

Computer Assisted Recording and Editing (MTEC 446a)

Course Syllabus, Fall 2023

Instructor

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Course Description

Computer Assisted Recording is an introduction to techniques and applications of recording sound on personal computers. Discussions will also include a study of the hardware and software required as well as editing music, dialog, and sound effects for song, commercials and film.

Requirements, Exams and Grading Information

Student evaluation in 446a will consist of practical assignments, quizzes and exams. The assignments include short exercises and a final project. In general, students will be given one week to complete and turn in exercises. Assignments turned in late will be lowered one grade per week and will not be accepted beyond three weeks late. All assignments must carefully follow file management and format guidelines. Instructions for the final project will be available at a later date.

Quizzes will be given weekly via BlackBoard and will cover reading and video assignments, as well as, instructor notes and handouts. The midterm exam will consist of both written and hands-on questions. The final will be a hands-on exam designed to test the practical skills developed during the semester. All exams and quizzes must be taken during the scheduled times and cannot be made up at a later date.

Attendance is taken each class and will count towards your final grade. After two absences your grade will be lowered one-half grade for each additional absence. Because of the importance of hands on experience with this subject, attendance to all classes is the only method of understanding the concepts of this specialized topic.

Grading Summary

1. Participation	10%
2. Quizzes	10%
3. Lab Exercises	25%
4. Midterm Exam	15%
5. Final Exam	20%
6. Final Project	20%

Class Materials

1. Textbook: "Pro Tools 101: An Introduction to Pro Tools" version 2019 (recommended, available at USC bookstore and Amazon.com)

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2. LinkedIn videos available through Blackboard: *Pro Tools 12 Essential Training*; Foundations of Audio series: *EQs and Filters*; *Compressions and Dynamic Processing*; and *Reverb, Delay and Modulation*.
3. Pro-Tools Reference Guide (free download from http://avid.force.com/pkb/articles/en_US/User_Guide/en379111)
4. Instructor handouts and lecture notes (available on BlackBoard under Course Documentation)
5. Reference headphones are required and should be brought to all classes. All assignments will be evaluated using Sony MDR 7506 reference headphones!
6. USB Memory Stick and/or other external storage device!

Communication

Please make it a habit to use/check your USC E-mail account. Any E-mail I send to the class will use that account. ***Please add "446a" in the subject header of all email that you send me.*** This will help me to organize all the emails that I receive and enable me to respond to you more quickly. In addition, most course materials, quizzes and class grades will be posted on Blackboard (<http://blackboard.usc.edu>). For example the course syllabus can be found under Syllabus, instructor handouts and project instructions under the Content tab. All exercise materials and instructions will be posted to the class folder (instructions on how to access this folder will be provided during week 2 and will be posted to Blackboard).

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 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.

Academic Integrity

Academic Integrity-Students are expected to adhere to the Academic Integrity Guidelines of USC as outlined in the current edition of SCampus. Work found to contain plagiarized or uncited materials will be referred to the USC Office of Student Conduct for review. Academic Integrity violations will result in a failing grade for submitted material and for the course, and dismissal from Thornton School of Music majors and minors.

***Please be advised anyone found surfing the web will be asked to leave the class. Before you can be readmitted to the class you must meet with the program chair.

Course Schedule (*Schedule and Content Subject to Instructor Changes*)

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Week 1 - Class Introduction and Review

- Native system setup
- PTs Playback Engine and H/W buffer and system latency
- Navigating a PTs session
- Changing zoom level, track height, rulers, Edit window options
- Playback and scrolling options
- Making selections
- PTs file types and management
- Exercise Procedures and Expectations
- Reading: 101 – 1 and 2
- Exercise 1: Navigating the Edit Window

Week 2 - Audio Editing Review

- Importing audio
- Audio clip attributes and management
- Separate, break, heal clip
- Copy/paste, duplicate, repeat, loop, and loop trim clips
- Clip trim, trim to insertion, trim from insertion
- Conform clip to tempo
- Fades: in/out, cross fade, equal power vs. equal gain
- Master Fader Tracks
- Introduction to dither and noise shaping
- Bounce to disk, bounce “rules”
- Reading: 101 – 5, 7 and 8; *Pro Tools 11 Essential Training* chapters 3 and 6
- Exercise 2: Audio Editing Basics

Week 3 - Recording Audio

- Creating PTs sessions: file types, sample rates, bit depth, I/O considerations
- Creating and naming tracks, track I/O, phantom power
- Setting record levels/gain structure
- PTs signal path, recording with a “pre-disk” aux track
- Click tracks, countoffs, tempo and meter
- Punch record and pre/post roll
- Monitoring options, Input Monitoring
- Introduction to volume editing/automation
- Reading: 101 – 3 and 4; *Pro Tools 11 Essential Training* chapter 4
- Exercise 3: Voice Over Recording and Editing

Week 4 - Working with Playlists and Alternate Takes

- Playlist overview

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- Create, duplicate and delete playlist
- Switching playlists
- Playlist use and strategy
- Playlist view, comping tracks from multiple takes
- Crossfade use, issues and solutions
- Clip consolidation
- Track freeze
- Reading: Instructor handout
- Exercise 4: Playlist Comping Exercise

Week 5 - Plug-ins

- Adding and removing plug-ins
- Copying settings
- Recalling and saving presets
- Copying plug-ins
- Bypassing and inactivating plug-ins
- Multi channel and multi mono plugs
- Plug-in formats (AAX, RTAS, AU, VST, etc.)
- AudioSuite plug-ins
- Reading: Instructor handout; *Pro Tools 11 Essential Training* chapter 12
- Exercise 5: Using AudioSuite plugins

Week 6 - The Mix Window: Inserts, Sends and Groups

- Mix window overview
- Track signal path and routing
- Track inserts (series processing)
- Bus effects and sends (parallel processing)
- Creating headphone cues
- Prefader sends, using mono vs. stereo sends
- Solo safe
- Master fader track signal path and use
- Creating and using submixes
- Reading: 101 – 9
- Exercise 6: Insert, Sends, Bus Effects, and Submixing

Week 7 - **Mid-Term Exam**

Week 8 - Drum Sound Replacement and Enhancement

- Old school sound replacement
- Sample replacement with Sound Replacer

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Sample enhancement with Slate Trigger
Strip Silence
Audio editing to enhance groove (“Pocketing”)
Reading: Instructor Handout
Exercise 7: Drum Sound Replacement and Enhancement

Week 9 - Organizing the Mix

Relinking source files
Marker and none type memory locations
Color coding tracks and markers
Track groups
VCA Faders
Setting levels and pans
Term Project Explanation
Reading: Instructor handout

Week 10 - Drum Editing and Processing

Timbre and the “magic frequencies”
Filter shapes, parameters and use
Parametric EQ parameters and use
Basic applications of audio filters and equalization
Compression overview
Compression parameters: threshold, ratio, attack/release, makeup gain
Basic pop/rock applications of compression
Other dynamic processors: limiters and noise gates
Reading: Instructor handout; Lynda.com *Foundations of Audio: EQ and Filters* chapters 2-3

Week 11 - Bass and Guitar Editing and Processing

Bass and Guitar EQ, filters and compression
Track duplication
Intro to groove editing
Reading: Lecture Notes; Lynda.com *Foundations of Audio: Compression and Dynamic Processing* chapter 2

Week 12 - Vocal Processing; Delay and Reverb Processing

De-essers: parameters and use
Vocal EQ and Compression
Reverb: setup, parameters and application

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Creating a session tempo map, adding tempo markers

Delay: setup, parameters and application

Lynda.com *Foundations of Audio: Reverb* chapter 3, *Delay and Modulation*

chapter 1, *Pro Tools 11 Essential Training* chapter 11

Week 13 - Introduction to Automation

Real-time automation

Graphic automation basics

Automation breakpoints, tools

Create, edit, copy, paste and nudge automation

Override automation

Reading: Instructor handout, 101 – 09

Week 14 - Final Project progress check

Final project due 8pm in the course server drop box by last day of USC “Study Days” semester schedule. No direct emails with attachments will be accepted.

Final Exam – Date and Time published online via USC Finals Schedule