



Artists Boot Camp

Audio Engineering / Recording Arts Program

Class Meeting Times: 4 hours per week

Class Labs: 4 hours per week. Access to a computer with Pro Tools v8 Minimum

Textbooks:

AE/RA 1 & 2: Modern Recording Techniques 7th Edition (MRT); David Miles Huber, ISBN-13: 978-0240810690
Pro Tools 101; Avid Inc., ISBN-13: 978-1435458802

AE/RA 2 & 3 The Art of Mixing (AM); Gibson, ISBN-13: 978-1931140454
The Art of Producing (AP); Gibson, Curtis, ISBN-13: 978-1931140447

Supplies: A set of high quality "can" (circumaural) headphones with a "quarter inch" plug or adapter. A storage device e.g. portable hard drive or USB Flash Drive.

Course Requirements:

Course materials and a positive attitude. Students should already possess a solid understanding of computer usage, file management and storage strategies. Students will take notes during lecture and take part in demonstrations, labs and listening exercises. Exams will cover course materials from text, lecture, demonstration, listening and lab exercises; the tests can be comprehensive and may include written or drawing components. Labs must be completed on lab computers. It is the student's responsibility to back-up lab assignments. Lab assignments must be saved on the student's portable storage device. Note: it is the student's responsibility to keep up with the progress of the class and make-up any and all work missed due to absence. Cell phones and computers should be turned off and put away. No food or drinks are allowed in the lab or studio. Headphones are not available for loan. Students are required to have headphones for every class. Supply tests will be given randomly.

Method of Evaluation: 50% Tests, Assignments and Labs, 50% attendance, Mid Term and Final Exams; Note: Late exams or labs are reduced by 15 points or one letter grade. 100-90 = A, 89-80 = B, 79-70 = C, 69-60 = D, Below 60 = F

In addition, a Class Participation Benefit is available to students who regularly make positive contributions to class discussions and activities. Students who have a Class Participation evaluation of "above average" and whose final semester grade is within two points of earning the next higher letter grade will receive two points added to their final semester grade average as a Class Participation Benefit. No benefit will be made available to students whose Participation evaluation is "average" or "below average". No points will be deducted for a failure to participate in class activities and discussions.

Attendance Policy: Attendance is mandatory. Roll will be taken, three absences or tardies will drop the final grade by one letter; six absences will drop the final grade by two letters, etc.



Artists Boot Camp

Audio Engineering / Recording Arts Program

Course Description: Audio Engineering / Recording Arts 1

Lecture with practical hands on Lab exercises directly supporting lecture materials. Introductory overview of the recording studio. Includes basic studio electronics and acoustic principles, waveform properties, microphone concepts and micing techniques, studio set-up and signal flow, recording console theory, signal processing concepts, recorder principles and operation, and an overview of mixing and editing.

Student Learning Outcomes:

- Identify acoustic and electronic concepts: describe waveform properties,
- Explain microphone characteristics and discuss their placement,
- Describe studio set-up and signal routing,
- Explain console and recording machine operation techniques,
- Discuss basic studio procedures.

Tentative Course Calendar Audio Engineering / Recording Arts 1:

Week #	Topics	Labs	Reading
1	Diagnostic Testing and Overview		MRT Chpt. 1
2	Recording Session Procedure and Overview / Sound & Hearing	Lab 1:	MRT Chpt. 2
3	Studio Acoustics and Design	Lab 2	MRT Chpt. 3
4	Microphones: Design and Application	Lab 3:	MRT Chpt. 4
5	Microphones: Application Techniques	Lab 4	MRT Chpt.4
6	Monitoring	Lab 5	MRT Chpt 16
7	Signal Processing: EQ, Comp, Reverb		MRT Chpt 14/15
8	Signal Processing	Lab 6	MRT Chpt 14/15
9	Analog Tape Recording/ Digital Audio Technology	Lab 7	MRT Chpt 5
10	Digital Audio	Lab 8	MRT Chpt 6
11	The Audio Production Console	Lab 9	MRT Chpt 7
12	Control Surfaces	Lab 10	MRT Chpt 13
13	Practical Recording Projects	Lab 11	MRT Chpt 16
14	Practical Recording Projects	Lab 12	
15	Review for Final Exam All Labs and Assignments Due		MRT Chpt 18
16	Final Exam - INCLUSIVE		



Artists Boot Camp

Audio Engineering / Recording Arts Program

Course Description: Audio Engineering / Recording Arts 2

Combined lecture and some hands on application of the techniques listed. Deeper, more detailed look at the recording studio processes and practical implementation of the recording process, microphones, audio console, multi-track recorder, and signal processing devices through hands on application.

Student Learning Outcomes:

- Demonstrate proficiency with micing techniques
- Demonstrate proficiency in signal flow
- Demonstrate proficiency in signal processing applications
- Demonstrate proficiency in pre-production and production
- Demonstrate engineering concepts to complete an advanced recording project.
- Improved timbral ear-training, including distinguishing between the subtle changes in audio such as minimal boosts and cuts in gain throughout the mixing process.

Tentative Course Calendar Audio Engineering / Recording Arts 2:

Week #	Topics	Reading
1	Overview, Evaluation Testing & Review	
2	Sound Chain and signal flow, Cables and connectors, Direct Input	MRT Chpt 13, 14
3	Patchbays and Mic Pre, Connecting to the console, console routing	
4	Studio Setup Strategies, Isolation vs. group recording	
5	Microphone placement techniques for various instruments including recording techniques, single, small group, ensembles	
6	Microphone placement techniques for a drum kit	
7	Signal Processing: Gates, Limiters, Soft Clipping, EQ, Compressor, Reverb	AM Chpt 4
8	Monitoring, system calibration, sound field imaging	AM Chpt 2
9	Setup and record a live band, Pro Tools session setup, record, punch-in	
10	Setup and record a live band, continued.	
11	Editing audio in preparation for the mix.	
12	Mixing techniques and strategies. Introduction to automation.	AM Chpt 3, 4
13	Mixing, applying those techniques and strategies	AM Chpt 6, 9
14	Mastering basics	MRT Chpt 18
15	Mastering and prep for production. All Labs and Assignments Due	MRT Chpt 19
16	Review for Final Exam & Final Exam - Inclusive	



Artists Boot Camp

Audio Engineering / Recording Arts Program

Course Description: Audio Engineering / Recording Arts 3

Very hands on application of the techniques covers interspersed with lectures. Advanced practice of procedures and techniques in recording and manipulating audio. Includes digital audio editing, advanced recording and engineering techniques including advanced automation; Mastering, Product Manufacturing, Professionalism in the Workplace including the role of the Tracking Engineer, Recording Engineer, Mixing Engineer and Producer. Session strategies including budgeting, technical considerations, business aspects and marketing. Multi-Media audio including audio production for the web and cell phones.

Student Learning Outcomes:

- Demonstrate advanced editing skills
- Utilize very advanced recording, mixing and editing techniques including automation.
- Outline the role, duties and responsibilities of the producer.
- Summarize session planning, layout and strategies.
- Communication, budgeting and music markets.
- Execute advanced recording and producing projects.
- Convert and optimize files for release on the Internet and cell phone.

Tentative Course Calendar Audio Engineering / Recording Arts 3:

Week #	Topics	Reading
1	Overview, Evaluation Testing & Review	MRT Chpt 20
2	The Producers Job and the business side of production	AP Chpt 1-3
3	The Production Process	AP Chpt 4, 5
4	The Production Process, continued	AP Chpt 6, 7
5	Recording session planning, setup and execution	
6	Record / Track a band, three song minimum	
7	Record / Track a band, three song minimum, continued	
8	Editing good/alternate takes and assembling songs and tracks	
9	Mixing – EQ, Compression, Reverb, Noise Reduction	AM Chpt 5
10	Mixing – EQ, Compression, Reverb, Noise Reduction	
11	Mastering, song ordering, preparation for	
12	Song ordering, Mastering for CD demo release	AM Chpt 9
13	Final Mastering and CD production	MRT Chpt 19
14	Protecting your Music	AP Chpt 17
15	Audio file format comparison and conversion. All Labs and Assignments Due	MRT Chpt 10
16	Review for Final Exam & Final Exam - Inclusive	