

DESN 385 Advanced Digital Sound Design – Syllabus *Prerequisite DESN 275 (DESN 384)*

Course Description

This course provides in-depth experience in digital sound production techniques and related hardware and software, including setting up accurate monitor systems, live and studio recording techniques, multi-track mixing, mastering, and the design and creation of sound tracks, including music, to support and enhance typical media productions. Group and individual projects will be required. Recording live performances requires structured time outside of class.

The course will meet for three hours per week of lecture, critiques and guided interactive demonstrations, and approximately two hours per week for guided field or laboratory work. For class projects, microphones and studio hardware will be supplied.

Students are expected to be able to use typical digital audio workstation software (certain freeware is acceptable), and to have access to a computer with such software installed. Additionally, students are encouraged to acquire their own professional headphones. Please consult the instructor, as most consumer headphones tend to produce poorly balanced audio mixes.

Text David Miles Huber, *Modern Recording Techniques*, Audio Engineering Society Presents, 2017. Other reading resources will be web-based or supplied by the instructor.

Assignments and Tests

Assignments will be given weekly or every other week. Quizzes will be given often. Grading will be based 50% on production work, 20% on critiques and presentations, 5% on attendance, and 25% on quiz and final exam scores. Grading will follow EWU standards, with 97% points = 4.0

Projects

Class projects will be arranged to take advantage of on-campus performances. In addition to the class projects, each student is required to propose, plan and complete one individual major project and one minor project. Examples of major projects include creating CD master quality recordings of a small or large ensemble in a venue (two or three pieces of music); creating and mixing a multi-track demo recording for an individual or group; creating a sound track for a video; creating competitive cheer or workout soundtracks; creating a set of sounds for a video/computer game; and so on. Examples of a minor project would include recording a narration for

a podcast; creating a music track for a larger soundtrack production; and so on. Finally, each student will present a 15 minute presentation to the class on a related topic not directly covered in class.

Turning in Assignments

Due to the large size of digital audio files, we will use thumb drives, rather than Canvas, to turn in assignments. Alternately, if a student wishes, assignments can be turned in via FTP to the instructor's website.

Topical Outline: This course will provide instruction on how to...

- 1. Establish a bench mark standard system for evaluative listening and mixing - speakers and room - RTA, REW system setup and EQ - troubleshooting*
- 2. Record in the studio - part 1 utilizing simple vocal tracks - using typical microphones - microphone techniques - optimizing levels at every interface: source to mic, mic to preamp input, preamp gain, channel gain, send level, input level gain, track volume - hardware compression - troubleshooting*
- 3. Record in the studio - part 2 utilizing multiple tracks - microphone techniques for various instruments - latency - click tracks - microphone vs direct input box? Cabinet emulation device? - troubleshooting*
- 4. Record live performances - utilizing stereo microphone techniques such as Blumlein, coincident, mid-side, spaced pair, etc., as well as spot microphone techniques - to capture or recreate the sound of a performance venue.*
- 5. Apply industry standards to projects - understand planning and organization for work flow and file management, optimizing files for different media such as video, motion graphics, games, podcasting, streaming, etc. understand professional practices and client expectations, loudness standards, and the production of stems and alternate mixes.*
- 6. Understand basic sound design for film and video - including terminology and planning - pre and post production and repair, the utilization of soundmaps, leitmotifs, themes, metaphors - understand the categories to describe sounds used in film: diegetic, non-diegetic, synchronized, false-synchronized, acousmatic, and on-track and off-track sounds.*
- 7. (Concurrently) Mix multi-track projects utilizing panorama, dimension, equalization, dynamics, and interest.*
- 8. (Concurrently) understand mastering processes - listen critically - develop standards*