CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

Course Title: MU 428 Digital Mastering, Editing and Delivery

Date of Preparation: November 29, 2004
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COURSE OUTLINE

I. Catalogue Description

MU 428 Digital Mastering, Editing and Delivery (4)

Advanced, exploration of the principles and practices of music audio mastering. Group projects explore critical listening, noise reduction, continuity, sweetening, gain structure, dynamics processing, psychoacoustics, editing, fades, Fletcher & Munson loudness curves, and other topics related to audio mastering. 4 hours lecture, activity or a combination. Prerequisite: MU 328

II. Required Background or Experience

Prerequisite: MU 328 Music Recording II.

III. Expected Outcomes

- Demonstrated knowledge of technical, aesthetic and practical elements of music mastering.
- Achieve a working knowledge of mastering procedures specific to musical genres and formats.
- Achieve a realistic understanding of the functional scope of the mastering process.
- Demonstrate proficiencies in delivering content to all mediums covered.

IV. Text and Readings

Katz, Bob. *Mastering Audio: The Art and the Science.* 2nd Ed. ISBN 0240808371. Focal Press: 2007.

Owsinski, Bobby. *The Mastering Engineer's Handbook.* 2nd Ed. ISBN 1598634496. ArtistPro: 2007.

V. Minimum Student Materials

Headphones, blank CD-Rs, blank DVD-Rs,

VI. Minimum College Facilities

1. Control room/class room large enough to accommodate monitoring equipment, instructor and seated students. Avid ProTools HD hardware & software. Computer system compatible with Avid hardware. Two hard drives. Two computer monitors. Internet access. Off-site server accessible via Ethernet for backing up audio data. Mixing console and/or digital audio workstation controller. Other signal processing equipment. Monitoring systems (speakers, amplifier and gain controller). Studio furniture including computer noise-isolation, equipment racks, speaker stands, console table, and chairs for instructor and students. Analog and digital cabling including patch-bay.
2. Blackboard (or equivalent) on-line site.

VII. Course Outline

1. Introduction and overview of audio mastering for music.
   a) Relative loudness adjustments
   b) Absolute loudness adjustments (Fletcher and Munson loudness curves)
   c) Noise reduction
   d) Fade-ins, fade-outs and cross-fades
   e) Dynamics signal processing (compression/limiting, expansion/gating)
   f) Other signal processing (subtractive vs. additive equalization; delay and reverberation)
   g) Mid-side and other advanced mastering techniques
   h) Dithering down from high to low bit depths
   i) Assembly of CD premaster
   j) Duplication
   k) Mastering for other media
2. Mastering Project I (noise reduction)
3. Mastering Project II (before and after demonstration CD)
4. Mastering Project III (multiple song demonstration CD)
5. Paper and presentation project.
6. Mastering Project IV (full-length CD)

VIII. Instructional Methods

Classes will be taught via lecture, demonstration and hands-on student experiences.

IX. Evaluation of Outcomes

Hands-on group projects.
Paper and presentation.