Music 346 MIDI & Digital Audio Techniques

Spring 2014 – 3 Credits
Mondays 3:10-4:00pm, Wednesdays 3:10-5:00

Instructor

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In -lab office hours: M/W 2:00-3:00pm (Music Computer Lab)
Other office hours by appointment or as posted

Prerequisites
Music 246 (Introduction to Music Technology) or permission of instructor.

Course Description

Students enrolled in MIDI & Digital Audio Techniques will study the principles and practice of sample-based digital audio as it applies to creative musical work in instrument design, live performance, and composition. Through lectures and readings students will learn the principles of acoustics (with a focus on timbre), analog and digital audio, digital signal processing (DSP), and sampler instrument design and construction. These principles will be applied in practical, technical, and creative work in designing, building, and demonstrating musically interesting and useful sample-based virtual instruments. MIDI & Digital Audio Techniques is an introductory course in sample-based sound creation/synthesis for musical applications. The course will include lectures in sound synthesis techniques, practical lab exercises, and projects in both instrument design and electronic music composition.

Software and Rules for Completion of Assignments

The computer platform and software to be used in the course is

Macintosh OS (10.7 or above)
Sampling Synthesis: Kontakt 5
Sound Editing, Composition, Mixing/Post-processing: Audacity or Pro Tools 10

Because the course requires uniformity in order to maintain a focused basis for in-class discussions and presentations, students may not use alternate software to complete assignments, projects, and presentations. All work must be available for examination in patches and project files rather than as mixed-down audio.

All software and digital audio equipment required for the course is provided in the music computer lab, 056 Music Hall. There is ample open lab time to complete all assignments. Students do not need to purchase software or equipment. Students who own the required software may complete assignments using their own equipment but are responsible for supporting their own systems, including any required adjustments to files and settings for compatibility with the music computer lab. Files that do not run because they were developed outside the music computer lab will be considered incomplete and may receive a failing grade.
**Evaluation and Grading**

Student work will be evaluated through presentations and examinations. The written exams will cover both practical projects and readings, using short-answer and essay formats. The grade for the course will be determined by the instructor, using the following guidelines:

- 15% Participation (discussion, demonstration/presentations of lab assignments)
- 30% Unit Examinations (2 @ 15%)
- 30% Unit Creative Projects (3 @ 10%)
- 25% Final Project

Unexcused late work will not be accepted. All creative projects must be presented to the class on the date due. The final exam period will be used for presentation of the final project. If a valid excuse exists for the failure to present this project as scheduled, the instructor will determine the method of compensation in calculating the grade for the course.

**Course Structure**

Music 446 will combine lectures, in-lab workshops, assigned practical projects, readings, unit exams, and a final project. A schedule will be provided in advance of each unit of study. Each student will have a project workstation for use during class. Workstations are available for work outside class in the music computer lab according to the posted schedule. Students will have an account on the music server that provides assignments, course reference materials, and storage for completed assignments.

**Course Policies**

**Computer Platform and Software**

Students may not substitute computer platforms or software for assignments, projects, and presentations. The course requires uniformity in order to establish a base or terminology and practical techniques for in-class discussions and presentations.

If students have access to duplicate software in other facilities, including their own computer systems, this may be used but students must be able to demonstrate and discuss every aspect of their lab/project using the software and equipment provided in the music computer lab—each project must be open to examination of details and run live during the presentation (not as a mixed-down audio recording).

Caution related to updates in software:

Because the main software used in this course most often will not accept files produced in earlier versions students should take particular care not to update their own systems to a version in advance of that currently installed in the lab. To retain system-wide compatibility between several software packages the lab often will not use the latest update. Similarly, student should take care that work produced in the lab will open on their own systems if their systems are some version behind.
**Completion of Coursework**

The presentation of a unit or final project is a significant portion of the project grade. Students may not defer the presentation of their projects except as arranged within the context of a documented excused absence. If a valid documented excuse exists for the failure to present the final project as scheduled, the instructor will determine the method of compensation in calculating the grade for the course.

All technical problems related to transfer of files from systems outside the lab, and the compatibility of these files with lab systems, are the full responsibility of the student. Neither the instructor nor the lab support staff are required to solve problems related to the use of external systems. Further, labs and projects are considered complete when they are turned in to the course dropbox and will opened for presentation on lab systems. If files produced on external systems are turned in but will not run, the project will not be evaluated as complete.

Grades of Incomplete (I) will be granted only in accordance with university policy. In general, incompletes may be granted in cases of medical or family emergency and must be supported by a valid written excuse.

**Physical Limitations and Access**

The instructor will make every reasonable effort to accommodate an individual student’s documented disability in coordination with the resources defined by the Disability Resources office. Students with visual disabilities should be aware that music software involves a complex graphical interface and interpretation of tables with columnar alphanumeric data.

If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with me soon. Please request that a Student Disability Resource staff send a SAAR form verifying your disability and specifying the accommodation you will need.