RECORDING ARTS & TECHNOLOGY (RA&T)

RA&T 100
MUSIC TECHNOLOGY
3 UNITS

Grade Only
Lecture 3 hours
Offered: ALL
Introduces the computer's role in music, synthesizer parameter definition, sequencers, editors, and notation programs. Provides computer-assisted instruction in music theory. [D; CSU; UC; C-ID CMUS 100X] (Same as: MUS 100)

RA&T 105
ELECTROACOUSTIC COMPOSITION
3 UNITS

Grade Only
Lecture 2 hours, laboratory 3 hours
Offered: ALL
Introduces electronic music techniques, branches of electroacoustic music, and the composers who developed the style. Features hands-on use of computer-based DAW software (Ableton Live), Musical Instrument Digital Interface (MIDI) sequencing software, and hardware used in contemporary computer-based music production. [D; CSU; UC] (Same as: MUS 155)

RA&T 107
COMPOSITION LABORATORY
3 UNITS

Pass/No Pass or Grade is Allowed
Prerequisite: MUS 131 or equivalent.
Lecture 2 hours, laboratory 3 hours
Offered: FALL, SPRING
Provides comprehensive coverage of music composition across various genres and instrumentations. Offers practical feedback on individual compositions and includes structured projects designed to delve into a wide range of topics. Explores different musical styles, develop their own unique sound, and refine their skills through hands-on practice and expert guidance. Enhances creativity and technical proficiency, making it suitable for both aspiring composers and experienced musicians looking to expand their repertoire. [D; CSU]

RA&T 110
MUSIC BUSINESS/CAREER OVERVIEW
3 UNITS

Grade Only
Lecture 3 hours
Offered: ALL
Explores the business aspects of music, with an emphasis on copyright law, production, contract law, personal management, professional organizations, and other elements of music which account for success in the music industry. [D; CSU] (Same as: MUS 150)

RA&T 120
RECORDING TECHNIQUES
3 UNITS

Grade Only
Recommended Concurrent Enrollment: FTMA 101.
Lecture 2 hours, laboratory 3 hours
Offered: ALL
Introduces audio recording with an emphasis on current digital recording techniques, equipment, and practices. Focuses on the physics of sound propagation, psychoacoustics, microphones, mixers, signal processing, and historical perspectives on analog, digital and HD audio recording, and multi-track recording and mixing. [D; CSU; UC] (Formerly: TELE 151; Same as: FTMA 111;MUS 151)

RA&T 121
AUDIO RECORDING TECHNOLOGY I
4 UNITS

Grade Only
Prerequisite: FTMA 111, MUS 151, or RA&T 120 or equivalent.
Lecture 2 hours, laboratory 6 hours
Offered: FALL, SPRING
Covers the fundamentals of microphone placement, large-format console operation, and the use of outboard gear. Includes practical applications of these skills in various recording projects, focusing on mixing and mastering. [D; CSU]

RA&T 122
AUDIO RECORDING TECHNOLOGY II
4 UNITS

Pass/No Pass or Grade is Allowed
Prerequisite: RA&T 121 or equivalent.
Lecture 2 hours, laboratory 6 hours
Offered: FALL, SPRING
Explores advanced techniques for microphone placement, large-format console operation, and the use of outboard gear. Includes practical applications of these skills in various recording projects, with a focus on mixing and mastering. [D; CSU]

RA&T 123
AUDIO RECORDING TECHNOLOGY III
4 UNITS

Grade Only
Prerequisite: RA&T 122 or equivalent.
Lecture 2 hours, laboratory 6 hours
Offered: ALL
Investigates the artistic and aesthetic differences between mixing the elements of live sound and recorded sound, and how these differences can be enhanced. Enables students to envision recording devices as musical instruments, with an emphasis on developing critical and analytical listening skills. [D; CSU]

RA&T 131
RECORDING TECHNIQUES FOR MIXED MEDIA
3 UNITS

Pass/No Pass or Grade is Allowed
Prerequisite: FTMA 111, MUS 151, or RA&T 120, or equivalent.
Lecture 2 hours, laboratory 3 hours
Offered: FALL, SPRING
Focuses on advanced audio recording with an emphasis on current recording techniques, equipment, and practices in the film industry. Focuses on Post Sound including Foley and ADR-Automatic Dialog Replacement. [D; CSU] (Same as: FTMA 121)

RA&T 141
INTRODUCTION TO COMPUTER PROGRAMMING - AUDIO FOCUS
3 UNITS

Grade Only
Lecture 2 hours, laboratory 3 hours
Offered: ALL
Offers a foundational understanding of computer programming, specifically tailored for those interested in audio technology. Introduces essential programming concepts and techniques, with a unique focus on their application within audio algorithms. Covers the basics of coding while exploring how these principles can be used to create, manipulate, and analyze sound. Includes hands-on projects and real-world examples to demonstrate the intersection of programming and audio engineering, making it ideal for beginners and those looking to specialize in the field of audio technology. [D; CSU]

RA&T 151
INTRODUCTION TO ELECTRONICS - AUDIO FOCUS
3 UNITS

Grade Only
Lecture 2 hours, laboratory 3 hours
Offered: FALL, SPRING
Introduces the fundamentals of electronics, with a special focus on audio-related applications. Provides a solid understanding of basic electronic principles and components, and how they apply to audio technology. Includes practical, hands-on projects, culminating in a major project such as synthesizer design. Includes the design, build, and troubleshoot electronic circuits, and gain insight into the unique challenges and opportunities in the field of audio electronics. Provides both theoretical knowledge and practical skills for those interested in combining their passion for music and electronics. [D; CSU]

RA&T 171
LIVE SOUND
4 UNITS

Grade Only
Lecture 2 hours, laboratory 6 hours
Offered: FALL, SPRING
Explores the intricacies of live sound engineering, covering essential topics such as front-of-house mixing, monitor mixing, in-ear monitor solutions, and feedback suppression. Explores the latest technologies in sound reinforcement, best practices for optimizing sound quality in various live environments, and the fundamental principles of acoustics and signal processing. [D; CSU]

RA&T 290
PROFESSIONAL AUDIO WORK EXPERIENCE
2-4 UNITS

Pass/No Pass or Grade is Allowed
Recommended Concurrent Enrollment: Enrollment in one other class directly related to the Recording Arts and Technology major in order to apply learned theory in a practical hands-on setting through an internship class.
Limitation on Enrollment: Declared Recording Arts and Technology major.
Laboratory 12 hours
Offered: ALL
Integrates principles and skills from the Recording Arts major into practical job assignments. Students earn one unit of credit for every 54 hours of work experience. They can accumulate 2 to 4 units per semester, up to a maximum of fourteen units. Both the job supervisor and the instructor will evaluate each student's performance. [D; CSU]

RA&T 299
INDEPENDENT STUDY
1-3 UNITS

Pass/No Pass or Grade is Allowed
Limitation on Enrollment: Eligibility for independent study.
Lecture 3 hours
Offered: ALL
Individual study or research in some area of Recording Arts and Technology of particular interest to the student and not included in regular courses of the College. [D; CSU; **UC] (**UC Limitation: credit for variable topics courses is given only after a review of the scope and content of the courses by the enrolling UC campus.)