Audio Engineering III projects

- Each student must sign in and keep accurate daily records on a sign-in log, and keep project records on the 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, set all volume controls at minimum, power down applicable equipment, check locks on studio and control room.

Upon completion, each of these projects should be prepared to present to the class as an instructional tool. The student or team will prepare a multi-media presentation documenting how the project was done, showcase the final product to the other students, and answer any questions about the production.

Group Projects to be completed by 2 or more students per team:

PROJECT 1: ACOUSTIC GUITAR: Great acoustic guitar micing
OBJECTIVE: Produce a finished instructional CD demonstrating 6 great ways to mic an acoustic guitar using only a stereo pair of mics.
DETAILS: Using the system and software of your choice, no compression or effects, Record 12 different stereo micings of acoustic guitar played by a great guitarist. Use your knowledge of acoustics and micing to choose and plan the best 12 potential ways to mic the instrument. Have the performer play the same 1 minute musical performance for each recording. Carefully note all details of the setup, equipment, mics, preamps, recorder, CD-R brand, mic placement, room size, wall coverings, anything that an audio tech listening to the finished product would be interested to know. Include usable digital photos of each setup to help document each recording. Reset the mics and/or choose different mics, and repeat the same operation for a total of 12 documented tracks. Edit the recordings, and select the best sounding 6 tracks. Edit and produce a finished CD from these recordings. Completed project will have a professional-sounding, well written spoken word introduction describing what the CD is, and detailed vocal description of each track before each of the 6 tracks. 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 2: VOCAL: Great vocal micing
OBJECTIVE: Produce a finished instructional CD comparing the sound of 12 different mics and/or mic placements on vocals.
DETAILS: Using the system and software of your choice, no compression or effects, record 12 different tracks of a vocalist using different mics and/or variations of mic placement. Use your knowledge of acoustics and micing to choose and plan the best 12 potential ways to mic the vocalist. Have the performer perform the same 1 minute musical performance for each recording. Carefully note all details of the setup, equipment, mics, preamps, mic placement, room size, wall coverings, anything that an audio tech listening to the finished product would be interested to know. Include usable digital photos of each setup to help document each recording. Reset the mics and/or choose different mics, and repeat the same operation for a total of 12 documented tracks. Edit and produce a finished CD from these recordings. Completed project will have a professional-sounding, well written spoken word introduction describing what the CD is, and detailed vocal description of each track before each of the 12 tracks. 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 3: ELECTRIC GUITAR: Great electric guitar recording
OBJECTIVE: Produce a finished instructional CD comparing the sound of 12 different setups for recording electric guitar.
DETAILS: Using the system and software of your choice, no compression or effects, record 12 different tracks of electric guitar using different mics and/or variations of mic placement. Use your knowledge of acoustics and micing to choose and plan the best 12 potential ways to mic the instrument. Have the performer perform the same 1 minute musical performance for each recording. Carefully note all details of the setup, equipment, mics, preamps, mic placement, room size, wall coverings, anything that an audio tech listening to the finished product would be interested to know. Include usable digital photos of each setup to help document each recording. Reset the mics and/or choose different mics, and repeat the same operation for a total of 12 documented tracks. Edit and produce a finished CD from these recordings. Completed project will have a professional-sounding, well written spoken word introduction describing what the CD is, and detailed vocal description of each track before each of the 12 tracks. 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: DRUMS: Great drum sounds recording
OBJECTIVE: Produce a set of tracks comparing 6 great ways to mike a drum kit using 4 mics. When completed, students will present the recordings to the class, and compare the individual drum micings, and the overall kit sounds.
DETAILS: Using the system and software of your choice, no compression or effects, record 6 different stereo mic setups using 4 mics, of a great sounding drum kit played by a great drummer. Use your textbooks, web advice,and past experience to choose and plan the best 6 potential ways to mike the kit. Schedule a good drummer and set up his best-sounding kit. Have the drummer play along with 1-2 minutes of a drum-kit intensive recording in his headphones featuring fills, crashes, and some standard rhythm sections. Carefully note all details of the setup, equipment, drums, mikes, preamps, recorder, mike placement, room size, wall coverings, anything that an audio tech listening to the finished product would be interested to know. Have available digital photos of each setup to help document each recording. Reset the mikes and repeat the same operation for a total of 6 documented 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 5: Complete recording of a multi-instrument band using studio Control room 1 and analog console, using Digital Performer system
OBJECTIVE: Plan, rehearse, set-up, record, overdub, and mix a release-quality recording using the analog console.
DETAILS: Session will include live drums, bass, guitar, keyboard, vocals, background vocals, percussion. Record all rhythm instruments and a guide vocal together for the basic tracks, overdub the other instruments, and mix down to the final two-track. 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: Complete recording of a multi-instrument band using studio Control room 1 and analog console, using Protools system

OBJECTIVE: Plan, rehearse, set-up, record, overdub, and mix a release-quality recording using the analog console.

DETAILS: Session will include live drums, bass, guitar, keyboard, vocals, background vocals, percussion. Record all rhythm instruments and a guide vocal together for the basic tracks, overdub the other instruments, and mix down to the final two-track. 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 7: Complete recording of a multi-instrument band on a laptop system 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. Record all rhythm instruments and a guide vocal together for the basic tracks, overdub the other instruments, and mix down to the final two-track. 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 8: Two Live recordings of MCC concerts

DETAILS: Each scheduled recording date will have two student teams each doing a live recording with separate equipment of your choice using 24 bit 48K.

Post production will import both versions of the event into one DP product, align the files, and prepare a presentation for our class highlighting the sonic, dynamic, phase and sound quality differences between the two, and demonstrating possible combinations of the two versions.

Then edit the songs into a CD style product, master and present the finished DP project once again to the class, demonstrating the processes, edits, enhancements, and tools used to produce the end product.

Class members will critique and make suggestions for optimizing the product. Then complete the product, burn at least 2 CDs and deliver one to BK (with all supporting documentation and work logs) for class credit, and deliver the other CD to the instructor of the performance group you recorded.

These will be completed within 10 days following the recording event.

INDIVIDUAL STUDENT PROJECTS..... The following projects will be produced by each student individually-

PROJECT 9: Complete recording of a midi sequenced production with vocals and other acoustic tracks on a ProTools system, internal software processing, and automated mix with controller worksurface.
OBJECTIVE: Sequence and overdub vocal and instruments for a release-quality midi-sequence based recording on the pro tools system.
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 10: Complete recording of a midi sequenced production with vocals and other acoustic tracks using DAW of your choice, internal software processing, and automated mix with controller worksurface..
OBJECTIVE: Sequence and overdub vocal and instruments for a release-quality midi-sequence based recording using DAW of your choice.
DETAILS: Produce midi drum and instrument tracks using the sequencer in LOGIC, 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: Complete recording of a midi sequenced production with vocals and other acoustic tracks on a Digital Performer system using external mic preamps and external hardware processing, and automated mix with controller worksurface.
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.

PROJECT 12: Re-mic pre-recorded drum tracks in 3 live rooms and compare the results.
DETAILS: Set up playback system and stereo mics, re-record drum tracks of the room sound to add ambiance. Thoroughly document and photograph the entire project, assemble into a presentation and present to class with session files, showing the variety of sounds possible with this technique. Save project files, 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 cr1 analog console with all 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 your cr1 analog console band studio recording session (from project 3 or 4) using Digital Performer system using controller worksurface.
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 tracks from any other recording session using ProTools system using controller worksurface.
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: Weekly Listening chops exercise.
DETAILS: Each week choose at least one selection from the studio listening library. Listen to it being played back, selectively monitor it thru 3 different speaker systems and headphones. Do internet research on the artist, producer, engineer, studio where it was recorded, and any other interesting info you can collect about the recording. Prepare a presentation of your findings and observations, and make a presentation no longer that 5 minutes to the class. Presentation should have visual and audio samples to document your info.

PROJECT 17: Complete construction of an operational electronic audio device, and demonstrate it to the other students at some time during the semester.