

Western Michigan University  
School of Music

MUS 2940 Multi-track Recording

Instructor: John Campos

Room: 2206 Kohrman

Office: 2118 Dalton Center

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Office Hours: Monday and Wednesday 2-3p.m.

Course Description

This course is an introduction to multi-track recording, console and patch-bay signal flow, and common studio signal processors. The goal of the course is for students to be able to record, over-dub, and mix a project on their own. Pro Tools will be used as a multi-track recorder but the more advanced functions of Pro Tools will not be taught in this course. MUS3940 Advanced Recording I will cover Pro Tools in detail.

Included in this course pack is a flowchart for the Otari Series 54 console that is in WSS. Students who plan to complete the sequence of four classes in audio engineering will do well to begin to learn the flowchart and the control surface depicted on the reverse of the flowchart, and to avail themselves of opportunities to learn the console in WSS.

Major Topics

- 1) Console signal flow. Input/output modules, monitoring and headphone sends. Students will be required to learn every detail regarding the control surface of our Mackie Onyx 4 Bus analog console. A full description of the console can be found here:  
<http://www.americanmusical.com/ItemFiles/Manual/mackie/maconyx24-32.pdf>. Students will also be introduced to the Otari Series 54 console in WSS. It is strongly recommended that students begin to learn the Series 54 long before they use it in MUS4940 Advanced II Recording. Tutorials for the Series 54 can be found here:  
<https://www.youtube.com/playlist?list=PL1s8mukthpgX2M-jKVG06nFhufA67Jg3V>
- 2) The multi-track recorder. Theory of operation and use for tracking and over-dubbing. Data back-up and reloading projects from back-ups.
- 3) The patch-bay and studio connections.
- 4) Introduction to typical session flow. Tracking the rhythm section, over-dubs. Gain staging and signal to noise ratio.
- 5) Signal Processors. Compressors, expanders reverb and delay.

## 6) Mixing.

Each topic will require from 1-4 weeks to complete.

**The mid-term exam will consist of an oral examination at which the student will demonstrate their understanding of the controls of the analog console, how to set up a Pro Tools session, and how to create and distribute two headphone mixes, how to zero the console, how to properly wrap a cable, and how to store gear away properly.**

### Class Requirements

Students must complete a multi-track recording/mixing project. It is the responsibility of the student to secure the musicians for the project. The recording must include a singer and a live drum kit. The style and the quality of the musical performance will have no bearing on the grade given. Each student will have a maximum of 20 hours of lab time to complete recording and mixing.

You must pay a fee in order for your ID card to have swipe access to the lab and WSS. This fee also covers the mailbox key for WSS for advanced students. Payment of this fee must be taken care of before the second week of classes; this means that you must get a new ID card, if you do not have one. Please see Jenny Snyder and do this the first week of class.

Current fees are: \$5 per semester. \$10 per academic year (fall and spring). \$10 summers. \$55 for all of your time at WMU.

Student's projects that are kept on the system in 2206 Kohrman must be stored in a single folder in the student section. This folder will be labeled with the student's name and the current semester.

Students must present their projects as multi-track sessions in Pro Tools for grading. It is permissible, and in fact encouraged, that students take files home to work in another DAW. However, projects must be brought back into Pro Tools for grading.

**Students who miss three or more classes, whether excused or not, will not pass this class.** If the absences are excused then an incomplete grade is a possibility. As per university policy, a full year will then be available for the student to complete missed class work and to attend missed lectures.

The required course pack will include the rules that all students who use Western Sound Studios will abide by. **Violation of these rules may result in a student being barred from using the labs and studio at WMU.**

## Grading

Midterm 40%  
Mix analysis 20%  
Final Project 40%

Final projects are due no later than midnight on the Friday BEFORE finals week.

**All projects must be backed up and removed from the multi-track recorder no later than the Friday FOLLOWING finals week. The staff of WSS will not back up student projects.**

To assure compliance with the Americans with Disabilities Act, faculty at Western Michigan University need to know how a disability will impact student participation and work in courses. Any student registered with Disability Services for Students who would like to discuss accommodations for this class should contact the instructor of record in a timely manner. Students with documented disabilities who are not registered with DSS should the office call at (269) 387-2116 or visit [wmich.edu/disabilityservices](http://wmich.edu/disabilityservices). Students cannot request academic accommodations without scheduling an appointment and meeting with a DSS staff member. If a student does not register with DSS, his or her academic accommodations cannot be executed.