Date: 2-17-16

ROSE STATE COLLEGE

Division Course Syllabus

Division Humanities

Course Title Audio Engineering II
Course Prefix and Number MUS 2352
Semester and Year Submitted Spring 2016
Credit Hours 2-1-2
Prepared by Dr. David Gedosh

Hours Per Week: Class 2 Lab 1

Course Description (as it appears in Catalog)
This course is designed for students who desire to continue to develop a practical understanding of the technical and creative principles of music production using current music technology for today's music industry. Through lectures, demonstrations, and practical exercises and assignments, this course offers students a more in depth study of music technology and recording techniques. Topics include digital audio theory, microphone techniques, advanced signal routing, and digital signal processing, with a focus on critical listening and mixing techniques. This course is taught in the recording studio using Pro Tools HDX software. Prerequisite: MUS 2323

Prerequisites MUS 2323 Audio Engineering 1

Text(s):
Title Modern Recording Techniques 8th edition
Author David Miles Huber, Robert E. Runstein
Publisher Focal Press
Copyright Date 2013
ISBN # 978-0240821573
Reading Level Intermediate

Supplemental Materials: (Other books, audio visual aids, etc.)
Required: External HDD or Flash Drive (max GB), Headphones with 3.5mm connector and 1/4 inch adapter.
Outline for Remainder of Syllabus:

Rationale: This course is a continuation of the Audio Engineering course series, in the Music Engineering and Industry program, and is a required course. It is designed for students who desire a more indepth study of the use of music production technology in today's music industry. This course is taught using Pro Tools HDX software, and continues to develop students' understanding of microphone techniques, signal pathway, analog and digital audio production equipment, and recording techniques. Successful completion of Audio Engineering 1 is necessary for enrollment in this course. This course is taught in the recording studio using Pro Tools HDX software.

Expected Outcomes: Upon completion of this course students should be able to:

1) Demonstrate an intermediate knowledge of analog and digital music production equipment and its use in studio and live music production environments
2) Demonstrate an intermediate proficiency in the use of microphones and microphone techniques, for use in professional live and studio music production environments
3) Demonstrate an intermediate knowledge of signal flow and signal routing as it pertains to live and studio music production
4) Demonstrate a intermediate knowledge of hardware and software dynamic processing and digital signal processing
5) Demonstrate intermediate proficiency of recording and mixing techniques using industry standard software and hardware to enhance recording and mixing projects
6) Develop skills for critical listening and analysis of music production techniques
7) Develop an industry level understanding of Digital Audio Theory
8) Effectively communicate their knowledge of the artistic and technical elements of music production
9) Continue to develop a portfolio creative work

Methods of Instruction: This course is largely practical, with hands-on demonstrations, exercises, and practical projects, supported by technical discussion of theoretical information. The following methods of instruction are to be used:

Reading assignments from text
Reading assignments and quizzes from handouts - distributed online through D2L
Online videos and articles pertaining to specific topics
Class lectures and discussion
Class demonstration and practical exercises
Written quizzes
Software-based practical assignments and projects

Assessment (Including Critical Thinking measurements): Assessment of students' understanding is varied across written quizzes and tests, practical in-class exercises, practical software assignments, and practical projects, as well as class participation and the ability to clearly articulate the technical and artistic elements of the course material.
Students’ work will receive a numerical grade in the form of points received out of total points possible. The final grade will be calculated by converting the total points received into a percentage as follows:

A=100-90, B=89.9-80, C=79.9-70, D=69.9-60, F=59.9-0

Learning Objectives: The following section defines the major units of the course along with learning objectives for that section. Supplemental materials, including media files, reading assignments and quizzes, and tests can be found in the supplemental materials folder accompanying this course syllabus.

Unit I  Digital Audio Theory (Outcomes 1, 7)

On written quizzes and exams, the student will be expected to demonstrate the following:

1) Computer recording systems
2) Basic sampling theory; sample rate, bit depth, quantization

Unit II  Intermediate Microphone Techniques and Recording (Outcomes 1, 2, 3, 6)

On practical exercises and assignments the student will be expected to demonstrate the following:

1) Stereo microphone techniques on a variety of instruments
2) Multi-microphone techniques on a variety of instruments
3) Multi-tracking session organization and setup

Unit III  Dynamic Processing, Equalization, and Delay-based Effects (Outcomes 1, 3, 4, 5, 6)

On written quizzes and exams, and practical assignments the student will be expected to demonstrate the following:

1) Basic understanding of the parameters of and practical use of dynamic processing; Compression, Limiting, Gating, and Equalization
2) Intermediate routing techniques for dynamic processing
3) Basic understanding of the parameters of and practical use of common delay-based effects; Delay, Reverb, Chorusing, Flanging, and Phasing
4) Intermediate routing techniques for delay-based effects
5) Intermediate mixing techniques

Unit IV Critical Listening (Outcomes 6, 8)

This section is concurrent with Units II and III

On written and practical assignments, the student will be expected to demonstrate the following:

1) Frequency identification; beginning level
2) Development of critical listening skills for analysis of music productions techniques