MTEC 311: MIDI Music Production for the Performing Musician
20143 Course Syllabus

Instructor:
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Office Hours: on-campus Monday/Wednesday 10 - 11:30am, Thursday 12 - 2pm; other meetings happily scheduled by appointment.

Course Description
MIDI Music Production is an introduction to the techniques of sequencing and recording musical compositions via MIDI on personal computers. Discussions will also include a study of the hardware and software required, processes and functions common to all sequencers and performance, editing and orchestration techniques that yield a musical result.

Course Objectives:
By the end of this class students will be able to produce a MIDI recording of their compositions and accompaniments for solo and ensemble performances. In addition, they will be able to export the MIDI recording to a musical notation program create parts for live performance. Students will also be familiar with a wide variety of MIDI software and hardware that will enable them to effectively purchase and put together a home MIDI studio.

Requirements, Exams and Grading Information:
Student assessment in MUSC 311 will consist of short practical assignments, a midterm exam and a final project. Unless otherwise noted, all exercises are due one week from the date assigned. All assignments are to be turned in to the class folder on the Overture server and must carefully follow file naming conventions, file management and format guidelines. Instructions for the term project will be available at a later date.

The midterm-exam will be a hands-on exam designed to test the student's practical skills. A study guide will be available the class meeting prior to the test. Tests must be taken during the scheduled time. Make-up exams will only be allowed for documented illness and emergencies.

The final project will consist of a sequence of 10-15 musical parts, approximately 65 measures in length. Students can choose 20th or 21st century classical scores, jazz scores or original compositions subject to the instructor's approval. Final projects will be presented in class during finals week. Further instructions will be available at a later date.

Grading Summary:
1. Participation   10%
2. Exercises   40% total
3. Midterm Exam   20%
4. Final Project   30%

Letter grades are assigned strictly by percentage: 90+ = A, 80 – 89.99 = B, 70 – 79.99 = C, 60 – 69.99 = D, < 60 = F. Grades ending in 0 but less than 4 are minus, while those ending in 7 but less than 0 are plus (except for A, which has no plus grade). Grades are not "curved" or "rounded" – please do not ask.

Class Texts:

Huber, David Miles. *The MIDI Manual* (3rd Edition). Focal Press (2007). **Recommended**.

Gilreath Paul, Jim Aikin, Omar Torres. *The Guide to MIDI Orchestration*. Musicworks; 3rd edition (2004). Recommended. (The text is listed as GMO in the course reading assignments).

Pejrolo, Andrea. *Creative Sequencing Techniques for Music Production*. Focal Press (2005). Recommended. (The text is listed as CST in the course reading assignments).

David Nahmani, *Logic Pro X,* Peachpit Press, ISBN 978-0321967596 (optional, but highly recommended).

Supplementary Materials:
1. Headphones (Sony, MDR-7506 required)
2. USB Memory Stick

Communication:

Please make it a habit to use/check your USC E-mail account. Any E-mails I send to the class will use that account. ***Please add "311" in the subject header of all emails that you send me*** This will help me to organize all the emails that I receive and respond to you more quickly. In addition all course materials and class grades will be posted on BlackBoard (http://blackboard.usc.edu). For example the course syllabus can be found under Course Information, lecture notes under Course Documentation, and exercise and project instructions under Assignments.

Disabilities:

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.-5:00 p.m. Monday through Friday. The phone number for DSP is 213/740-0776.

Tentative Schedule:

			Reading Assignments
Week 1	08/28	*The MIDI Studio Setup* MIDI language MIDI devices and Instruments	MM – 1, 3, 4
Week 2	09/04	*Introduction to Logic Pro* MIDI setup The Arrange window Track types, views Viewing, sizing tracks vertically, horizontally The Transport window Playback shortcuts	Lecture Notes

Week 3 09/11 *Basic MIDI Sequencing*   MM 2, 5
        MIDI signal routing
        Click tracks
        Track setup
        Introduction to Virtual Instruments
        Real time recording
        Step-time recording
        Buffer settings
        Overdubbing, MIDI-merge, punch-in/ punch out

   Exercise 1: Sequencing exercise

Week 4 09/18 *MIDI Editing*   Handout
        MIDI note-on messages, velocity, transposition, duration
        Quantization basics
        Graphic editors
        Score editor
        Standard MIDI files, import/export

   Exercise 2: MIDI Editing exercise

Week 5 09/25 *MIDI Editing II and VI Samplers* Handout
        Copy and paste
        Multi-output virtual instrument setup
        Articulation and Sequencing
        Event list editing, filter
        Memory Locations

   Exercise 3: Working with articulations

Week 6: 10/02 *Drum Sequencing*   Handout
        Virtual drummers (Drummer) and Pattern sequencers (Ultrabeat)
        Programming effective drum parts
        MIDI Looping
        Introduction to automation
        Working with audio files
        Layering MIDI tracks

   Exercise 4: Drum sequencing

Week 7   10/09   Midterm Examination

Week 8   10/16   *MIDI Messages 2 and Musical Expression*   MM - 2
                        Rewire and Rewire Programs (Reason, Live)
                        MIDI Latency and MIDI Offsets
                        Continuous controller messages and editing
                                Volume, pan, etc.
                                Polyphonic aftertouch
                                Data thinning

        Exercise: 5: Continuous controllers exercise

Week 9   10/23   Subtractive Analog Synthesis
                        Analog synthesis overview
                        Filters, cutoff frequency, resonance
                        LFOs, envelopes and modulation
                        Arpeggiators and step sequencers

        Exercise 6: Synthesizer exercise

Week 10   10/30   *MIDI Orchestration Techniques 1 and Virtual Instruments 2*
                        Rhythm section tips   GMO – Chapter 2
                        Keyboard emulation plug-ins   CST – Chapter 5
                        Guitar and bass reamping plug-ins
                        Final Project explanation and expectations

        Exercise 7: Rhythm section exercise

Week 11   11/06   *MIDI Orchestration Techniques 2*   GMO Chapter 3, 5
                        Woodwind orchestration tips
                        Brass orchestration tips
                        Kontakt Presets
                        Complex tempo tracks
                        Proposal check for Final Project

        Exercise 8: Orchestra excerpt exercise

Week 12   11/13   *Working with Audio Timing*   Handout
                        Quantizing audio
                        FlexTime basics
                        Audio looping

        Exercise 9: Audio beat mapping exercise

Week 13	11/20	*Working with Audio Tuning*	Handout
		Correcting pitch in audio	
		Flex Pitch basics	

Exercise 10: Audio pitch correct exercise

Week 14	11/27	*Thanksgiving Holiday (class does not meet)*	

Week 15	12/04	*Finishing a MIDI Project*	Handout

                       Duplicating tracks/Layering sounds
                       Signal Processing
                       Automation/Continuous Controllers
                       Dither/Bounce to Disk
Final Projects Progress Check
Students work on projects in class
Instructor check's student progress and helps resolve student problems

12/07   **Final Projects Due at 5pm. There will be no Final Exam.**

Important Note! The G147 lab will be **closed** as of 5pm on 12/09. *There will be no open lab time after that date. **There will be no exceptions to this policy**.* Please plan accordingly.