

Perris Union High School District

Course of Study

A. COURSE INFORMATION		
Course Title: <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">CTE Audio Technology</div> <input type="checkbox"/> New <input type="checkbox"/> Revised	Subject Area: <input type="checkbox"/> Social Science <input type="checkbox"/> English <input type="checkbox"/> Mathematics <input type="checkbox"/> Laboratory Science <input type="checkbox"/> World Languages <input checked="" type="checkbox"/> Visual or Performing Arts <input type="checkbox"/> College Prep Elective <input type="checkbox"/> Other	Grade Level <input type="checkbox"/> MS <input checked="" type="checkbox"/> HS <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input checked="" type="checkbox"/> 9 <input checked="" type="checkbox"/> 10 <input checked="" type="checkbox"/> 11 <input checked="" type="checkbox"/> 12
If revised previous course name if changed <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Is this classified as a Career Technical Education course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Transcript Course Code/Number: <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">108391/108392</div> (To be assigned by Educational Services)	Credential Required to teach this course: <i>SS - Arts, Media, Entertainment</i> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;"> <i>Designated Subjects: Career Technical Education</i> <i>To be completed by Human Resources only.</i> </div>	
Required for Graduation: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<div style="border: 1px solid black; padding: 5px; display: flex; justify-content: space-between;"> <div style="text-align: center;"> Signature </div> <div style="text-align: center;"> <div style="font-size: 1.5em; font-family: cursive;">2/6/18</div> Date </div> </div>	
Meets UC/CSU Requirements? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was this course <i>previously approved by UC</i> for PUHSD? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Will be verified by Ed Services)	Meets "Honors" Requirements? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Meets "AP" Requirements? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Value/Length of Course: <input type="checkbox"/> 0.5 (half year or semester equivalent) <input checked="" type="checkbox"/> 1.0 (one year equivalent) <input type="checkbox"/> 2.0 (two year equivalent) <input type="checkbox"/> Other:	
Submitted by: PUHSD Educational Svcs Site: Date: 02/05/2018		
Approvals	Name/Signature	Date
Director of Curriculum & Instruction		2/6/18
Asst. Superintendent of Educational Services		2.6.18
Governing Board		

COURSE OUTLINE

Course: 12722 RCOE Audio Technology

Articulation:

Academic Credit: UCOP a-g credit in "f" category

Job Title(s):

O'NET	JOB TITLES
27-4012.0	Broadcast Technician
27-4011.0	Audio & Video Equipment Technician
27-4014.0	Sound Engineering Technician

Course Description:

The RCOE Audio Production course focuses on the aesthetic qualities of sound production in the studio and live environment. It will analyze the impact of digital and analog audio technology as a vital part of communication in the world today. Students will creatively express and develop written ideas within groups and individuals including, proposals, budgets and musical compositions. Students will also write and produce podcasts, webcasts and songs in a variety of formats. Instruction in the creative process that precedes any final project including writing, rewriting, collaboration and more rewrites will be a main focus. Students will also study the impact audio and sound production on our society from a social, economic, and political viewpoint. Students will learn the history of sound production and the technological advances in the art form. Knowledge and utilization of microphones, digital, analog and computer-based audio editing and recording equipment, and software programs such as Reason and Pro Tools will be a secondary focal point to that of meeting the elements of art and principles of design as well as the components in the state standards. Study and training in the Audio Production course will prepare students for careers in music engineering and production, post-production for film and television, and live sound-mixing for theater and concerts.

This course is approved by the University of California (and accepted by the California State University System) in meeting the "a-g" subject requirement for Visual and Performing Arts (f).

Hours:

Classroom	290	Classroom	290
Community Site (CC)	<u>0</u>	Coop VocEd (CVE)	<u>0</u>
Total:	290	Total:	290

Prerequisites:

Recommended TV/Video Production 1 course and careers in ICT course.

Date of Last Revision: January 21, 2018

Additional Course Information:

COURSE SEQUENCE: TV VIDEO 1 & 2

Suggested CDE Course Code: Arts, Media, & Enter Sector-Multimedia Prod (Sub-Path 113C)
7246 Intro to Multimedia Prod
7247 Inter Multimedia Prod (Con)
7248 Adv Multimedia (Cap)
7247, Advanced Multimedia Sound Production (Capstone)
7248

Hours		
Class	CC	CVE

Occupational Competencies

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1 ORIENTATION TO CTE/ROP AND THE AUDIO INDUSTRY

- A Completes a course orientation.
- B Identifies, compares and uses Personal Protective Equipment.
- C Recognizes basic equipment rigging.
- D Identifies and understands Electrical Safety.
- E Recalls and recites equipment operational safety.

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2 EARS - UNDERSTANDING AND RESPONSIBILITY

- A Recalls and recites the parts or components that make a healthy ear.
- B Identify and analyse the various symptoms and outcomes of hearing loss as well as hearing correction.
- C Identify and differentiate between having educated ears and just listening.

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3 PHYSICS OF SOUND

- A Understands the principles and components of a sound wave.
- B Identifies various components of physical sound and their corresponding psychological correlation.
- C Knows the frequency ranges of the 10 octaves audible to human hearing and their sonic characteristics.
- D Understands the difference in measurements between sound in acoustical form and sound in electrical form.
- E Knows the equal loudness principle.
- F Understands how the acoustic phase relationships of sound waves affect amplitude.
- G Understands timbre.
- H Understands the relationship of frequency and pitch.
- I Knows the four stages of the sound envelope.

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4 ACOUSTICS OF SOUND

- A Understands, memorizes and identifies direct, early and reverberant sounds.
- B Understands and recognizes the differences between various acoustic treatment solutions. Understands and applies the use of ergonomically designed equipment.
- C Applies concepts of recording studio designs through comparison.

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5 MICROPHONES

- A Understands and applies the operating principles of microphones including magnetic inductions and variable capacitance.
- B Understands and applies the concepts of microphones based on directional characteristics of microphones in various applications.
- C Identifies and applies the principles of microphone/system components.
- D Identifies and interprets the technical specifications of various microphones.
- E Connects and applies principles of microphone accessories.

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6 CONSOLES AND CONTROL SURFACES

- A Recognizes and operates various functions of the input section to an analog or digital mixing or control surface.
- B Understands and applies cable patching physically and virtually for digital and analog work environments.
- C Compares and distinguishes the differences between the metering functions of a mixing console.
- D Identifies and demonstrates the automation features of a mixing console.

Hours		
Class	CC	CVE

15		
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7 SYSTEM CONNECTION AND CONNECTORS

- A Recognizes, compares and connects various audio connectors and cables.
- B Compares the functions and applications of DI Boxes.
- C Identifies and understands the gender orientation of various connectors.
- D Creates cables with connectors with proper connection termination.

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8 LOUDSPEAKERS AND MONITORS

- A Identifies various types of speaker enclosures.
- B Identifies and applies the use of various powering systems.
- C Deploys and applies principles of loudspeaker placement.
- D Compares and demonstrates the use of speaker enclosures.
- E Investigates the need and applies the use of headphones and IEM systems.

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9 SIGNAL PROCESSING

- A Applies principles of pre/post signal routing and understand specific applications.
- B Recalls and employs the use of time based and dynamic based signal processing.
- C Applies concepts of loudspeaker management systems.
- D Understands and employs the use of outboard equipment for in-live and studio environments.

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10 MIDI MICROPHONE TECHNIQUE, PODCASTING

- A Practices MIDI Sequencing in Reason.
- B Creates Patterns and builds an arrangement from Patterns.
- C Practices playing with a click track.
- D Navigates DAW (digital audio workstation). Utilizes bars, beats, and subdivisions.
- E Utilizes Real-Time Recording, Replace and Overdub, Loop Recording, Step Recording, and Punching in and out.
- F Imports and exports media and practices voice and vocal recording.

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11 EDITING AND LIVE RECORDING

- A Explores Tempo, Key, Song Length, Velocity, Dynamics, Gate Time, Delay, and Editing
- B Fixes mistakes including correcting timing, durations, and dynamics. Edits pitch, uses cut/copy/paste operations, and edits in the Arrange Window.
- C MIDI Mixing and Automation.
- D Understands live recording seminar, techniques, etiquette.
- E Understands the relationship between the engineer, producer and artist.

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12 MIXING AND MASTERING

- A Dynamics Processing
- B Compressing the Bass Track
- C Gating
- D Time-Based Effects Delay
- E Doubling/Flanging/Chorus
- F Reverb
- G EQing, Compression, DB

Hours		
Class	CC	CVE

12722 RCOE Audio Technology

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13 HARD-DISK RECORDING AND EDITING

- A Understands Sampling.
- B Understands Hard-disk recording and issues.
- C Practices non-destructive editing.
- D Defines regions.
- E Edits a song form, defines rhythm loops and song tempo.
- F Utilizes destructive editing and DSP (digital signal processing).
- G Uses the Change Gain and Normalize Commands and Fade In/Out.

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14 PREPARING FILES FOR DISTRIBUTION

- A Prepares sequence files for distribution.
- B Imports and exports standard MIDI Files with protocols
- C Imports and Exports standard MIDI Files with Reason.
- D Posts Sequence Files on the Web.
- E Utilizes audio distribution formats.
- F Creates a final master for CD, MP3, or Vinyl.
- G Practices audio file compression and makes MP3 Files.
- H Organizes and embeds in iTunes.
- I Distributes audio files via the Web.

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15 EXPLORING A CAREER IN AUDIO PRODUCTION

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16 COURSE RECAP AND FINAL PROJECT

Job Attitudes

- 99 A Work Ready Certificate