

**COMPETENCY MAP
AUDIO PRODUCTION
BACHELOR PROGRAM 3x5x4**

Competency	Model Course	AIS Course
	Audio Theory	
Articulate the role that sound design plays in various media.	Synthesis & Sound Design	ADT265 Sound Design I
Describe the physical properties of sound waves and how those properties are related to the human perception of sound.	Audio Technology I, Acoustics	ADT105 Audio Technology ADT225 Acoustics
Describe the behavior of sound in indoors and outdoors and how the acoustical characteristics of an environment affect sound properties.	Acoustics	ADT225 Acoustics
Recognize the parameters that govern the operational limits of audio equipment.	Audio Technology I, Audio Technology II, Audio Recording I, Electronics III	ADT105 Audio Technology ADT130 Audio Recording Apps/Tech ADT180 Electronics I ADT245 Electronics II
Explain clearly how audio as digital information is transmitted, stored, processed, and delivered.	Audio Technology II	ADT200 Digital Audio III ADT310 Digital Audio IV ADT445 Audio Delivery Systems and Distribution
Outline the principles of SMPTE time code and the variables which affect synchronization of audio systems.	Audio Technology II, Digital Audio III,	ADT200 Digital Audio II ADT325 Audio Post for Film and Video
Explain the concepts of transformers and how transformers can be used to solve signal manipulation problems.	Electronics II, Live Sound Reinforcement II, Synthesis & Sound Design I	ADT245 Electronics II ADT240 Live Sound II ADT265 Sound Design I
Apply the principles of Ohm's Law to audio signals and solve problems using current, voltage, resistance, and power for AC and DC circuits.	Electronics I, Electronics II, Electronics III	ADT180 Electronics I ADT245 Electronics II

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Articulate the causes and types of audio signal distortion and the methods for distortion measurement.	Electronics III	Electronics III
Explain the functions of all types of signal processors including spectral processors, dynamic processors, and time-based processors.	Audio Technology II	ADT130 Audio Recording Apps/Tech
Create, read, and explain block diagrams of basic audio systems used in live sound and mixing applications.	Live Sound Reinforcement I	ADT220 Live Sound I
Describe typical loudspeaker design and the variables controlled through enclosures, crossovers, and drivers.	Live Sound Reinforcement I	ADT220 Live Sound I
Solve algebraic problems using decibels and decibel references and apply the mathematical concepts behind decibels to real world problem solving.	Audio Technology I, Acoustics	ADT105 Audio Technology ADT225 Acoustics
Describe the electrical and magnetic design characteristics and specifications of condenser, moving coil, and ribbon microphones.	Audio Technology I	ADT105 Audio Technology
Demonstrate the uses of the function generator, oscilloscope and digital multimeter to diagnose common problems with audio equipment.	Electronics I	ADT180 Electronics I
Describe the process used for converting AC line voltage to filtered DC voltage suitable for running audio equipment.	Electronics I	ADT180 Electronics I
Demonstrate the design and use of LR, RC and LRC filters in audio applications.	Electronics II	ADT245 Electronics II
Demonstrate safe building and repair techniques for audio equipment which utilizes thermionic tubes.	Electronics II	ADT245 Electronics II
Demonstrate ability to interpret and utilize data from schematic circuit diagrams.	Electronics I, Electronics II, Electronics III	ADT180 Electronics I ADT245 Electronics II
Critical Listening & Music		
Identify in a musical work the principles of music theory and notation including basic rhythm, scales, keys, triads, and their inversions.	Music Theory I, Music Theory II	ADT140 Music Theory I ADT315 Music Theory II
Analyze the characteristics of various music genres with	Music Theory II	ADT315 Music Theory II

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respect to form, melody, harmony, arrangement, and production techniques.		
Demonstrate critical listening skills typical of a professional audio engineer including recognition of standard one-octave frequency ranges in the audible spectrum, dynamic range processing, frequency domain processing, time-based processing, digital and analog distortion and the sonic characteristics of common data compression methods.	Listening and Analysis, Audio Recording II	ADT320 Listening and Analysis ADT130 Audio Recording Apps/Tech ADT200 Digital III
Analyze and express the structure and production elements of a musical recording.	Listening and Analysis	ADT320 Listening and Analysis
Digital Audio and MIDI		
Describe the foundations of the MIDI specification.	MIDI System I	ADT260 MIDI System I
Install and configure MIDI systems and hardware controllers such as MIDI interfaces and control surfaces.	MIDI System I	ADT260 MIDI System I
Master the use of on-board digital signal processing of a professional quality MIDI instrument.	MIDI System I	ADT260 MIDI System I
Perform typical MIDI functions in an industry standard software sequencer.	MIDI System I	ADT260 MIDI System I
Demonstrate proficiency with an advanced MIDI sequencer using MIDI recording, Quantization, controller editing, graphic editing, program & bank changes, automation, and tempo control.	MIDI System II	ADT365 MIDI System II
Execute the principles and techniques associated with samplers including file management, recording, editing samples, programs, multi-timbral setups and playback.	Synthesis & Sound Design	ADT265 Sound Design
Demonstrate mastery of modern computer operating systems, hardware, and peripherals typically used in media production.	Digital Audio II	ADT160 Digital Audio II
Work with speed and efficiency when using industry standard audio editing software.	Digital Audio II	ADT160 Digital Audio II
Set up and troubleshoot a professional digital audio	Digital Audio III	ADT200 Digital Audio III

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workstation.		
Gain a strong theoretical understanding for how audio is used in interactive media and software applications.	Digital Audio I	ADT120 Digital Audio I
Outline in detail the processes involved in analog to digital conversion for audio signals.	Digital Audio IV	ADT310 Digital Audio IV
Demonstrate proficiency in digital asset management including digital audio file archival, restoration, and delivery of content in a replication-ready format.	Digital Audio II	ADT160 Digital Audio II
Proficiently operate a digital audio work station showing understanding of DAW signal flow including inputs, outputs, sends, returns, inserts, and aux inputs.	Audio Recording II, Digital Audio IV	ADT130 Audio Recording Apps/ Tech ADT310 Digital Audio IV
Demonstrate to ability record, edit, mix, and master audio for post-production and music production in a professional standard digital audio platform.	Digital Audio I	ADT120 Digital Audio I
Recommend and apply creative audio solutions to problems based on historical models, contemporary trends, and current technology.	Digital Audio III	ADT200 Digital Audio III
Proficiently operate professional analogue and digital mixing consoles and develop the skills needed to quickly learn new mixing consoles.	Live Sound Reinforcement I, Advanced Recording Techniques I, Digital Audio IV	ADT220 Live Sound I ADT280 Advanced Recording Techniques I ADT310 Digital Audio IV
Explain the components of modular subtractive synthesis.	Synthesis & Sound Design I	ADT265 Sound Design
Discuss advanced MIDI theory, current uses of system exclusive message formats, and device documentation.	Synthesis & Sound Design I	ADT265 Sound Design
Describe the dominant synthesis methods available commercially and in development.	Synthesis & Sound Design II	ADT375 Sound Design II
Demonstrate the ability to create original sounds using both hardware and software synthesizers for typical music and audio/visual contexts.	Synthesis & Sound Design II	ADT375 Sound Design II
Production Skills		
Apply a variety of creative mix techniques including Drum Replacement, Keys & side-chains, integration of Pro Tools	Advanced Recording Techniques II	ADT350 Advanced Recording Techniques II

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in the mix environment, and advanced signal flow.		
Use proficiently the Solid State Logic 6000 or 4000 series console and computer.	Advanced Recording Techniques I, Advanced Recording Techniques II	ADT280 Advanced Recording Techniques I ADT350 Advanced Recording Techniques II
Implement a detailed production plan by managing the necessary assets, people, facilities, and technology needed to bring the project to completion within a required production budget and timeline.	Advanced Recording Techniques II, Senior Project II	ADT350 Advanced Recording Techniques II ADT400 Senior Project II
Adjust properly time alignment and line array placement in live sound systems.	Live Sound Reinforcement II	ADT240 Live Sound II
Describe the typical scenarios and professional protocols in using ear monitors and RF technology.	Live Sound Reinforcement II	ADT240 Live Sound II
Create a 5.1 surround mix with proper bass management, control of dynamics, timbre, panning, time based signal processing, and automation.	(Digital Audio IV)	ADT200 Digital Audio II ADT325 Audio Post for Film and Video
Set up and operate audio equipment for a typical live sound reinforcement.	Live Sound Reinforcement I	ADT220 Live Sound I
Demonstrate proficiency in surround audio formats and mixing.	Digital Audio IV	ADT200 Digital Audio II ADT325 Audio Post for Film and Video
Demonstrate troubleshooting and problem solving abilities typically used by professional audio engineers in live sound, music recording, system design and installation.	Audio Recording II, Live Sound Reinforcement I, Advanced Recording Techniques I	ADT130 Audio Recording Apps/ Tech ADT220 Live Sound I, ADT280 Advanced Recording Techniques I
Demonstrate proficiency in multi-track mixdown using production notes and track sheets.	Audio Recording I	ADT130 Audio Recording Apps/ Tech
Describe and execute the processes involved in a typical multi-track recording project.	Audio Recording II	ADT150 Audio Recording Sessions
Articulate the roles and responsibilities of the individuals involved in a typical multi-track recording project.	Advanced Recording Techniques I, Senior Project I	ADT280 Advanced Recording Techniques I,

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Engineer recording sessions involving medium to large ensembles involving multiple cue mixes isolation booths, and acoustic instruments.	Advanced Recording Techniques I	ADT350 Advanced Recording Techniques II
Present completed production projects, including all necessary paperwork, printing, promotional materials and media to a public audience of one's peers.	Audio Recording I, Advanced Recording Techniques I,	ADT160 Digital Audio II ADT200 Digital Audio III ADT299 Portfolio I ADT280 Advanced Recording Techniques I,
Proficiently operate DAT and CD recorders including DAT PNO's and ID's, start ID and an end ID and Auto ID.	Audio Recording I	Not in our curriculum, outdated
Design and troubleshoot a sound system for a wide variety of venues and execute the engineering procedures and techniques used in live performance, corporate audio, and convention sound.	Live Sound Reinforcement I, Live Sound Reinforcement II	ADT220 Live Sound I ADT240 Live Sound II
Properly use all types of microphones in a variety of production scenarios such as voice recording, musical instrument recording, live sound reinforcement, and field recording.	Live Sound Reinforcement I, Advanced Recording Techniques I	ADT130 Audio Recording Apps/ Tech ADT220 Live Sound I ADT235 Sound for Film and Video ADT 325 Audio Post for Film and Video ADT280 Advanced Recording Techniques I
Use SMPTE time code proficiently in music and post production.	Audio Recording II	ADT 325 Audio Post for Film and Video
Exercise proper audio recording techniques for media production.	Fundamentals of Audio	ADT105 Audio Technology ADT120 Digital Audio I ADT130 Audio Recording Apps/ Tech
Business and Career Development		
Develop a business plan for a given media production project.	Media Business Practices & Law	ADT230 Business and Culture of Audio DFVP428 Media Business Practices

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		& Law
Generate a professional business plan.	Business Fundamentals	ADT230 Business and Culture of Audio
Demonstrate a clear understanding of legal ramifications in mass media work and the obligations of a responsible audio professional.	Survey of the Music Industry	ADT110 Audio Industry Survey
Demonstrate knowledge of historic periods and events of mass communications and their impact on society.	History of Media & Mass Communications	DFVP326 History of Media & Mass Communications
Research, retrieve, analyze, and evaluate information for a production or research project.	Survey of the Music Industry, Senior Project I	ADT110 Audio Industry Survey ADT400 Senior Project I
Identify and use professional associations and industry resources for networking and career development.	Survey of the Music Industry	ADT110 Audio Industry Survey ADT230 Business and Culture of Audio
Outline in detail the various career paths available in the music industry.	Survey of the Music Industry	ADT110 Audio Industry Survey ADT230 Business and Culture of Audio ADT290 Internship I
Respect and comply with copyright laws.	Internship I, Media Business Practices & Law, Internship II	DFVP428 Media Business Practices & Law,
Identify and comply with regulations pertaining to permits, licenses, releases, and labor laws.	Senior Project I, Senior Project II	DFVP428 Media Business Practices & Law,
Adapt to various business environments.	Internship I, Internship II	ADT290 Internship I ADT440 Internship II
Create, interpret, and negotiate business contracts.	Media Business Practices & Law	DFVP428 Media Business Practices & Law
Recognize self-employment and entrepreneurship opportunities.	Survey of the Music Industry, Career Development	ADT110 Audio Industry Survey DFVP428 Media Business Practices & Law
Exhibit a passion for the profession.	Internship I, Internship II	All of them.
Assess personal strengths to develop a career goal.	Career Development, Portfolio Preparation	ADT290 Internship I DFVP428 Media Business Practices & Law

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Develop and organize an effective portfolio for professional use.	Portfolio Preparation, Portfolio	ADT299 Portfolio I ADT450 Portfolio II
Generate resumes and cover letters for effective job search.	Career Development	DFVP428 Media Business Practices & Law
Perform effectively in an interviewing situation.	Career Development	ADT230 Business and Culture of Audio DFVP428 Media Business Practices & Law
Prioritize tasks to meet deadlines.	Senior Project II, Portfolio Preparation,	ADT290 Portfolio I ADT280 Advanced Recording Techniques I Senior Project II, ADT450 Portfolio
Maintain willingness and desire for life-long learning and professional growth.	Internship I, Career Development, Internship II	ADT290 Internship I
Exhibit tolerance, flexibility, collaboration, enthusiasm, and/or leadership in a teamwork situation.	Senior Project I	ADT400 Senior Project I
Exhibit self-motivation and the ability to work with minimal supervision.	Internship I, Senior Project II, Portfolio, Internship II	ADT290 Internship I ADT435 Senior Project II, ADT450 Portfolio
Maintain a current professional awareness through learning and networking.	Internship I, Career Development, Portfolio Preparation, Internship II	ADT230 Business and Culture of Audio ADT290 Internship I ADT435 Senior Project II, ADT450 Portfolio
Demonstrate a high standard of ethics.	Internship I, Business Fundamentals, Media Business Practices & Law, Internship II	ADT230 Business and Culture of Audio ADT290 Internship I ADT435 Senior Project II, ADT450 Portfolio
Describe the procedural and substantive components of the legal system.	Copyright & Intellectual Property	DFVP428 Media Business Practices & Law

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Describe the law and rationale supporting the development and protection of intellectual property.	Copyright & Intellectual Property	DFVP428 Media Business Practices & Law
Identify and prevent from potential liability in the areas of copyright, contract law, defamation, invasion of privacy, and trademark law.	Copyright & Intellectual Property	DFVP428 Media Business Practices & Law
Obtain, complete and file the required documents for the protection of intellectual property and for the permission to use of protected work.	Copyright & Intellectual Property	DFVP428 Media Business Practices & Law
Participate as a member and/or leader of a team.	Fundamentals of Video Production	DFVP100 Fundamentals of Video Production
Apply legal principles to the formation, operation, and termination of sole proprietorships, partnerships, and corporations.	Business Fundamentals	ADT230 Business and Culture of Audio
Apply basic business management principles to the operation of a business.	Business Fundamentals	ADT230 Business and Culture of Audio
Select and apply various marketing and promotion strategies in business situations.	Business Fundamentals	ADT230 Business and Culture of Audio
Recognize the major external influences on a company's marketing efforts.	Business Fundamentals	ADT230 Business and Culture of Audio
Construct and manage a budget for a given media production project.	Media Business Practices & Law	DFVP428 Media Business Practices & Law
Generate a business proposal for an intended client.	Media Business Practices & Law	DFVP428 Media Business Practices & Law
Generate and present effectively an audio production plan.	Senior Project I	ADT400 Senior Project I
Differentiate demographics specific to needs for the media project.	Digital Marketing Strategies	FM228 Digital Marketing Strategies
Develop marketing strategies for media delivery and distribution.	Digital Marketing Strategies	FM228 Digital Marketing Strategies
Produce and deliver effective presentations.	Portfolio Preparation, Portfolio	ADT299 Portfolio I ADT450 Portfolio II
Related Foundation Competencies		
Design for specific delivery platforms.	Fundamentals of Web Design	DFVP220 Media Delivery Systems

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		and Distribution
Operate a personal computer or a Macintosh computer using current operating system interfaces.	Computer Applications	ADT120 Digital Audio I
Use and manage computer hardware peripherals for input, output, and storage.	Computer Applications	ADT120 Digital Audio I
Construct a web page with dynamic media content.	Fundamentals of Web Design	DFVP220 Media Delivery Systems and Distribution
Format media content for current industry standard delivery formats.	Digital Audio IV, Media Delivery Systems & Distribution	ADT310 Digital Audio IV DFVP220 Media Delivery Systems & Distribution
Use video recording and playback devices.	Fundamentals of Video Production	DFVP100 Fundamentals of Video Production
Demonstrate basic lighting skills, including sources of light and lighting theory.	Fundamentals of Video Production	DFVP100 Fundamentals of Video Production
Maintain workflow documentation and production log.	Fundamentals of Video Production	DFVP100 Fundamentals of Video Production
Describe the functions of various post-production equipment.	Fundamentals of Editing	DFVP102 Fundamentals of Editing
Edit digital video footage using principles of timing, pacing, and transition within a context to match a given genre.	Fundamentals of Editing	DFVP102 Fundamentals of Editing
Differentiate between off-line and on-line editing modes.	Fundamentals of Editing	DFVP102 Fundamentals of Editing
Determine target output media.	Media Delivery Systems & Distribution	DFVP220 Media Delivery Systems & Distribution
Assess and select appropriate delivery method for a given project.	Media Delivery Systems & Distribution	DFVP220 Media Delivery Systems & Distribution
Format media content for current industry standard delivery formats.	Digital Audio III, Media Delivery Systems & Distribution	ADT200 Digital Audio III, ADT445 Audio Delivery Systems and Distribution
Anticipate and prepare for emerging technologies	Media Delivery Systems & Distribution	ADT445 Audio Delivery Systems and Distribution
Explain differences between traditional broadcast, Internet, and other distribution methods.	Media Delivery Systems & Distribution	ADT445 Audio Delivery Systems and Distribution

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Explain how a streaming media server delivers media content over the Internet.	Media Delivery Systems & Distribution	DFVP220 Media Delivery Systems & Distribution
Apply interactive authoring tools and techniques to create a product.	DVD Authoring	DFVP421 DVD Authoring
Use interactive authoring software.	DVD Authoring	DFVP421 DVD Authoring
Produce and deliver interactive presentations.	DVD Authoring	DFVP421 DVD Authoring
Maintain quality standards appropriate to the project.	DVD Authoring	DFVP421 DVD Authoring
Demonstrate a variety of creative mix techniques	Advanced Recording Techniques II	ADT350 Advanced Recording Techniques II
Ascertain equipment requirements for the project.	Senior Project I	ADT400 Senior Project I