifiers
      - a. Envelopes
      - b. Low Frequency Oscillator (LFO)
  - B. Frequency Modulation (FM) synthesis
    - 1. Carriers
    - 2. Modulators
  - C. Wavetable synthesis
  - D. Introduction to digital sampling
  - E. Modeling synths
  - F. Controlling synth parameters within a DAW
- V. Common Modalities of DAWs: Ableton Live vs. Pro Tools
  - A. Multitimbral synthesizers
  - B. Sequencers
  - C. ReWire data transfer protocol

**Assignment:**

1. View online tutorials 2 hours per week at Groove3.com.
2. Weekly MIDI projects and weekly project review.
3. Quizzes (1-3) on vocabulary and technical terminology.
4. Completion of required laboratory hours.
5. Final project: An original MIDI sequence or composition (minimum of 3 minutes in length) that demonstrates mastery of the concepts of the course.

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing  
0 - 0%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

MIDI project(s)

Problem solving  
40 - 55%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Hands-on proficiency demonstrations

Skill Demonstrations  
25 - 35%

**Exams:** All forms of formal testing, other than skill performance exams.

Terminology quizzes

Exams  
10 - 25%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation, lab hours

Other Category  
5 - 10%

**Representative Textbooks and Materials:**

Online tutorials: Groove3.com (all-access pass)

The MIDI Manual: A Practical Guide to MIDI in the Project Studio (3rd). Huber, David Miles. Focal Press: 2007 (Kindle Edition 2012)

Instructor prepared materials.