Instructor

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Course Description

As the rolls of musicians, engineers, producers, and music business professionals continue to become more intertwined, it is crucial that music professionals communicate intelligently about what they are hearing. Critical Listening, MTEC 176, is designed to help students develop a comprehensive understanding of audio quality and the musical aspects of audio production. Through selected listening examples, the course will develop the students' listening and problem identification skills, as well as, the specialized vocabulary necessary to offer useful audio critique.

Objectives

Students in Critical Listening will learn how room setup and psychoacoustics impact the way humans perceive sound. Additionally, they will learn to recognize elements of a recording by frequency, amplitude and spatial position; by audio production style and technique; and then effectively combine those skills with an analysis of musical form, instrumentation, arrangement, dynamics, style and other musical characteristics.

Requirements, Exams and Grading Information

Student evaluation will consist of take-home listening exercises, in-class listening quizzes, a midterm exam and final exam. Concise instructions for take-home exercises will be available at a later date. Take-home exercises are due one week after assignment.

Exams will contain both written and listening sections. Please note that the final exam is cumulative. Tests must be taken during the scheduled times and cannot be made up at a later date. **The final exam will be given during the university scheduled final exam time for the class.**

Attendance is taken each class and will count towards your final grade. After two absences your grade will be lowered one-half grade for each additional absence. Because of the importance of hands on experience with this subject, attendance to all classes is the only method of understanding the concepts of this specialized topic.

Recommended Textbooks- *wait till first meeting discussion before any purchases*

Corey, Jason. *Audio Production and Critical Listening*. Focal Press (2010). (Required)

Huber, David Miles and Runstein, Robert E. *Modern Recording Techniques 8th Edition*. Focal Press (2013)

Everest, F. Alton. *Critical Listening Skills for Audio Professionals.* Cengage Learning (2006).

Thompson, Daniel M. *Understanding Audio: Getting the Most Out of Your Project or Professional Recording Studio.* Berklee Press (2005.)

Grading

1. Participation (in-class and online) 10%
2. Exercises, Labs and Project 20%
3. Module Quizzes 20%
4. Midterm Exam 20%
5. Final Exam 30%

GRADING SCALE	
100 - 94	A
93 – 90	A-
89 - 87	B+
86 - 83	B
82 - 80	B-
79 - 77	C+
76 - 73	C
72 - 70	C-
69 - 67	D+
66 - 64	D
63 - 60	D-
Below 60	F

Blackboard and Communication

Course materials, assignments, documentation and grades will be posted on Blackboard at **https://blackboard.usc.edu/**. Please make it a habit to use/check your USC E-mail account. Any E-mails sent to the class will only use your USC E-mail account.

Statement on Academic Conduct and Support Systems

Academic Conduct

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards*https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct/.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* http://equity.usc.edu/ or to the *Department of Public Safety* http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us. This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* http://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.htmlprovides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* *http://emergency.usc.edu/*will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

Class Schedule – *(Subject to Instructor Changes)*

Module 1 – *Course Introduction:*
How Sound Works
Frequency
Levels
Time
Harmonics
Pitch vs. Frequency
Reading: *Modern Recording Techniques Ch. 2*

Module 2 - *Hearing*
The Ear
Perception
Objective and Subjective
Reading: Modern Recording Techniques Ch. 2

Module 3 - *Spectral Balance*
Equalization
Ranges
Identifying boost or cut
Filter Types
Reading: Audio Production and Critical Listening Ch. 2

Module 4 - *Audio Dynamics*
Levels
Noise
Distortion
Compression
Reading: Audio Production and Critical Listening Ch. 4

Module 5 - *Audio Imaging*
Mono
Stereo
Surround
Reading: Audio Production and Critical Listening Ch. 3

Module 6 - *Room Acoustics*
Basic Design
Testing
Treatment
Correction
Reading: Modern Recording Techniques Ch. 3

Module 7 - *Sound and Reflections*
- Delay
- Phase
- Reverb
- Creating depth

Reading: Audio Production and Critical Listening Ch. 3

Module 8 - **Midterm Exam**

Module 9 - *Monitoring*
- Passive Monitors and Amps
- Active Monitors
- Control
- Headphones

Reading: Modern Recording Techniques Ch. 17

Module 10 - *Judging Audio Quality*
- Distortion Problems
- Stereo Problems
- Playback issues
- Editing Issues

Reading: Audio Production and Critical Listening Ch. 5

Module 11 - *Instrument Identification I*
- Drum Set
- Percussion
- Electrics and Acoustic Bass
- Guitars
- Keyboards

Reading: Audio Production and Critical Listening Ch. 7

Module 12 - *Instrument Identification II*
- Percussion
- String
- Brass
- Woodwinds

Reading: Audio Production and Critical Listening Ch. 7

Module 13 - *Song Analysis I*
- Instrumentation
- Form
- Levels
- Position
- Dynamics
- Dimension
- Quality

Reading: Audio Production and Critical Listening Ch. 7

Module 14 - *Song Analysis II: Contemporary Sound Techniques*

Layering
Frequency stratification
Side-chain processing
Envelope modulation
Filter modulation
Arpeggiators

Reading: Audio Production and Critical Listening Ch. 7

Module 15 - *Review*

Finals Week: Final exam day and time TBA per published USC Final Schedule for Spring 2017.