Computer Assisted Recording and Editing (MTEC 446a)  
Course Syllabus, Spring 2021

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  
   (recommended, available at USC bookstore and Amazon.com)
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.


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)**

**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
   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
   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
   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

*** Important Note! TMC G-147 will be closed end of study week. There will be no open lab time after that date. There will be no exceptions to this policy so, please plan accordingly.