Arts, Audio/Video Technology and Communications

Pathway: Audio and Video Technology and Film

Code	Topic	Course	Knowledge and Skill	Performance Element	Measurement Criteria
ARPA01.01	Audio and Visual Technology and Film Pathway	#4: Audio-Video Arts and Design	Explore career opportunities in Audio and Video Technology and Film.	Exhibit knowledge of the history of film and how it is specifically related to the industry today.	Discuss the beginnings and evolution of audio and video production, and film.
					Describe how increasingly available technology is changing the audio and video, and film industries.
				Analyze various careers and their job descriptions in audio and video technology, and film.	Discuss the responsibilities of producers, including budgets, schedules, personnel, and tracking progress.
					Describe the responsibilities of directors, including knowledge of story structure, script analysis, the relationship to the production team, and the responsibilities of crewmembers.
					Describe the duties of editors for audio, video, and film productions.
					Discuss the duties of editors related to audio and visual effects.
					Describe various jobs associated with animation, including communications, video, and feature-length productions; and Internet streaming.
					Discuss the responsibilities of others in this field, including lighting directors, cinematographers, videographers, sound engineers, stunt coordinators, special effects coordinators, productions specialists, and other crewmembers.

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			(CONTINUED)	Define the terminology associated with audio and video technology, and film production.	Define commonly used audio production terminology.
					Define commonly used video production terminology.
					Define commonly used film production terminology.
				Comprehend value of a broad general knowledge of fine arts, and cultural and regional diversity.	Identify various types of audio and visual approaches that convey information or create an emotional impact.
					Explain how knowledge is useful in dealing with projects covering a broad spectrum of events, regions, or cultures when research may not be possible.
ARPA01.02	Audio and Visual Technology and Film Pathway	#6: Audio Production Methods	Apply knowledge of equipment and skills related to audio production.	Comprehend the types of microphones, pick-up patterns, and techniques required for a variety of audio presentations.	Identify microphones used for audio-video productions, music, and theater.
					Explain why audio pick-up differs in various types of microphones.
					Describe the techniques to maximize sound performance using various audio formats.

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			(CONTINUED)	Apply knowledge of audio equipment for productions, including basic recording equipment, equalizers, mixing consoles, and quality-monitoring equipment.	Identify basic recording session equipment.
					Select equipment required for specific types of audio productions.
					Describe how an audio mixing console, quality-monitoring equipment, and basic recording session equipment are utilized.
					Demonstrate techniques used for equalization.
					Demonstrate how to record and mix audio.
				Exhibit knowledge of analog and digital audio formats.	Distinguish between analog and digital audio formats.
					Describe the difference in data signals and equipment for analog and digital technology.
				Illustrate the techniques required for synchronization of an audio with video and multiple sound tracks.	Describe synchronization processes.
					Demonstrate how audio is synchronized with other audio or video.
				Demonstrate writing audio scripts for various types of programs.	Identify the key elements required in audio scripts.
					Explain how various styles of music can create a specific emotional impact.
					Apply writing skills to the development of a short audio script.

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ARPA01.03	Audio and Visual Technology and Film Pathway	#8: Video Production	Apply knowledge of equipment and skills related to video production.	Apply knowledge of lighting requirements for a planned production.	Identify types and placement of lighting fixtures for various lighting effects.
					Demonstrate lighting techniques used for portable and studio productions.
					Demonstrate operation of a master lighting panel and dimmer panel board.
				Apply knowledge of analog and digital video formats.	Distinguish between analog and digital video formats.
					Describe the difference in data signals and equipment for analog and digital technology.
				Demonstrate operation and maintenance of video systems.	Describe the Beta SP ½ inch operating system.
					Describe Mini DV, non-linear memory devices, and HDTV.
					Demonstrate operation of video cameras and switchers.
					Demonstrate how to clean, tune, and align video equipment.
				Demonstrate camera operations, video signals, and video formats.	Describe how to frame and maintain picture composition.
					Demonstrate focusing and adjusting images, and performing pans and zooms.
					Interpret video signals and production formats.

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			(CONTINUED)	Exhibit knowledge of computer-based development of video production and editing, with an emphasis on digital technology.	Define terms associated with computer-based production, including motion video: AVI, Quicktime and MPEG; and stills: JPEG and TIF.
					Identify types of software used in the development of video files and animations.
					Demonstrate how to use software for developing a simple video.
					Demonstrate using software to edit a video.
ARPA01.04	Audio and Visual Technology and Film Pathway	#9: Audio and Video Editing	Exhibit knowledge of editing audio and video productions.	Identify the basic functions and resources for editing.	Define editing related to audio and video productions.
					Describe the differences between offline and online editing related to low- and high-resolution input, respectively.
					Identify editing skills related to various delivery requirements, including commercial broadcast and other forms of distribution.
					Describe the significance of digital technology and high definition production, and the required equipment related to editing.
				Apply knowledge of basic editing to both linear and nonlinear systems.	Describe linear and nonlinear systems.
					Demonstrate skills required for editing using these systems.
				Apply knowledge of control peripherals used for editing.	Describe various digital platforms such as high definition, DVC Pro, and Digital Beta.

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ARPA01.05	Audio and Visual Technology and Film Pathway	#10: Technical Aspects of Audio-Video Systems	Demonstrate technical production support for audio, video, and film presentations.	Demonstrate repairing and servicing transmitting and receiving systems.	Describe the need for temperature stability.
					Describe the connection between receiver sensitivity and measurement of image rejection.
					Demonstrate how to align the receivers and transceivers for operation.
					Demonstrate basic preventative maintenance.
				Apply knowledge of wireless and wired transmission systems.	Define wireless system components.
					Define wired system components.
					Describe how to repair transmitting and receiving, and multi-channel systems.
				Demonstrate installation of cabling for audio and video productions.	Demonstrate reading a signal flow diagram to determine cabling route.
					Demonstrate pulling and securing cable.
					Demonstrate how to document the routing.
				Demonstrate the installation of a wireless audio-video system.	Identify how to determine if the power supply is adequate.
					Demonstrate placement of a wireless audio system for efficient operation.
					Describe a scenario that requires building support structures and tie-downs.

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			(CONTINUED)	Demonstrate how to troubleshoot audio-video system operations.	Identify the sequence required for troubleshooting.
					Conduct a troubleshooting sequence.
					Identify problems and potential solutions.
ARPA01.06	Audio and Visual Technology and Film Pathway	#11: Audio-Video Production Design	Exhibit the knowledge and skills required to design a production for audio-video presentation.	Apply knowledge of the critical elements in designing a production throughout the stages of pre-production, production, and postproduction.	Create a short script and identify the resources needed to begin the production.
					Identify the activities associated with pre-production, production, and postproduction.
					Analyze the script and storyboard development processes for a successful production.
					Identify the linkage from each stage to the next in processes and activities.
					Identify the team roles required for completion of a production.
					Identify equipment, crew, and cast requirements for a short, scripted audio-video.
					Identify several means to work within budget restraints.
					Conduct a casting day for the script.
					Execute production of the script.
					Critique a production to determine how the various elements resulted in a successful or unsuccessful presentation.

Additional Recommended
CTE/Degree Major Course:

#5: Introduction to Production Techniques

#7: Ethics and Legal Issues