

## STUDIO RULES:

- Each student must sign in and keep accurate daily records on the sign-in log, and keep complete written project records on a recording project status log sheet.
- The studio is never to be left unattended.
- No non-session people are allowed in studio.
- At end of sessions, log out, power down tube devices, volumes all to "0", check locks!
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## GENERAL INFORMATION:

- All microphone and instrument signals must be recorded thru our external mic preamps this semester!
- All projects will be presentable to the class demonstrating the edits and techniques used and archived to your backup hard drive with full visual documentation, project log sheets, photos and videos.

## COMPLETION AND PRESENTATION DEADLINES:

*The following groups of scheduled projects must be completed on time and presented in the week scheduled. To receive credit for these projects these are absolute deadlines for presenting your finished projects. No excuses.*

- Week 3: project 1, 2, 7
- Week 5: projects 3, 10, 12
- Week 7: projects 9, 11, 13
- Week 8: project 14

You may complete all other projects in any order, any time during the semester.

## **GROUP STUDENT PROJECTS:**

The following projects (1-10) will be completed by a group of 2 students per team. Carefully plan each project, schedule on calendar, delegate each student's duties and responsibility on the project.

### **PROJECT 1**

**Conduct a shootout comparing microphones, or mic preamps, or outboard compressors, or various placements of a single microphone.**

**DETAILS:** Following instructor's class discussions of this project, devise a scientific controlled set of comparative audio tests. Discuss your project with instructor and get approval before you proceed. Make accurate and calibrated recordings of the test items. Set up and compare the recordings in a blind listening test, documenting and scoring the results. Use video and photos to document each step and prepare a video production suitable for posting on youtube, that can be used to help other audio engineers. Present the results to the class and archive all documentation.

### **PROJECT 2 Vocal stacking.**

**Create a thick layered "wall of sound" vocal mix using stacking and harmony vocals.**

1. Starting with a music only mix of a lyrical vocal song, working with a good vocal performer, record three useable takes of the lead vocal, comp the best parts of each take into a "best of" vocal track.

2. Feeding the “best of” vocal track into the singer’s headphone mix, record another two identical tight stacks of the lead vocal.
  3. Record the singer singing a harmony part on the chorus, hook, or verse.
  4. Record the harmony vocal another 2 times for a total of three identical unison harmony vocal tracks.
  5. Record the singer singing a second harmony part with the lead and harmony one vocal in singer’s headphones on the chorus, hook, or verse.
  6. Stack the second harmony vocal another 2 times for a total of three identical harmony vocal tracks.
  7. Mix the song using panning, multiple reverbs, and appropriate levels/EQ to create a thick, wide vocal mix that is also mono compatible.
- Present the results to the class and archive all documentation.

### **PROJECT 3 Great drum mic setups, using all external mic preamps.**

**OBJECTIVE:** Produce a HIGH QUALITY instructional MP4 VIDEO demonstrating 6 variations of classic pop drum micing setups. Upload completed project to youtube as a representation to the world of your audio and production skills. View many similar instructional videos on the web to see how others have created interesting instructional videos, then storyboard your project, planning the photo/video needed as well as the audio recordings to sync for the final video production.

**DETAILS: Find the best drummer available and the best drum set you can.** Using the system and software of your choice, no compression or effects, Record 6 different setups, including:

1. Kick, snare, overhead xy coincident pair 6 feet over kit center + stereo pair room mics placed in the best sonic place in the room.
2. Kick, snare, overhead xy coincident pair 3 feet over kit center + stereo pair room mics placed in the best sonic place in the room.
3. Kick, snare, overhead xy coincident pair over drummer’s head aimed at kit center + stereo pair room mics placed in the best sonic place in the room.
4. Kick, snare, overhead xy coincident pair 3 ft over front of kit aimed back at kit center + stereo pair room mics placed in the best sonic place in the room.
5. Kick, snare, overhead spaced pair 6 ft apart centered on kit aimed back at kit center + stereo pair room mics placed in the best sonic place in the room.
6. Kick, snare, and individual mics on each drum and cymbal + stereo pair room mics placed in the best sonic place in the room.

Have the performer play the same 10 second riff including regular hat/snare/kick rhythm, tom fills, ride section, and cymbals, the same for each setup. Keep the kick and snare setup the same for all 6 recordings, demonstrating the difference the overhead placement makes. Do 2 mixes from each setup, one without the room mics, and a second of the same mix with room mics added. Mix each setup with no compression or effects to best represent the qualities of each variation.

Carefully document with notes and quality photos/video all details of the setup, equipment, mics, preamps, recorder, mic placement, room size, wall coverings, anything that an audio tech listening to the finished product would be interested to know. **EMPHASIS: Include HIGH QUALITY, well lit digital photos and videos of each setup to help document each recording and result in a high-quality multi-media presentation.** Edit and produce a finished multi-media presentation with narration explaining how you did the project, and what you learned from the process and have a professional-sounding, well written spoken

word introduction describing what the project is, and detailed vocal description of each track before each of the 6 tracks.

Completed project will be posted to youtube as a representation to the world of your audio and production skills. The project will be turned in with a completed with accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

## PROJECT 4

**Complete recording of a pop music ensemble multi-instrument band on the Cr1 Console – Digital Performer system using all external mic preamps.**

**OBJECTIVE:** Plan, rehearse, set-up, record, overdub, and mix a release-quality recording of a rehearsed, ready-to-record quality music ensemble on the analog system.

**DETAILS:** Session will include basic tracks of rhythm section, with drums, bass, chord instruments, and scratch vocal. Plan carefully to get great quality sounds. Spend time with the drum sounds. Do overdubs with multiple tracks of vocals and instrument parts and comp them for best tracks. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

## PROJECT 5

**Complete recording of an instructor's ensemble multi-instrument band on the Cr1 Console - ProTools system**

**OBJECTIVE:** Plan, rehearse, set-up, record, overdub, and mix a release-quality recording on the Cr1 Console system.

**DETAILS:** Session will include performance of an instructor's ensemble. Plan carefully to get great quality sounds. Spend time with the drum sounds. Do multiple tracks of vocals and guitar parts and comp them for best tracks. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

## PROJECT 6

**Complete recording of a multi-instrument band on a laptop system using DAW of your choice, with portable interface, all external mic preamps.**

**OBJECTIVE:** Plan, rehearse, set-up, record, overdub, and mix a release-quality recording on the laptop system.

**DETAILS:** Session will include live drums, bass, guitar, keyboard, vocals, background vocals, percussion, Plan carefully to get great quality sounds. Spend time with the drum sounds. Do multiple tracks of vocals and guitar parts and comp them for best tracks. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

## **PROJECT 7**

**Make an airplay ready :30 and :60 second radio ad.**

**DETAILS:** Research, script, and produce a radio advertisement campaign for a client. The finished product will be :29 seconds, and :59 seconds in length. Use a narrator, background sfx and music, use ducking to maintain consistent level. Present to class, Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions. Present the results to the class and archive all documentation.

## **PROJECT 8**

**Create a 2-minute video of a band recording music, using the synched audio from a mastered song as the audio soundtrack.**

**DETAILS:** Video multiple takes, angles, and shots of a band recording in the studio. Edit these together in sync with the audio soundtrack of a finished mastered recording.

## **PROJECT 9 Great acoustic guitar mic placement**

**OBJECTIVE:** Produce a finished instructional mp4 video demonstrating 6 great ways to mic an acoustic guitar using a stereo pair of mics.

**DETAILS:** Find the best acoustic guitarist available and the best acoustic guitar you can. Restring the instrument. Do these recordings in the main studio. Using the system and software of your choice, no compression or effects, record 6 different placements of one set of stereo mics, of acoustic guitar played by a great guitarist. Research the best-recommended techniques and use your knowledge of acoustics and micing to choose and plan the best 6 potential ways to mic the instrument. Have the performer play the same 10 second musical performance for each recording. Carefully note all details of the setup, equipment, mics, preamps, recorder, mic placement, room size, wall coverings, anything that an audio tech listening to the finished product would be interested to know. Include HIGH QUALITY digital photos of each setup to help document each recording. Edit and produce a finished multi-media presentation on a MP4 VIDEO from these recordings. Completed project will have a professional-sounding, well written spoken word introduction describing what the project is, and detailed vocal description of each track before each of the 6 tracks. The project will be turned in with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

## **INDIVIDUAL STUDENT PROJECTS**

The following projects will be produced by each student individually.

**PROJECT 10 Research, use, and teach class how to use external audio processor.**

**DETAILS:** Choose an external audio processing device, (mic preamp, reverb unit, compressor, etc.) read the instruction manual, experiment with and learn to use the device.

Create some recordings using the device and demonstrating the device's capabilities. Prepare a presentation with audio and graphics, and teach the class how to use the gear, and direct them to resources for further info about the gear. Present the results to the class and archive all documentation.

**PROJECT 11 Research, use, and teach class how to use one of the TC Electronic Hybrid plugins or one of the TC 6000 plugin audio processors.**

**DETAILS:** Choose one of the TC audio processing plugins, read the instruction manual, experiment with and learn to use the device. Create some recordings using the device and demonstrating the device's capabilities. Prepare a presentation with audio and graphics, and teach the class how to use the plugin, and direct them to resources for further info about the item. Present the results to the class and archive all documentation.

**PROJECT 12 Complete recording of a midi sequenced production of other artist, not including yourself, with vocals and other acoustic tracks using Digital Performer in control room 2, 3, or 4, using external mic preamps, internal software processing, and automated mix with desktop controller.**

**OBJECTIVE:** Sequence and overdub vocal and instruments for a release-quality midi-sequence based recording on the Digital Performer system.

**DETAILS:** Produce midi drum and instrument tracks using the sequencer in Digital Performer, using both internal and external voice modules. Record a release-quality vocal and at least one other acoustic sound source. Daily work on project must be documented on completed and accurate daily updated RECORDING PROJECT STATUS LOG SHEET. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

**PROJECT 13 Complete recording of a midi sequenced production of other artist, not including yourself, with vocals and other acoustic tracks using Pro Tools in control room 2, 3, or 4, internal software processing, and automated mix with desktop controller.**

**OBJECTIVE:** Sequence and overdub vocal and instruments for a release-quality midi-sequence based recording. **DETAILS:** Produce midi drum and instrument tracks using the sequencer in ProTools, using both internal and external voice modules. Record a release-quality vocal and at least one other acoustic sound source. Daily work on project must be documented on completed and accurate daily updated RECORDING PROJECT STATUS LOG SHEET. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

**PROJECT 14 Use and demonstrate the use of parallel compression.**

**OBJECTIVE:** Learn to use parallel compression on individual tracks, and on a complete mix.

**DETAILS:** Create a project in which you set up and use parallel compression on a vocal track, drums, instrument track, and a complete mix. Record the results on separate tracks,

so that we can compare the before and after sounds. Present your project to the class, explaining and demonstrating your routing, setup, and the results.

**PROJECT 15** Remix one of your instructor ensemble recordings on Cr1 Console – Digital Performer using internal pluggins and analog outboard processors.

**DETAILS:** Daily work on project must be documented on completed and accurate daily updated RECORDING PROJECT STATUS LOG SHEET. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

**PROJECT 16** Remix another student's tracks on Cr1 Console – Pro Tools using internal pluggins and analog outboard processors.

**DETAILS:** Daily work on project must be documented on completed and accurate daily updated RECORDING PROJECT STATUS LOG SHEET. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

**PROJECT 17** Remix a recording session using Pro Tools system using control surface hardware controller automation.

**DETAILS:** Daily work on project must be documented on completed and accurate daily updated RECORDING PROJECT STATUS LOG SHEET. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

**PROJECT 18** Remix a recording session using Digital Performer system using control surface hardware controller automation.

**DETAILS:** Daily work on project must be documented on completed and accurate daily updated RECORDING PROJECT STATUS LOG SHEET. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

**PROJECT 19** Master 2 mixes using all analog outboard equipment.

**DETAILS:** Daily work on project must be documented on completed and accurate daily updated RECORDING PROJECT STATUS LOG SHEET. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate

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RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

## **PROJECT 20 Master 2 mixes using Digital Performer and pluggins.**

**DETAILS:** Daily work on project must be documented on completed and accurate daily updated RECORDING PROJECT STATUS LOG SHEET. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

## **PROJECT 21 Master 2 mixes using ProTools and pluggins.**

**DETAILS:** Daily work on project must be documented on completed and accurate daily updated RECORDING PROJECT STATUS LOG SHEET. Mix to wav 44.1/16 bit file, backup, document your work with screenshots and session photos showing how you used the equipment, plugins, and daw. Keep the session files, audio files, and mix file on your passport drive. Completed project will be turned in with a complete and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including the photos and notes from the sessions.

## **PROJECT 22 Participate in 3 live recordings or live sound for MCC concerts.**

**DETAILS:** Record and edit concert, master and burn release quality CD with separated programs. Provide CD copy to the concert organizer and turn in CD copy with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, and a written summary of the project.

## **PROJECT 23 Complete and master capstone presentation project. This will be presented to the faculty as a requirement for graduation.**

**PROJECT 24** Make a complete archival copy of all your projects from this year. Make one copy to keep for your archives and create one copy to hand in to instructor.

Directory structure:

Student name/project number/

/ all project files and audio files (playable on the DAW)

/ mixes (2 track 44.1k 16 bit mastered and unmastered versions)

/ presentation files (any multimedia presentations for project)

/ supporting documents (including raw photos, project logs, notes and worksheets)