

## AUBURN UNIVERSITY COURSE SYLLABUS

**Course Number:** CTMU 7550/7556  
**Course Title:** Applications of Technology in Music Education  
**Credit Hours:** 3 Semester Hours  
**Prerequisites:** Admission to Graduate School  
**Co-requisites:** none  
**Updated:** March 2014

### COURSE DESCRIPTION

Current tools, skills, and concepts for creating aural and visual interactive applications. The technology focus of this course is the development of basic MIDI, computer music sequencing and notation skills for music teaching.

### REQUIRED MATERIALS

1. Computer capable of running the music software (usually a faster processor and larger hard drive)
2. A MIDI capable piano keyboard, or MIDI controller and a way to connect the keyboard/controller to your computer. "Modern" keyboards connect via USB, "Older" keyboard may need a USB MIDI interface.
3. Note – if you have an iPad, it is possible to use it as a MIDI controller using the app Pianist Pro – follow the directions for connecting it (these are available on the Canvas site). There are now other options for iPad as well.
4. Microsoft Office – Word, Excel, PowerPoint
5. OpenOffice.org (free download) – Database
6. Studio One (free version works for what we will be doing and is available for MAC or WIN).
7. Soundation (free web-based sequencer)
8. Finale, Sibelius, Noteflight.com or other notation software
9. Audacity (free download)
10. If time allows in the course, we will use free versions of certain software to look animation (I will show an example in class – this could replace "powerpoint presentations").

### STUDENT LEARNING OUTCOMES

The student will have the ability to...

1. Describe the structure of hardware and software components used in music instruction, evaluate and select hardware and software for music instruction, and produce materials for music instruction using digital tools.  
**ASSIGNMENTS:** MIDI/Sequencing Projects and Lesson Plan; Notation Projects and Lesson Plan; Final Grant Application/Proposal Paper
2. Develop a proposal for integrating current technology into music education programs, evaluate music instructional technology products and systems, and demonstrate ability to evaluate research literature related to music instruction in PK-12 or higher level settings.  
**ASSIGNMENT:** Final Grant Application/Proposal Paper
3. Facilitate and inspire student learning and creativity by providing a variety of learning environments that foster collaboration and innovative thinking to solve real world issues and authentic problems using digital tools and resources. (4)(b)1.  
**ASSIGNMENTS:** MIDI/Sequencing Projects and Lesson Plan; Notation Projects and Lesson Plan
4. Design, develop, use, manage, and assess authentic digital-age learning experiences that are aligned with subject-area content and the *Alabama Course of Study: Technology Education* to maximize content learning and address diverse learning styles, incorporating the use of formative and summative measurement tools to better inform learning. (4)(b)2.  
**ASSIGNMENTS:** Final Grant Application/Proposal Paper
5. Model and facilitate innovative digital-age work and learning experiences through the effective use of current and emerging tools to ensure success in a global and digital world whereby the teacher and learner locate, analyze, evaluate, manage, and report information as well as communicate and collaborate online fluently using a variety of technology-based media formats. (4)(b)3.  
**ASSIGNMENTS:** MIDI/Sequencing Projects and Lesson Plan; Notation Projects and Lesson Plan; Word processing and Excel Projects

6. Promote, model, and communicate the safe, legal and ethical principles of digital citizenship, equitable access, digital etiquette, and responsible online social interactions in a global culture including respect for copyright, intellectual property, the appropriate documentation of sources, and Internet user protection policies. **(4)(b)4.**  
**ASSIGNMENTS:** Copyright and Professional Organizations Discussion Posts/Discussions; Final Grant Application/Proposal Paper
7. Engage in professional growth and leadership activities, including modeling lifelong learning by participating in face to face and online learning communities to continuously improve professional practice using existing and emerging digital tools, resources, and current research that focuses on improved student learning, as well as promotes professional development of other educators. **(4)(b)5.**  
**ASSIGNMENTS:** Copyright and Professional Organizations Discussion Posts/Discussions

### COURSE CONTENT AND SCHEDULE

***NOTE: THESE MAY BE EDITED DURING THE SEMESTER. THIS IS ONLY A GUIDE!***

**ALL SEMESTER** Attendance, complete assigned readings, and active participation in class discussions and activities (discussion board, in class interaction, distance education notes if needed)  
 Discussion board topics, in class interaction, distance education notes, etc.

**Weeks 1-2** Copyright and Professional Organizations Discussion Posts/Discussion  
 Ethics and Student Computer Use

- a. Choose an organization and write a description of its purpose, its typical members, and procedures for membership. Post to Canvas. Respond to two of your classmates' posts with comments and at least one question you might have. Respond from your original post to your classmates' comments/questions.
- b. Respond to copyright scenarios on Canvas Discussion board.
- c. Read the articles posted. Search in the Library (online) for 3 additional research articles on ethics and computer use. Write a review of each article. Come up with ideas for your own research article that would explore different topics about ethics and students' computer use. Consider what you might do with your own students (or prospective students).

**Weeks 3-4** MIDI/Sequencing Projects, Lesson Plan, Software Review

- a. MIDI/Sequencing Lesson Plan: Write a lesson plan using MIDI and/or sequencing as a central part of music learning for your student
- b. Identify and briefly review one alternate sequencing software title for you and your students to use.
- c. Sequencing Project 1 – Compose an audio arrangement or original composition.
  1. Do NOT worry about what notation looks like at this point
  2. Must be at least 32 measures long (longer than 1:00 minute in length) in Standard MIDI format.
  3. 5 or more tracks
  4. 4 or more timbres (patches or this is also called the instrument)
  5. At least 3 melodic tracks and at least 1 percussion track
- d. Sequencing Project 2 – Learning the Software Through Editing Music
  1. Use an existing MIDI file that is longer than 1 minute in length and which has more than 5 tracks. You will have to open it in the sequencer to see how many tracks there are.
  2. Cut it to be about 1 minute long (DO NOT cut from the beginning to 1 minute). Cut it at a logical cadence point for beginning and then for the ending cut at another logical cadence point. See what I did in my example of "Happy" by Pharrell Williams – Save this cut file as "YOUR-NAME-Sequ2-File1.mid"
  3. Change the key of the entire piece (up or down transpose - all tracks). Save this file as "YOUR-NAME-Sequ2-Edited.mid" and use this file for all other changes (so you will have the unchanged file and the edited file to turn in).
  4. After changing to a new key, change the key (transpose) of 1-2 tracks - so it is clearly recognizable by ear.
  5. Change the patch/program (instrument) of at least 2 tracks - so it is clearly recognizable by ear.
  6. Edit the volume of the piece (throughout).
  7. Pan the piece (left/right)
  8. Change the tempos throughout - interpretation (speeding up, slowing down).
  9. Put aural accents (>) throughout - so it is clearly recognizable by ear (velocity).
  10. Think of something not mentioned here and make that change to your file.

**Weeks 5-6** Notation Projects and Lesson Plan, Software Review

- a. Notation Lesson Plan: Write a lesson plan using notation software as a central part of music learning for your students.
- b. Identify and briefly review one alternate notation software title for you and your students to use.

- c. Notation Project 1: Reproduce each of the pages provided in class.
- d. Notation Project 2: Arrange a public domain piece or choose a more difficult musical excerpt and transcribe --- OR notate your sequenced composition. If you are a choral person, you may wish to transcribe 4 parts in voice, but then have the 5th instrument a transposing instrument. It must include or match the following:
  - 1. At least 24 measures long
  - 2. 6 or more staves with at least 1 transposing instrument
  - 3. Include: dynamic markings, crescendos, decrescendos, slurs, lyrics/text, etc.
  - 4. Printed full score and individual parts.

#### Weeks 7-8 Word processing and Excel Projects

- a. Create a newsletter or concert program “properly” formatted (2-fold, 3-fold front and back)
- b. Excel spreadsheet of student- or inventory-related data
- c. Mail merge letter and envelopes related to the database
- d. Create a grade book using Excel – it must have: (1) at least 10 students, (2) Percentage-based grades, (3) Class mean, median, and mode(s) calculated (4) Standard Deviation and what that means for the class.

#### Weeks 9-10 Complete any uncompleted work; Final Grant Application/Proposal Paper (use Times New Roman, 12 point font, 1 inch margins); Grant Proposal Presentations

- a. Page 1 is your cover page with your name and contact information.
- b. Page 2 is your “one-pager” handout for the class or other type of professional presentation.
- c. Pages 3-4 pages are definition of terminology
  - 1. Define MIDI, Sequencer, Sequencing, Types of Sequencers, Notation, Digital Audio, MIDI controller;
  - 2. Describe common features found in high-end MIDI and/or Audio sequencing programs
  - 3. Describe common features found in “free” or low-end MIDI and/or Audio sequencing software, which may include web-based software that is appropriate for student use at home as well as in the classroom.
- d. Pages 5-6 should describe current uses of technology in music education classrooms (these may be your “ideal” classroom examples). Use citations from bibliography to support.
- e. Pages 7-9 should describe the following
  - 1. Required hardware for technology integration in your classroom. This may include: computer, monitor, iPads/tablets, MIDI controller/electronic keyboard, all cables, etc. You may also want to consider tables and chairs, or other requirements for students to use the hardware;
  - 2. How you would setup the hardware if you were to receive the grant (also include a graphical setup of how the hardware would be setup in your room);
  - 3. Setup and basic operation of electronic instruments
  - 4. Required hardware for software that you could use with your students
  - 5. Describe MIDI, General MIDI, standard MIDI files, and their practical uses
  - 6. Common features of electronic instruments
- f. Pages 10-11 are your proposal. Write a proposal for integrating what you have described above
  - 1. Computers and/or iPads/tablets
  - 2. Electronic instruments, sequencers, and notation software into your music education program. How will this be used? What can your students gain from this? Etc.
- g. Page 12 is the Budget Form
- h. Pages 13+ are your annotated bibliography of related music education technology literature (at least 11 references, at least two should be research)

### CLASS POLICY STATEMENTS

*Please see the Student Policy eHandbook for important information:*

[http://www.auburn.edu/student\\_info/student\\_policies/](http://www.auburn.edu/student_info/student_policies/)

- A. Attendance: Although attendance is not required, students are expected to attend all classes, and will be held responsible for any content covered in the event of an absence.
- B. Excused absences: Students are granted excused absences from class for the following reasons: illness of the student or serious illness of a member of the student’s immediate family, the death of a member of the student’s immediate family, trips for student organizations sponsored by an academic unit, trips for university classes, trips for participation in intercollegiate athletic events, subpoena for a court appearance, and religious holidays. Students who wish to have an excused absence from class for any other reason must contact the instructor in advance of the absence to request permission. The instructor will weigh the merits of the request and render a decision. When feasible, the student must notify the instructor prior to the occurrence of any

excused absences, but in no case shall such notification occur more than one week after the absence.

Appropriate documentation for all excused absences is required. Please see the *Tiger Cub* for more information on excused absences.

- C. **Make-Up Policy:** Arrangement to make up a missed major examination (e.g., hour exams, mid-term exams) due to properly authorized excused absences must be initiated by the student within one week of the end of the period of the excused absences(s). Except in unusual circumstances, such as the continued absence of the student or the advent of university holidays, a make-up exam will take place within two weeks of the date that the student initiates arrangements for it. Except in extraordinary circumstance, no make-up exams will be arranged during the last three days before the final exam period begins.
- D. **Academic Honesty Policy:** All portions of the Auburn University student academic honesty code (Title XII) found in the *Tiger Cub* will apply to university courses. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.
- E. **Disability Accommodations:** Students who need special accommodations in class, as provided by the Americans with Disabilities Act, should arrange for a confidential meeting with the instructor during office hours in the first week of classes (or as soon as possible if accommodations are needed immediately). The student must bring a copy of their Accommodations Letter and an Instructor Verification Form to the meeting. If the student does not have these forms, they should make an appointment with the Program for Students with Disabilities, 1288 Haley Center, 844-2096 (V/TT).
- F. **Course contingency:** If normal class and/or lab activities are disrupted due to illness, emergency, or crisis situation, the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials.
- G. **Professionalism:** As faculty, staff, and students interact in professional settings, they are expected to demonstrate professional behaviors as defined in the College's conceptual framework. These professional commitments or dispositions are listed below:
  - Engage in responsible and ethical professional practices
  - Contribute to collaborative learning communities
  - Demonstrate a commitment to diversity
  - Model and nurture intellectual vitality

#### **JUSTIFICATION FOR GRADUATE CREDIT**

Students will not only gain operational skills in developing music instructional materials with digital tools, but they will understand the underlying software and hardware structures of the digital tools. With this knowledge, they will be able to evaluate the utility of existing and future music instruction digital media and hardware systems in direct, expository, discussion, constructivist, and cooperative learning environments and choose tools which enhance the curricular goals of music education programs.