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.

Textbooks – Recommended Only

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   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 Fall 2016.**