

SYLLABUS

MUSIC 221 - AUDIO RECORDING

WINTER QUARTER, 2002

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OFFICE HOURS, Mondays and Wednesdays 3:30 P.M. – 4:30 P.M.

Section 01 **meets** Mondays and Wednesdays from 12:30 P.M. to 1:45 P.M. in room 806. Section 02 meets on Mondays and Wednesdays from 2:00 P.M. to 3:15 P.M. in room 806. Three credits are awarded upon successful completion of the course. There are no required pre-requisites for the course however English 101 and Music 220 are recommended.

The **course objective** is to introduce students to audio mixing and recording. This will be accomplished in a lecture/demonstration format that will include hands-on learning opportunities for the students. This course is designed as the second of a six-course sequence available at the college. It is a requirement for completion of the associate degree in audio engineering and digital audio.

An approximate **course outline** for Music 221, AUDIO ENGINEERING, appears below.

- Week 1 - Introductions, syllabus distribution, course registration corrections and additions. An overview of the class and how it fits into the various degree options. An overview of console use in the modern recording studio. Split vs. inline design considerations. Input, output, monitoring, and mixdown functions are clarified and related to specific sections of the standard mixing console.
- Week 2 - Input circuitry in a modern mixing console. The mic/line switch, pad insertion, gain and trim potentiometers, and the overload indicator LED. Standard set up procedure for establishing input levels and channel output faders. Phantom power access in various console designs. On board equalization as "tone" control. Shelving vs. peaking styles of equalization.
- Week 3 - Sweepable bandwidth equalizers in console design. Semi-parametric, quasi-parametric, and fully parametric equalizer circuits. High pass and low pass filters in EQ design. Advantages of EQ bypass capability in console design. Effect loop access and channel routing in modern console design.
- Week 4 - The output section of the console as a production function in a split console design. Overdub mode and determining source or tape as a monitoring medium. Using the output section as an extension of the available input section. Record mode functions and their relation to mixdown mode functions.
- Week 5 - The master section of the recording/mixing console. Effect return options in the master section. Monitoring options for cue mixes, control room mixes, and studio mixes. Talkback and slate functions. Solo, mute, and solo in place functions located in the master control section.
- Week 6 - Musical considerations when mixing. A subtractive approach to mixdown which reduce center frequency buildup. Setting cue mixes which solve problems before they begin. Various tutorial approaches to recording and mixing practices commonly used in professional recording sessions.
- Week 7 - An introduction to outboard processing equipment in the industry. The historical

evolution from acoustical reverberation plates to "extreme" digital processing. Reverberation systems including plates, springs, microprocessors, and rooms are discussed.

- Week 8 - Early reflections (ER) and the effect they have on spatial imaging in your mix. The study of psychoacoustics, the psychoacoustic processors and their applications in modern recording technology. Applications of the psychoacoustic effect.
- Week 9 - Using special effects like flanging, chorusing, delay, pitch change, automatic panning etc. Music considerations when using special effects. Applications of various effects,
- Week 10 - Fully parametric equalization using outboard EQ. Variable gain amplifiers such as compressors, expanders, companders, duckers, and gates. Increasing headroom in sound reinforcement systems and audio storage devices with compression. Compressing tracks in a multi-track environment vs. compression of the final stereo mix.

Grading is based on scores in three areas. Area one is the combined scores on all written exams and accounts for 70% of the final grade. Area two is determined by success in hands-on projects assigned throughout the quarter and accounts for 15% of the final grade. Area three is based on attendance, participation, punctuality, and dependability throughout the quarter and accounts for 15% of the final grade. Decimal grading is used exclusively. The Z grade is awarded only for emergency withdrawals and only to students who are passing the course.

Any irrefutable evidence of **cheating** or **plagiarism** (turning in work that is not your own) on the part of a student will result in non-acceptance of the assignment or examination.

Requests for **excused absences** must be made before the scheduled class time and any subsequently missed tests or assignments completed before the next regularly scheduled class meeting.

The required **textbook** for this course is "*Modern Recording Techniques*" (5th edition), written by David Huber and is available in the college bookstore.

Students may be asked to **purchase** one (and possibly two) high quality cassette tapes on which to submit hands-on recording projects for evaluation. Every effort will be made to return all cassettes to their original owners but... the instructor does NOT assume responsibility for project tapes. It is the student's responsibility to make back-up copies of valuable recordings. Students are also expected to provide all note-taking materials as well as a storage/retrieval system for class handouts. Most handout materials will be punched for a standard three-ring binder.

In **inclement weather** conditions listen to KIRO or KING radio for official school closure announcements.