

# Audio Engineering IV, Spring projects

## .....GENERAL INFORMATION.....

- All projects will be presentable to the class with full visual documentation, photos and videos, using the DAW project files on the screen, demonstrating the edits and techniques used.
- ALL PROJECTS WILL BE TURNED IN WITH PHOTO DOCUMENTATION, PROJECT LOG SHEETS, AND ON A DVD OR CD.
- At least five of these projects must be completed and presented each four weeks in order to receive credit for completing the projects.
  
- Each student must sign in and keep accurate daily records on the **sign-in log**. and keep complete project records on a **recording project status log**.
- The studio is never to be left unattended.
- No non-session people are allowed in studio.
- At end of sessions, log out, power down, check locks!

## .....GROUP STUDENT PROJECTS.....

The following projects (1-8 ) will be completed by a group of 2 or 3 students per team.

### **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 hand in all documentation

### **PROJECT 2..... Great drum mic setups**

**OBJECTIVE:** Produce a finished instructional DVD demonstrating 6 variations of classic pop drum micing setup.

**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 high over kit.
2. Kick, snare, overhead xy coincident pair low over kit.
3. Kick, snare, overhead xy coincident pair over drummer's head.
4. Kick, snare, overhead xy coincident pair 3 ft over front of kit aimed back at drummer throne.
5. Kick, snare, overhead spaced pair 3 ft apart centered on kit.
6. Kick, snare, and individual mics on each drum and cymbal.

Keep the kick and snare setup the same for all 6, demonstrating the difference the overhead placement makes. Mix each setup with no compression or effects to best represent the qualities of each variation. Have the performer play the same 10 second riff including regular

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hat/snare/kick rhythm, tom fills, ride section, and cymbals, the same for each setup. 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 DVD 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.

### **PROJECT 3..... Complete recording of a pop music ensemble multi-instrument band on the Toft – Digital Performer system.**

**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, backup, and turn in CD copy. The CD 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.

### **PROJECT 4..... Complete recording of an instructor's ensemble multi-instrument band on the Toft - ProTools system**

**OBJECTIVE:** Plan, rehearse, set-up, record, overdub, and mix a release-quality recording on the Toft 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, backup, and turn in CD copy. The CD 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.

### **PROJECT 5..... Complete recording of a multi-instrument band on a laptop system using DAW of your choice, with portable interface.**

**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, backup, and turn in CD copy. The CD 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.

### **PROJECT 6..... Make an airplay ready :30 and :60 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

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and music, use ducking to maintain consistent level. Present to class, turn in a cd copy with full documentation.

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**PROJECT 7..... 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 synch with the audio soundtrack of a finished mastered recording.

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**PROJECT 8..... Great acoustic guitar mic placement**

**OBJECTIVE:** Produce a finished instructional DVD 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.**

**Restraining the instrument.** 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. 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 DVD 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.

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### .....INDIVIDUAL STUDENT PROJECTS.....

The following projects will be produced by each student individually.

**PROJECT 9..... 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, 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. Mix, backup, and turn in CD copy. The CD 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.

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**PROJECT 10..... 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. Mix, backup, and turn in CD copy. The CD 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.

**PROJECT 11..... 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 12..... Remix one of your Instructor ensemble recordings on Toft – Digital Performer using internal pluggins and analog outboard processors.**

**DETAILS:** Mix, backup, and turn in CD copy. The CD will be turned in with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including notes from the sessions.

**PROJECT 13..... Remix another student's tracks on Toft – Pro Tools using internal pluggins and analog outboard processors.**

**DETAILS:** Mix, backup, and turn in CD copy. The CD will be turned in with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including notes from the sessions.

**PROJECT 14..... Remix a recording session using Pro Tools system using control surface hardware controller automation.**

**DETAILS:** Mix, backup, and turn in CD copy. The CD will be turned in with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including notes from the sessions.

**PROJECT 15..... Remix a recording session using Digital Performer system using control surface hardware controller automation.**

**DETAILS:** Mix, backup, and turn in CD copy. The CD will be turned in with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, a written summary of the project including notes from the sessions.

**PROJECT 16..... Master 2 mixes using all analog outboard equipment.**

**DETAILS:** Turn in CD copy with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, and a written summary of the project.

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**PROJECT 17..... Master 2 mixes using Digital Performer and pluggins.**

**DETAILS:** Turn in CD copy with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, and a written summary of the project.

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**PROJECT 18..... Master 2 mixes using ProTools and pluggins.**

**DETAILS:** Turn in CD copy with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, and a written summary of the project.

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**PROJECT 19..... Complete and master capstone presentation project.**

**DETAILS:** Turn in CD copy with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, and a written summary of the project.

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**PROJECT 20.....** Make a complete archival copy of all your projects from this year. All raw mixes, non-mastered.

**DETAILS:** Turn in CD copy with a completed and accurate RECORDING PROJECT STATUS LOG SHEET, and a written summary of the project.

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**PROJECT 21.....** Participate in 3 live recordings of 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.

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**PROJECT 22.....** Attend and record / or write a review of 5 live performances.

**DETAILS:** Each student is required to attend and review at least five performances of MCC students/faculty each semester. You must hand in five written reviews of the concerts you attend.

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