

Advanced I Multi-Track Recording

Class: MUS3940 Advanced Multi-Track recording
Room: 2206 Kohrman
Instructor: John Campos
Office 2118 Dalton Center
Office hours: Mon. Wed. 2-3p.m.
269-387-4720

Class requirements. 1) Cover tune. 2) "Anything goes" with permission of instructor.

The "Anything" in the Anything Goes project refers to flexibility in your choice of project, pending approval of the instructor. However, unlike other projects, **this project must be done (recorded, edited and mixed) entirely in pro tools.** Each project is worth 50% of total grade.

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.

A maximum of 20 hours of lab time may be used per project. One project must be done by mid-term week.

All projects must be turned in no later than midnight on the Friday before finals

Students who **miss three or more class meetings**, even with excused absences, **will not pass the class.** If absences are excused a grade of "incomplete" may be possible.

Students who violate studio rules (see course pack) may be barred from using the studio or taking further recording classes.

Workstations in the MAT program (2202, 2005) are available to MAT students. The use of these stations does not count toward the total hours for your projects.

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 (excepting the Anything Goes project, as explained above). However, projects must be brought back into Pro Tools for grading.

Students must follow all of the rules as outlined in the course pack. **It is the responsibility of each student to know the rules and policies in the course pack.**

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 call the office at (269) 387-2116 or visit 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.

Weeks 1-5, Pro Tools

Week 1

Introduction to various hardware components of Pro Tools. Basic workstation overview: you never lose anything, you always can get back to where you were; you can always come back to session in progress.

Using "Save as" for project variations.

Creating a "Parent Folder" for all your work.

Analog ins and outs, the patchbay and pro tools internal busses.

Creating a session. Where to store it. Sample rate, bit depth, file format.

Edit and mix windows.

Creating tracks. Audio tracks, aux inputs, master faders.

Importance of naming tracks carefully before recording.

Level adjustment must be done external to pro tools. Faders do playback only!

File window. Tracks vs. files.

Introduction to channel strip functions/controls.

Week 2

Quick review of creating session properly.

Viewing tracks, time and amplitude views. Use of icons and short commands.

Arranging windows to show what you want to see.

Memory locations, creating, naming, saving view status.

Track show and hide, In **Mix** window, hidden tracks **are** affected by all actions in their group (level adjustments, solo, muting, automation, etc.) except record enable. However, in the **Edit** window, hidden tracks that are part of a group will **not** be edited when editing across the group. Track show and hide can also be used to re-arrange track position on the virtual mixer.

Arming tracks, recording using mouse and icons vs. space bar.

Punching in, pre and post roll, auto punch, loop record. Use quick punch for multiple punch ins on a single pass.

Playlists, creating a composite track. Create "comp" while looking at all playlist. Use arrow to move selections to comp. Naming playlists. Auto-create playlists while in loop record (under preferences).

Using "view bar" to navigate up/down and left/right.

Week 3

Quick review, creating sessions properly.

Slip, shuffle, spot and grid (relative and absolute) modes. Setting the tempo and the subdivision of the grid.

Grouping tracks. Creating mix, edit or mix/edit groups using group window and from channel strip in the mix window. Groups can over-lap. Group window, enabling/disabling groups (clicking on group or using a/z icon), adding or removing tracks, seeing which tracks are in each group (dot icon or "modify"), choosing/changing attributes, global attributes, saving attribute templates, creating VCA group masters,

Editing. Explain and demonstrate each tool. Selector, grabber, trimmer, magnifying glass, linking functions.

Navigating with Tabbing, Shift Tab, Option Shift Tab, and Tab to Transients

Demonstrate editing of two track recording with multiple takes.

Various ways of working are all legitimate as long as you always keep a way to get back to where you were earlier.

Demonstrate spot and slip and trimmer.

Fades and cross-fades, batch fades.

All of this translates to multi-track editing. Edit all tracks!

Undo. Undo history.

Week 4

Mixing/automation.

Clip Gain.

Volume automation. Demonstrate various modes, touch, latch, etc.

Using the mouse verses the fader to ride levels.

Detail edits with mouse, no excuses for bad balance.

Automating across groups.

Demonstrate other track automation functions, pan, mute, trim, etc.

Automating aux-sends.

Copy/paste including automation.

Week 5

Plugins and using external effects.

TDM, RTAS, AAX

Hardware buffer, small for tracking big for mixing.
Two buffers for PT11.

Delay compensation.

Being smart about processing power. Using an aux track w/ plugin for reverb and delay. Printing effects if necessary.

Applying processing to a track on a separate playlist to free up power or have

multiple options available immediately.

Automating plugins.

Saving and Importing settings for plugins.

Duplicating for export. Adding time for spacing of tracks in sequence.

Bouncing mixes. Creating a folder for mixes.

Stem smarts. Make them so they import into sessions properly.

Creating MP3s for emailing, etc.

Preparing for archiving. Labeling and applying effects to make sure that you (or whomever) can come back to the session and have all the sounds whether they have the plug-ins or not.

Backing up. Labeling of back-ups. Re-loading from back-ups.

Session Smarts - Week 6

Sample rates and bit depth.

Click tracks. When, sounds, level to phones-bleed, mute at tail, automating click tracks.

Clicks at top and through breaks.

Guide tracks for pitch.

Tuning notes at top.

Check tuning regularly.

Backing up and labeling.

Otari flow chart and learning the console.

3 Weeks of Microphones

Week 7

Microphone specifications in detail.

Review: Dynamic, Capacitor

Large vs small diaphragm

Transient Response

Polar patterns, demonstrate omni through shotgun,

Off axis coloration

Multiple path lengths, comb filtering. Demonstrate with track slide or on-line

1.8 - 2 / 1, room vs. direct, cardioid, bi-directional, omni

Multi pattern mics

Proximity effect

Extended low Frequency with pressure only.

Hearing and localization: TOA, amplitude differences, shading, hole in the middle

Dynamic/capacitor 90 degree phase difference

Tools not Rules!

Week 8

Mono vs stereo techniques, when and why

Stereo techniques: Coincident (XY, Blumlein, MS), Near coincident (ORTF, NOS, Decca Tree, Spaced pairs

Spot mics in combination with stereo.

Greater distance yields narrower image due to decreasing amplitude differences between mics at greater distances.

Closer arrays have wider image at front of stage than rear of stage. Get mics up!

Do demonstration of various stereo techniques w/ piano. Record then listen and compare/contrast.

Week 9

Mic placement/close micing: Any point on a sphere will yield a unique spectral balance. Therefore, close micing is stupid as well as absolutely necessary. A world of opportunity to shape the sound. Mics in combination, close/far, snare + overheads/room mics, etc. Demonstrate with single drum, mandolin or guitar w/headphones.

Pop filters and blimps

Processors - 3 weeks

Week 10

Compression.

Review controls. Demonstrate attack and release.

Cover various designs (Optical, VCA, etc.)

Clip gain to minimize compression challenges

Light compression at various stages is more transparent than slamming it once.

Side-chain use. Demonstrate in Protools.

Parallel Compression; Mixing compressed and uncompressed signals.

Expanders. Demonstrate kick drum as trigger for oscillator.

Demonstrate various compressors with same settings.

Week 11

EQ. Pan first, avoid boost-o-mania.

Masking. Threshold of hearing in quiet.

Cutting to open up space, allow sounds to be heard.

Low cuts to clean up bottom end, high cuts to allow vocals and cymbals to shine.

Sound replacement for drums.

Week 12

Delay.

Demonstrate short delays and longer slap-back and repeating delays. Short delay to spread guitar wide.

Delays to reverb only.

Reverb. Demonstrate small rooms up to large. Changing brightness, decay, pre-delay, etc. Use of M3000.

Mono verses stereo reverb. Cross panning reverb and delays.

Using multiple reverbs simultaneously.

Treating sends.

Weeks 13-14

Listening and feedback on projects, trouble shooting.