Instructor:
Andrew Garver: (213) 821-1605
E-mail: garver@usc.edu   Add "MTEC 389" to the Subject
Mailbox: TMC 118
Office: TMC 107 {or MUS 103}
Office Hours: By appointment

Text: (Optional) **Principles Of Digital Audio by Ken Pohlmann**
Other resources: http://www.soundonsound.com/
http://mixonline.com/
http://www.recordingmag.com/
http://en.wikipedia.org

Course Description:
Digital Recording & Equipment MTEC 389 is a survey of the fundamental principles of digital audio. Topics include an overview of all the components involved in the conversion, clocking, formatting, and processing of digital audio. Digital audio has permeated the entertainment industry, through recording, production, performance, and delivery. These essential concepts are crucial to providing the highest quality audio in any situation, while understanding the limitations and risks inherent in digital systems.

Requirements, Exams and Grading Information:
Student evaluation in 389 will consist of a variety of work. Take home exercises stressing vocabulary and concepts will be assigned in class, and must be turned in one week later.

Tests will contain mostly short answer or multiple-choice questions. The midterms will cover the topics discussed prior to the test. Only the final exam will be cumulative. Tests must be taken during the scheduled times and cannot be made up at a later date.

Attendance is mandatory and will count towards your final grade, as part of class participation. Because of the importance of hands-on experience with this subject, participation in all classes and labs is the only method of understanding the concepts of this topic. Attendance will be taken at each class, and each absence will be noted. After three absences, your grade will be lowered one-half grade for each additional absence. There is no distinction in this class between "excused" and "unexcused" absences—all will be counted. In the event of a serious situation such as illness that causes you to miss more than three classes in a row, you should contact Professor Garver as soon as possible.

Throughout the semester, questions about your grades should be addressed immediately. Do not wait until the semester has ended to resolve a grading issue.

Disabilities:

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure

the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776, http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html.

Academic Integrity:

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. Scampus (scampus.usc.edu), the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: http://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/.

Blackboard:

Course materials, documentation and grades will be posted on Blackboard at **https://blackboard.usc.edu/**. All e-mail correspondence regarding the class will be sent to USC accounts only, so please check yours regularly!

Grading:
1. Homework   15%
2. Quizzes   20%
3. Midterm   25%
4. Final Exam   30%
5. Class Participation   10%

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

Class Schedule:

Date	Topic
10-Jan	Introduction & Basics
17-Jan	Fundamentals of Digital
24-Jan	Delta-Sigma Conversion & Noise Shaping
31-Jan	Clocking and Jitter
7-Feb	Digital to Analog Conversion
14-Feb	Interconnections
21-Feb	Computers and Interfaces
28-Feb	**Midterm**
7-Mar	Error Correction
14-Mar	**Spring Break**
21-Mar	Storage, Tape, CDs, hard disk
28-Mar	Audio File Formats Perceptual Coding
4-Apr	Internet Audio
11-Apr	DSP
18-Apr	System Design
25-Apr	Review
9-May	**4:30pm Final Exam**