Critical Listening (MTEC 176)
Syllabus Fall 2023 2 hours per week (2-unit)

Instructor
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Office Hours: TBA - Online

Course Description
As the roles 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.

ACADEMIC FINAL EXAM CONFLICT WARNING
Courses taken on Wednesdays from 12PM – 1:50PM may/will have semester Final Exam scheduling conflicts. MTEC175 is not affected. All other courses will conflict. Student must resolve this issue at least two weeks prior to exam date. This may also include instructors who may choose to move their final exam time outside of USC guidelines and policies.
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.

Classroom Interference
Any class interference such excessive talking, whispering, technology interference, phones or devices sounding will not be tolerated in any manner. Offending student or students will be asked to leave classroom and not allowed back until an instructor office meeting takes place. Further academic actions may be necessary for offenses.

Recommended Textbooks - wait till first meeting discussion before any purchases
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) 15% Class Attendances, Blackboard Groups
2. Labs and Project 20% Training Labs, Song Analysis Project
3. All Module Quizzes 20% Module Content Assessments
4. Midterm Exam 20% Comprehensive to Date
5. Final Exam 25% Online Listening Exam

GRADING SCALE
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<tr>
<th>Score Range</th>
<th>Grade</th>
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<tr>
<td>100 - 94</td>
<td>A</td>
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<td>93 – 90</td>
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<td>89 - 87</td>
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<tr>
<td>63 - 60</td>
<td>D-</td>
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<tr>
<td>Below 60</td>
<td>F</td>
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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.html provides 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 - Midterm Exam

Module 8 - Sound and Reflections
  Delay
  Phase
  Reverb
  Creating depth
  Reading: Audio Production and Critical Listening Ch. 3

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

THE FOLLOWING ARE NOT INCLUDED IN REMOTE LEARNING PRESENTATION

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

**Finals Week:** Final exam day and time TBA per published USC Final Exam Schedule for current semester. See Final Exam Policy Warning Above.