

# Syllabus: MTEC 493, Audio Signal Processing Equipment

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## Instructor:

Andrew Garver  
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Mailbox: TMC G118  
Office: TMC 107 {or MUS 103}  
Office Hours: Tuesdays and Thursdays by appointment

**Text:** Class notes and PDFs on Blackboard

**Other resources:** <http://www.soundonsound.com/>  
<http://mixonline.com/>  
<http://www.recordingmag.com/>  
<https://blackboard.usc.edu> (Lynda.com)  
<http://hyperphysics.phy-astr.gsu.edu/hbase/emcon.html#emcon>

## Course Description:

MTEC 493 Audio Signal Processing is a survey of the fundamental principles of signal processing for recording, mixing, and mastering. Topics include an overview of all the components involved in gain structure, equalization, dynamic control, and effects.

## Requirements, Exams and Grading Information:

Student evaluation 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 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 will be taken at each class and will count towards your final grade. After three absences your grade will be lowered one-half grade for each additional absence. 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.

## 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!

## 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/academicssupport/centerprograms/dsp/home\\_index.html](http://sait.usc.edu/academicssupport/centerprograms/dsp/home_index.html).

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## 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, 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/>.

## Grading:

1. Take Home Exercises	20%
2. Presentation	20%
3. Midterm Exam	20%
4. Final Exam	30%
5. Class Participation	10%

## GRADING SCALE

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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

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### Class Schedule:

Week	Date	Topic
1	22-Aug	Introduction
2	29-Aug	Electrical Basics and Connections
3	5-Sep	Components and Gain Structure
4	12-Sep	Amplifiers and Tubes
5	19-Sep	Compressors & Limiters
6	26-Sep	Equalization
7	3-Oct	Enhancers
8	10-Oct	<b>Mid-Term (Presentation Topic Due)</b>
9	17-Oct	Delays
10	24-Oct	Reverb
11	31-Oct	Multi Effects
12	7-Nov	Noise
13	14-Nov	Presentations
14	21-Nov	Presentations
15	28-Nov	Review
16	13-Dec	<b>Final Exam</b>