

# Audio Production

BACHELOR OF SCIENCE — 180 CREDITS

	QUARTERS 1-3	QUARTERS 4-6	QUARTERS 7-9	QUARTERS 10-12
<b>PROGRAM FOCUS</b>	<p>AUDA101 Fundamentals of Audio</p> <p>AUDA102 Music Theory for Audio Professionals I</p> <p>AUDA103 Audio Technology I</p> <p>AUDA111 Survey of the Audio Industry</p> <p>AUDA112 Music Theory for Audio Professionals II</p> <p>AUDA113 Digital Audio I - Introduction to the Interface</p> <p>AUDA123 Video Production for Audio</p> <p>AUDA133 Audio Recording I</p> <p>AUDA205 Listening and Analysis</p> <p>AUDA213 Audio Technology II</p> <p>AUDA418 Media Business Practices</p>	<p>AUDA143 Electronics I</p> <p>AUDA203 Production Sound</p> <p>AUDA215 Acoustics</p> <p>AUDA223 MIDI Systems</p> <p>AUDA233 Post-Production Sound</p> <p>AUDA243 Digital Audio II - Digital Audio Systems</p> <p>AUDA253 Audio Recording II</p> <p>AUDA263 Live Sound Reinforcement I</p> <p>AUDA273 Electronics II</p> <p>AUDA303 Advanced Post-Production</p> <p>AUDA313 Digital Audio III</p> <p>AUDA333 Sound for Interactive Media</p>	<p>AUDA202 Synthesis and Sound Design I</p> <p>AUDA283 Audio Distribution Technologies</p> <p>AUDA302 Synthesis &amp; Sound Design II</p> <p>AUDA308 Business Fundamentals</p> <p>AUDA323 Advanced Recording Techniques I</p> <p>AUDA334 Midi Systems II</p> <p>AUDA335 Digital Audio IV</p> <p>AUDA343 Advanced Recording Techniques II</p> <p>AUDA353 Live Sound Reinforcement II</p> <p>AUDA408 Business and Culture of Audio</p> <p>AUDA446 Interactive Music</p> <p>DFVA113 Fundamentals of Editing</p> <p>Programmatic Track Elective I</p>	<p>AUDA309 Portfolio I</p> <p>AUDA312 Special Topics</p> <p>AUDA322 Senior Project I</p> <p>AUDA403 Senior Project II</p> <p>AUDA406 Internship</p> <p>AUDA409 Portfolio II</p> <p>Programmatic Track Elective II</p> <p>Programmatic Track Elective III</p>
<b>GENERAL EDUCATION</b>	<p>ENCA101 English Composition I</p> <p>ENCA102 English Composition II</p> <p>MATA115 Applied Mathematics</p> <p>MATA201 College Geometry</p>	<p>COMA112 Principles of Communication</p> <p>SCIA206 Introduction to Physics</p> <p>English Elective</p>	<p>HUMA202 Contemporary World</p> <p>PSYA101 Introduction to Psychology</p>	<p>HISA208 United States from Civil War to Present</p> <p>MATA202 Finite Math</p> <p>General Education Elective</p>



1501 BISCAYNE BOULEVARD, SUITE 100  
MIAMI, FL 33132-1418  
305.428.5700 • 800.225.9023

START DATE \_\_\_\_\_

LENGTH OF QUARTER \_\_\_\_\_

BREAKS BETWEEN QUARTERS \_\_\_\_\_

APPROX. HOURS IN CLASS PER WEEK \_\_\_\_\_

APPROX. HOURS OUTSIDE OF CLASS—HOMEWORK \_\_\_\_\_

Please visit our Student Consumer Information page to find the average time to completion for continuously enrolled students for each credential level offered. This data is available at the average credit load, full-time or at full load. Changing programs, beginning programs at the mid-term start date, taking remedial courses, taking time off from coursework, registering for fewer hours or unsuccessful attempts at course completion will increase the total length of the program and overall cost of education from what is disclosed. Transfer credits awarded toward your program will likely decrease the overall length and cost of education.

Course descriptions for elective and general education courses can be referenced in the catalog.

STUDENT CONSUMER INFORMATION:  
<https://www.artinstitutes.edu/miami/student-consumer-information>

This is a sample schedule only. Schedule subject to change without notice at the discretion of the school.

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073019

# Audio Production (BS)

## COURSE DESCRIPTIONS

AUDA101

### FUNDAMENTALS OF AUDIO

This course covers the principles of recording sound and study of sound characteristics, basic acoustics, ergonomics, and basic techniques for field recording. The role of sound in media production is explained and exemplified. *Prerequisite(s): None*  
*Credits: 3*

AUDA102

### MUSIC THEORY FOR AUDIO PROFESSIONALS I

This course is an introduction to the rudiments of music theory. Students learn to identify notes and common scales as well as the notation of notes, scales, and simple rhythms. The concept and structure of the lead sheet will be introduced. An ear-training component will develop the students' skill in identifying and transcribing simple chords, melodies, and rhythms. *Prerequisite(s): None*  
*Credits: 3*

AUDA103

### AUDIO TECHNOLOGY I

This course examines the principles of audio signals and the equipment used to record, process, and distribute audio content. Students will begin to develop an understanding of signal flow of audio systems using block diagrams. A survey of audio transmission, manipulation, and delivery systems including cables, connectors, basic stereo mixers, microphones, amplifiers, and loudspeakers will be presented. *Prerequisite(s): None*  
*Credits: 3*

AUDA111

### SURVEY OF THE AUDIO INDUSTRY

This course explores the audio industry and its constituent sectors. There will be special emphasis on strategies for networking and utilizing industry organization. *Prerequisite(s): None*  
*Credits: 3*

AUDA112

### MUSIC THEORY FOR AUDIO PROFESSIONALS II

This course continues with the development of the rudiments of music theory and expands into an introduction to harmony, voice leading, modes and compound time signatures. Students will learn to create simple lead sheets. An ear-training component will extend the work from Music Theory I to include more complex chords and intervals. *Prerequisite(s): AUDA102*  
*Credits: 3*

AUDA113

### DIGITAL AUDIO I-INTRODUCTION TO THE INTERFACE

This course introduces the theories, practices, and tools used in digital audio production and techniques of non-linear digital audio editing, focusing on the fundamental theories and concepts behind various types of digital audio tools. Students develop knowledge and skills needed to operate non-linear audio workstations. *Prerequisite(s): None*  
*Credits: 3*

AUDA123

### VIDEO PRODUCTION FOR AUDIO

This course introduces students to the technical terms, equipment, and techniques of video production. *Prerequisite(s): None*  
*Credits: 3*

AUDA133

### AUDIO RECORDING I

This course covers theoretical foundations presented in Audio Technology I, which are reinforced in this course through practical, hands-on applications. Students learn the operational techniques of basic audio systems with an emphasis on mixdown of prerecorded multi-track sessions. *Prerequisite(s): AUDA103*  
*Credits: 3*

AUDA143

### ELECTRONICS I

Students are introduced to the fundamental concepts of electronics as they relate to audio production. Topics include Ohm's law, AC and DC circuits, basic troubleshooting for audio equipment, AC line voltage and filtered DC voltage, etc. *Prerequisite(s): AUDA103*  
*Credits: 3*

AUDA202

### SYNTHESIS AND SOUND DESIGN I

In this course, students develop advanced skills using synthesizers and samplers. Students study the elements of sound and how they apply to simple and complex waveforms, envelopes, LFOs, filters, and keyboard architecture. Theory and practice with sampling and subtractive synthesis using software and hardware sound sources. *Prerequisite(s): AUDA223*  
*Credits: 3*

AUDA203

### PRODUCTION SOUND

This course is an introduction to the science and art of production sound. Students learn how to use microphones, field mixers, and digital sound equipment to record dialogue and sound effects in a variety of settings. The fundamentals of sound editing and mixing are introduced. *Prerequisite(s): AUDA123*  
*Credits: 3*

AUDA205

### LISTENING AND ANALYSIS

This course covers ear-training and critical listening from the perspective of the audio engineer and contemporary production techniques. The student will learn to aurally analyze and identify typical contemporary popular song forms and the production techniques used to create them. *Prerequisite(s): AUDA113*  
*Credits: 3*

AUDA213

### AUDIO TECHNOLOGY II

Students continue to study the principles of audio signals and the equipment used to record, process, and distribute audio content in this course. Sound in acoustical form is discussed in relation to studio acoustics. Students expand their understanding of signal flow of advanced audio systems by creating and reading complex block diagrams. *Prerequisite(s): AUDA103*  
*Credits: 3*

AUDA215

### ACOUSTICS

This course examines the physical behavior of sound indoors and outdoors. Topics include human hearing and the principles of psychoacoustics, sound propagation, transmission, reflection, diffraction, diffusion, noise reduction, basic studio and room acoustics, and sound isolation. *Prerequisite(s): AUDA213*  
*Credits: 3*

AUDA223

### MIDI SYSTEMS I

Students develop a working theoretical and skills-based knowledge of the multi-timbral synthesizer and the sequencing environment within the context of the contemporary MIDI production studio. *Prerequisite(s): AUDA113*  
*Credits: 3*

AUDA233

### POST-PRODUCTION SOUND

This course focuses on the artistic and technical problems of preparing sound in relation to picture. Students will learn the terminology and techniques of editing, mixing, and sound design. *Prerequisite(s): AUDA203*  
*Credits: 3*

AUDA243

### DIGITAL AUDIO II-DIGITAL AUDIO SYSTEMS

Students learn the concepts and production techniques used with Pro Tools integrated into a digital audio workstation. Topics include computer based digital audio workstations, sound design, field recording, digital audio transfer protocols, software-based effects plug-ins, and online automation. *Prerequisite(s): AUDA113*  
*Credits: 3*

AUDA253

### AUDIO RECORDING II

Students expand and develop the skills learned in Fundamentals of Audio Production through multi-track recording projects. The course focuses on recording techniques used in music production. Emphasis is placed on signal flow for basic tracks, mixdown, and overdubs. Other topics include close and distant microphone techniques, recording session management, analog tape recorders, studio documentation, signal processing, and moving fader automation systems. *Prerequisite(s): AUDA133*  
*Credits: 3*

AUDA263

### LIVE SOUND REINFORCEMENT I

Students learn to set up and operate various audio equipments for a typical live sound reinforcement. Topics include reading block diagrams of audio systems, wiring speakers, connecting powers, testing and adjusting microphones, troubleshooting sound systems, and fine-tune reinforcement effects. *Prerequisite(s): AUDA133*  
*Credits: 3*

AUDA273

### ELECTRONICS II

Students explore the concepts, building, and application of transformers and filters and learn to read, interpret, and utilize data from more advanced schematic circuit diagrams. Emphasis is placed upon applying these electronic devices to the operation and troubleshooting of audio equipment. *Prerequisite(s): AUDA143*  
*Credits: 3*

AUDA283

### AUDIO DISTRIBUTION TECHNOLOGIES

This course addresses the end part of media production—delivery and distribution. Students will study a variety of delivery methods and systems and determine the advantages and limitations of each. They will also examine the relationships between delivery systems and distribution methods and evaluate the relative efficiency, cost, and effectiveness of each. *Prerequisite(s): None*  
*Credits: 3*

AUDA302

### SYNTHESIS AND SOUND DESIGN II

In this course, students explore and implement available synthesis methods that enhance the narrative in various media. Analytical listening sessions will expose students to synthesis methods in various contexts. *Prerequisite(s): AUDA202*  
*Credits: 3*

AUDA303

### ADVANCED POST-PRODUCTION SOUND

This course focuses on practical experience in advanced sound design and audio production for video. The course includes applied techniques used in Automated Dialog Replacement (ADR), and the creation of realistic, synchronized sound effects (Foley), and multi-track recording, editing, and mixing in the post-production story-telling process. *Prerequisite(s): AUDA233*  
*Credits: 3*

AUDA309

### PORTFOLIO I

This course prepares students for the transition to the professional world. This course will prepare students for the industry by helping them compile a portfolio. Students will demonstrate sound design, sound organization, presentation, and other skills as they assemble and refine their portfolio projects. Working individually with an instructor, each student will select representative projects showcasing work that reflects a unique style and developing them further as needed. Particular emphasis is placed on identifying short- and long-term professional employment goals, industry- and professional-related resources, and portfolio development strategies. *Prerequisite(s): See Department Director*  
*Credits: 3*

AUDA312

### SPECIAL TOPICS

This course addresses emerging technologies and techniques in the field of Audio Production. The course will also provide an intense examination of issues relevant to the audio industry in a specific geographic region or sector of the audio industry (broadcast, live sound reinforcement, recording techniques, etc.) *Prerequisite(s): AUDA323*  
*Credits: 3*

AUDA313

### DIGITAL AUDIO III-MIXING

This course covers digital audio theory and interacts with analog consoles, digital recorders, external DSP, software signal routing, interfacing equipment, and synchronizing digital audio streams. Topics include analog-to-digital/digital-to-analog conversion, dithering, error correction and concealment, digital storage media, encoding methods involving data compression, digital audio interface standards, DAW interchange standards, and synchronization methods. *Prerequisite(s): AUDA243*  
*Credits: 3*

AUDA322

### SENIOR PROJECT I

This course initiates a two-quarter long comprehensive project which will be integral to students' final portfolios. Students will employ their cumulative skills to pre-produce a significant, sophisticated, multi-track digital audio work. Committee and/or faculty will approve the project content and type of the audio work. Projects will be carried out individually or in groups based on the needs of the class as determined by the instructor. *Prerequisite(s): See Department Director*  
*Credits: 3*

AUDA323

### ADVANCED RECORDING TECHNIQUES I

This course covers the techniques and technology typical to professional music recording and mixing using advanced large-format consoles. Topics include studio procedures and professionalism, SSL Console operation, advanced signal flow, signal processing, analytical and critical listening skills, close, distant, and stereo mic techniques for a variety of musical instruments, and basic mixdown strategies. *Prerequisite(s): AUDA253*  
*Credits: 3*

AUDA333

### SOUND FOR INTERACTIVE MEDIA

Students learn the techniques of recording, mixing, and mastering for various interactive media such as CD-ROM, DVD, and the internet. The unique challenges of memory allocation and optimization are examined with a focus on quality differences between different formats. In addition, students examine coding and compression techniques. *Prerequisite(s): AUDA233*  
*Credits: 3*

AUDA334

### MIDI SYSTEMS II

This course will expand on the knowledge acquired in MIDI Systems I. Students will deepen into a theoretical and skills-based knowledge and resources of the sequencing environment within the context of the contemporary MIDI production studio. Students' proficiency in MIDI production processes will be enhanced through variously sized production projects. Both live and studio applications of MIDI will be covered. *Prerequisite(s): None*  
*Credits: 3*

AUDA335

### DIGITAL AUDIO IV

This course will address the stage of the audio production process called mastering. This process follows the mixing phase and is associated with signal processing enhancements that make the mixed session a finished product that has the optimum level of production quality. This stage also involves preparation of the audio media for whatever form of media or broadcast that the audio needs to be prepared for. The course will focus on the different approaches used in successfully mastering a completed audio mix and the considerations one needs to address for various forms of media. *Prerequisite(s): AUDA313*  
*Credits: 3*

AUDA343

### ADVANCED RECORDING TECHNIQUES II

This course provides the student a greater understanding of SSL consoles and VCA automation systems. Students use SMPTE time code for synchronization to a variety of multi-track formats, use digital audio sampling for sound replacement, and integrate software and MIDI sequencers into the analog studio mixing environment. Critical listening skills and critical analysis of master tapes are emphasized. Students participate in in-class recording sessions and engineer recording projects during and out of class hours, which may be included in their portfolio. *Prerequisite(s): AUDA323*  
*Credits: 3*

AUDA353

### LIVE SOUND REINFORCEMENT II

This course presents students more sophisticated and complex situations for live sound reinforcement. Through studio settings or real world events, students learn to operate large format analogue and digital mixing consoles and solve signal manipulation problems with transformers. Students also learn professional protocols in live sound reinforcement settings. *Prerequisite(s): AUDA263*  
*Credits: 3*

Course descriptions describe the learning opportunities that are provided through the classroom and coursework. It is each student's responsibility to participate in the activities that will lead to successfully meeting the learning outcomes.

AUDA403

### SENIOR PROJECT II

This course continues the two-quarter long comprehensive project begun in Senior Project I. Students will employ cumulative skills to produce a significant, sophisticated, multi-track digital audio work. Projects will be carried out individually or in groups based on the needs of the class as determined by the instructor. *Prerequisite(s): AUDA322*  
*Credits: 3*

AUDA406

### INTERNSHIP

Through a field internship experience, students will be able to apply their skills in a real and practical situation. The main objectives of the internship are to allow students the opportunity to observe and participate in the operation of successful businesses related to their fields of study. The students will gain the experience they need to enter the field when they graduate. *Prerequisite(s): See Department Director*  
*Credits: 2*

AUDA408

### BUSINESS AND CULTURE OF AUDIO

In this course, students look at the industry from a non-technical perspective and examine the business side of the production facility, as well as its role in a changing market and the impact that emerging technologies have on them. Issues of personality and attitude as they relate to working in the culture of an audio environment will also be covered as this class serves as a prerequisite to the internship process. *Prerequisite(s): None*  
*Credits: 3*

AUDA409

### PORTFOLIO II

This course aims to prepare students for entry-level employment within the industry by assisting them with the development and presentation of an audio production portfolio that reflects the stated exit competencies. Students will demonstrate an advanced skill set in areas such as process, sound design, sound organization, presentation, and other skills, as projects are refined and assembled into a cohesive, comprehensive body of work. Particular emphasis will be placed on identifying short- and long-term professional employment goals, industry- and professional-related resources and standards, portfolio development and presentation strategies. *Prerequisite(s): AUDA309*  
*Credits: 3*

AUDA418

### MEDIA BUSINESS PRACTICES

This course covers basic business theory and practices for the media professional, as well as key legal requirements for artistic industries are addressed in this course. *Prerequisite(s): None*  
*Credits: 3*

AUDA446

### INTERACTIVE MUSIC

This course explores concepts and techniques for real-time interaction between digital audio software, hardware controllers, and acoustic sound. Topics will include audio signal routing for real-time processing; looping and layering; mapping and programming software parameters for manipulation with hardware controllers; real-time performance, processing, and recording of acoustic and electronic sounds; approaches to controlling software parameters with various control surfaces (e.g., pads, rotary knobs, sliders, keyboards, and pedals); issues related to audio signal flow in electroacoustic music; and some of the historical, theoretical, and artistic dimensions of interactive and electroacoustic music. The course will be divided evenly between three components: 1) lectures, assigned listening, and readings; 2) hands-on exercises designed to develop skills and familiarity with specific techniques; and 3) creative projects that explore and extend these techniques. *Prerequisite(s): None*  
*Credits: 3*

DFVA113

### FUNDAMENTALS OF EDITING

Introduces the student to the editing of visuals and sound using non-linear editing software. *Course Prerequisite(s): None*  
*Credits: 3*

### GENERAL EDUCATION REQUIREMENTS (48 CREDITS):\*

ENCA101	English Composition I
ENCA102	English Composition II
SCIA206	Introduction to Physics
HUMA202	Contemporary World
HISA208	United States History from Civil War to Present
MATA115	Applied Mathematics
MATA201	College Geometry
MATA202	Finite Mathematics
PSYA101	Introduction to Psychology

GE English Elective

\*Course descriptions for general education and elective courses can be found in the catalog.