AUDIO 156
AUDIO ENGINEERING I

COURSE LEARNING OUTCOMES (CLOs)

1. Demonstrate the initial steps to set up a control room mixing board for a multitrack to two-track mixdown.
2. Effectively utilize VGA signal processing equipment during a recording session and during mixdown.
3. Recognize the subjective nature of audio mixdowns and demonstrate objective critical listening techniques.
4. Demonstrate critical decision making as used in a mixdown session.
5. Demonstrate effective use of equalization, imaging, subgrouping, balancing, and fader moves as used during a mixdown.
6. Plan a complete recording session by preparing pre-session tracking sheets and organizational documents.
7. Demonstrate proper patching of outboard effects units with correct gain structure and adjustment.
8. Recognize by ear, the 10 audio spectrum octaves and discern specific frequency ranges.
9. Demonstrate critical listening skills and actively participate in discussions while listening to various recorded material.

COURSE OUTLINE

I. Recording project preparation
   - A. Musical considerations, listening
   - B. Artist considerations
   - C. Timelines and budget
   - D. Detailed planning - the pre session planning/tracking sheet
   - E. Review of session procedure and individual roles
   - F. Scheduling

II. Review of recording/production process
   - A. Studio procedures
   - B. Critical listening
   - C. Preparing for mixdown

III. Signal processing with VGAs
   - A. Signal flow and patch bay
   - B. Gating, expanding
   - C. Compression, limiting
   - D. Equalization

IV. Outboard effects
   - A. Signal flow, gain structure and patch bay
   - B. Reverb
   - C. Delay
   - D. Chorus, flange and miscellaneous

V. Analog multitrack mixdown
   - A. Machine preparation
   - B. Signal flow, patching
   - C. Trim, PFL, meters, output level
   - D. Balance, imaging, subgrouping
   - E. EQ, masking
   - F. Patching and using VGAs
   - G. Effects
   - H. Mastering levels
   - I. Putting it all together

VI. Basic two-track editing
   - A. Tape
   - B. Hard Drive
   - C. Editing experience

VII. Critical listening
   - A. Octave and frequency identification
   - B. Microphone experimentation/comparison
   - C. A/B listening
   - D. Student mixdowns
   - E. Professional mixdowns

VIII. Professional site and studio visitations

WORKLOAD EXPECTATION STATEMENT

The average student will spend 33 hours in classroom lecture and 22 hours in classroom lab. The student is also expected to spend 77 hours studying written materials, performing critical listening assignments, and preparing for exams, practical tests, recording projects and other forms of student learning evaluation.