Recording Technology
Instructional Program Review 2011-2012

Spring 2012

Prepared by

Name	Title
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PROGRAM REVIEW – Recording Technology

The final summary of the program review process for Recording Technology is attached to this page.

I affirm that this program has been reviewed according to the accepted District procedures for program review and that the final summary accurately reflects the consensus of the members of the review committee.

Robert Slack, Dean of Fine and Performing Arts	date
Michelle Plug, Articulation Officer	date
Dave Kary,, Chair of Curriculum Committee	date
Irene Malmgren, Vice President of Academic Affairs	date
Nicki Shaw,, Academic Senate President	date
Geraldine M. Perri, Superintendent/President	date

It will be the department's responsibility to communicate review recommendations with additional offices and services.

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1. Executive Summary

A. Program History/Description

The Citrus Recording Technology Program began in 1998 with the completion of its state-of-the-art recording studios. As a two-year certificate program in recording technology, the curriculum focused on audio recording, post-production, live sound reinforcement and music business. In 2002, the program was revised to sharpen its emphasis on audio technology and emerging digital recording techniques. Courses were revised, prerequisite courses were changed, and new courses written to make curriculum more effective and condense the certificate program to one year.

In Fall 2007, the program was revised from two concurrent blocks to one block entering at a time. This adjustment simultaneously improved fill rates and successful completion. In addition, this streamlining of the program significantly improved the student learning experience.

Recording Technology provides training in music production and audio post-production for the entertainment industry. Studies include sound for film, record production, live sound, and the business of music. The curricular emphasis is engineering in audio recording, ranging from music production, film audio post-production and live sound, to audio for the video game industry. Students may earn a certificate of achievement in Audio Recording Technology and an A.S. in Recording Technology, granted April 2012.

The advisory committee meets annually and is comprised of industry professionals including recording engineers, live sound engineers, locations recorders, studio managers, and representatives from post-production houses and recording studios such as Sony and The Record Plant.

B. Strengths/Effective Practices

The Recording Technology program prepares students for success in entry-level positions in the audio recording and media production industries. To date, well over 200 certificated students occupy career positions at premier facilities such as Westlake Studios, Sony Pictures and Disney Studios, as well as industry institutions like the Recording Academy (the Grammy® people).

Our faculty and staff continue to remain active in the industry, bringing decades of professional experience and day-to-day expertise to the classroom; many count Grammys® and RIAA (Recording industry Association of America) platinum records among their numerous nominations and awards. Their associations with industry colleagues and organizations, such as the Recording Academy and AES (Audio Engineering Society) provide students one-on-one interaction with award-winning industry professionals and unparalleled networking opportunities, leading to career building positions in the music recording, film sound and concert fields.

By emphasizing current industry practices and techniques, and up-to-date hardware and software used in the industry, along with people skills vital to success in this relationship oriented field, the Citrus Recording Technology program has earned a reputation for producing highly skilled, knowledgeable graduates.

C. Weaknesses/Lessons Learned

Demand for the program remains high, as evidenced by the substantial enrollments in pre-requisite courses. However, the reduction of pre-requisite sections from all terms has impacted overall numbers of qualified, potential students for the certificate program.

Continuing technological evolution within the industry has literally re-written the job description of today's audio professional, from 'sound specialist' to 'media production generalist'. The rapid industry adoption of multi-purpose, integrated media production software has expanded the skill set required of the media production professional; a knowledge of digital video; combined MIDI (Musical Instrumental Digital Interface) sequencing and digital audio applications; and internet resource and delivery options are now required knowledge for the entry-level audio professional.

Although recent updates of the main studio and lab hardware/software have made the existing configuration current, sufficient funding for the continuous hardware and software updates has been challenging. PA154A studio needs reconfiguring and updating to current standards and the program needs additional spaces like PA154A in order for first semester students to receive the time necessary to gain competency in skills. Within the block program, first semester students work on the foundational skills and equipment. The second semester students work on advanced skills and equipment that exist in Studios A and B.

D. Recommendations/Next Steps

Offer additional sections of the Recording Technology pre-requisite courses, REC103, Introduction to Audio Engineering and REC140, Music Theory for Recording Engineers, to match the enrollment of REC100 (the third pre-requisite course) and provide a larger pool of qualified students to interview for the block program.

Provide funding to regularly maintain software and hardware updates of studios and lab space. The program will continue to apply for VTEA and other grant funding to provide for these needs. The Recording Technology Program must remain up-to-date in meeting the requirements of this technology–driven field.

2. Faculty

Full-Time Faculty	Adjunct Faculty
O'Hara, Stephen, faculty	Alverson, David Boylan, John Caudle, Mike Cowgill, Darian Deatrick, Steven Jaquette, Tim Shima, Kevin Tyck, Robert

3. Program Description

The Recording Technology Program is a hands-on, career education program which develops critical skills in audio engineering, live sound reinforcement, sound for film, television and gaming. The program teaches the audio basics necessary to engineer any kind of music and sound, from rock concerts to classical recordings, movie scenes to video games. Acceptance into the Recording Technology Program is by interview only.

4. Program Goals and Objectives

The Recording Technology program seeks to provide students with the technical and judgmental skills necessary to compete successfully in the recording and live sound industries. Through its course offerings, the program addresses key skill sets central to mastery and application of techniques and technologies used in recorded music, television and motion picture, concert sound and video game industries.

Through team building skills in a workshop environment, students learn to employ collaborative skills to effectively analyze, plan, execute and report results of basic and advanced audio projects.

The program is centered around a production environment identical to that found in film, TV, theatre and concert production. Students work with Music, Theatre and Dance students and faculty to record and create the necessary sound cues for the various programs which requires interaction and cooperation with these departments. Production planning and interpersonal communication are emphasized in keeping with real-world demands of the entertainment industry.

5. List and Review of Degrees, Certificates, and Awards

Degree or Certificate Title	Date last reviewed by Curriculum	Average number of awards each year	Date degree SLOs written	Date degree SLOs Assessed	Date last reviewed by Advisory Council
Audio Recording Technology Certificate	2008	44	2008	Spr 12	Spr 12

Audio Recording Technology Certificate of Achievement

Course Title	Units
REC 105: Fundamentals of Audio Technology	4
REC 115: Recording Studio Workshop I	4
REC 125: MIDI, Computers and Music	3
REC 135: Live Sound Reinforcement	3
REC 145: Critical Listening Skills for Engineers	3
REC 205: Advanced Audio Technology	4
REC 215: Recording Studio Workshop II	4
REC 225: Digital Audio Technology	3
REC 235: Acoustics for Engineers	3
REC 245: Music Business/Audio Careers	3

Average number of Certificates is 44.33 for the schools years 2004-2010, a total of 266 over a six year period.

6. List of Industry-Based Standard Certificates and Licenses

Avid ProTools User Certificate

7. Advisory Committee or Council

Name	Position / Company
'Doc' Goldstein	VP Post Production Universal Studios
Al Schmitt	Freelance Engineer
Ed Cherney	Freelance Engineer
Steve Burdick	Owner - Westlake Studios
Paula Salvatore	Studio Manager - Capitol Studios
Candace Stewart	Studio Manager - Firehouse Studios
Steve Kaplan	Freelance Engineer
Jeff Greenberg	CEO - The Village Studios
Lawrence Reyes	Graduate – Post-Production Editor
Justin Gay	Graduate – Freelance Location Mixer
Jeremy Olson	Graduate – Post-Production Editor
Allison Sanchez	Graduate – Assistant Engineer - Paramount Studios
Sonia Hernandez	Graduate – Post-Production Editor
Fred Vogler	Owner - Vogler Audio Media
Jim Lindsay	Owner - Jim Lindsay Productions
Don Cambou	Producer
Tom Sorce	VP Production Resource Group - Los Angeles
Andy Waterman	Producer / Engineer
John Boylan	Music Producer
Steve Genewick	Freelance Engineer
Ray Lignowski	Freelance Engineer
Dan Kimpel	Producer
John Avila	Producer / Engineer

8. Program Student Learning Outcomes

The Recording Technology Program has adopted the Institutional General Education Competencies of Citrus College (as approved by Steering December 8, 2008). General education competencies serve as a common set of core curricular components identified and defined by faculty. Student learning outcomes are behaviors based on these competencies.

Any student transferring, completing a degree or certificate from Citrus College, must demonstrate effectively assessed awareness, understanding, knowledge, skills, and abilities in the selected competencies. Students completing courses in the Recording Technology Program will have acquired the following competencies:

1) Communication (personal expression and information acquisition)

Recording Technology students will communicate effectively using proper vocabulary in written and verbal form to facilitate the technical and creative outcomes of a product.

2) Computation
Recording Students will apply acoustic concepts and mathematical formulas to demonstrate understanding of wave theory, room acoustics, materials, and microphone and speaker placement.

3) Creative, Critical, and Analytical Thinking, and Information Competency
Recording students will demonstrate understanding of the fundamental principles of audio through developing critical thinking, decision-making and problem solving skills by applying them to the studio, post-production and live sound environments.

4) Community/Global Consciousness and Responsibility
Students will develop interpersonal skills, empathy, and respect for others by completing team projects in order to gain key skills expected of professionals in the field.

5) Technology
Students will demonstrate advanced computer competency by completing production assignments utilizing software-based production and editing systems.

6) Discipline / (Subject Area Specific Content Material)
Recording students will understand the technical, creative and interpersonal skills required by the entertainment industry through demonstrating thorough knowledge of digital audio workstations and all audio hardware as appropriate to each course by performing these advanced skills in projects standard to the industry.

9. Curriculum Review and Student Learning Outcomes Assessment

Curriculum/ SLO Assessment Map: Recording Technology

CC 1: Communicate effectively with proper vocabulary	**CC 4: Develop interpersonal skills**
CC 2: Use appropriate computational skills	**CC 5: Demonstrate Computer Competency**
CC 3: Develop critical thinking skills	**CC 6: Develop industry specific protocols and techniques**
Course Applicability Key: T=Transfer, D= Degree, C= Certificate, S= Skill Award SLO Key: I= Introduced, D=Developed, M=Mastered	
Date of Assessment= FA10, SP12, CA=(Ongoing, Continuing Assessment), or N/O=(not offered in foreseeable future)	

	CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	Date of Assessment
REC 100 – Survey of Entertainment Technology (4 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	I		I				SP12
SLO 1B	I		I				SP12
SLO 1C	I		I			I	SP12
SLO 2A	I		I			I	SP13
SLO 2B	I		I			I	SP13
SLO 3A	I		I			I	SP13
SLO 3B	I		I			I	FA13
SLO 3C	I		I			I	FA13
SLO 4A	I		I				FA12
SLO 4B	I		I				FA12
SLO 4C	I		I			I	FA12

REC 102 – Record Production (3 Units), Applicability-S Last Offered: 2006, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	I	I	I		I	I	N/O
SLO 1B	I		I		I	I	N/O
SLO 2A	I		I		I	I	N/O
SLO 2B	I		ID	I	I	ID	N/O
SLO 3A	ID		ID	I	I	ID	N/O
SLO 3B	ID		ID	ID	I	ID	N/O

	CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	Date of Assessment
REC 103 – Introduction to Audio Engineering (4 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	I		I				FA12
SLO 1B	I		I			I	FA12
SLO 1C	I		I			I	FA13
SLO 1D	I		I	I		I	FA13
SLO 2A	I		I		I	I	SP13
SLO 2B	I		I	I	I	I	SP13
SLO 2C	I		I		I		FA13
SLO 3A	I		I	I	I	I	SP12
SLO 4A	I		I	I	I	I	SP12

REC 105 – Fundamentals of Audio Technology (4 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	I		I		ID	ID	SP12
SLO 1B	I		I		I	I	FA12
SLO 1C	I		ID	I	ID	ID	FA13
SLO 2A	I		ID		I	ID	SP12
SLO 2B	I		I	I	ID	I	FA13
SLO 3A	ID		ID		I	I	SP13
SLO 3B	ID		I		I	ID	FA12
SLO 4A	ID		ID		ID	I	SP14
SLO 4B	ID		ID		ID	ID	FA13
SLO 4C	ID		ID		ID	ID	SP14

REC 115 – Recording Studio Workshop I (4 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	I		ID		ID	I	FA13
SLO 1B	I		ID		ID	I	SP14
SLO 2A			ID		ID	ID	FA12
SLO 2B	I		ID		I	ID	SP12
SLO 2C			I			ID	SP13
SLO 3A	ID		ID		ID	I	FA13
SLO 3B	ID		ID	ID	I	ID	SP14
SLO 4A	ID		ID		ID	ID	FA12
SLO 4B	ID		ID		ID	ID	SP13
SLO 4C	I		ID		ID	ID	SP12
SLO 4D	ID		ID		ID	ID	FA13

	CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	Date of Assessment
REC 125 – Digital Audio Technology I (3 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	I		ID		ID	I	SP12
SLO 2A	I		ID		ID	I	FA12
SLO 2B	ID		ID		ID	I	FA13
SLO 2C	ID		ID		ID	ID	FA13
SLO 3A	I		ID		ID	ID	SP13
SLO 3B			ID		ID	ID	SP13
SLO 4A	I		ID		ID	ID	SP12
SLO 4B	ID		ID		ID	ID	SP14

REC 135 – Live Sound Reinforcement (4 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	I	I	I			I	SP12
SLO 2A	I		ID	I	ID	ID	FA13
SLO 2B	I		ID		I	I	FA13
SLO 2C	I		ID		I	ID	SP13
SLO 3A	I	I	ID		I	I	SP14
SLO 4A	ID		ID			I	FA12

REC 140 – Music theory for Engineers (3 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	I		I				SP12
SLO 1B	I		I				SP12
SLO 1C	I		I				FA12
SLO 2A	I		ID				SP13
SLO 2B	I		ID				FA13
SLO 2C	I		ID				FA12
SLO 3A	I		ID				FA13
SLO 4A	I		ID				SP13

	CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	Date of Assessment
REC 145 – Critical Listening Skills for Engineers (3 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	I		ID			I	SP12
SLO 1B	ID		ID			I	FA13
SLO 2A	ID		ID			ID	SP12
SLO 2B	ID		ID			ID	FA12
SLO 2C	ID		ID		I	ID	FA13
SLO 3A	ID		ID			I	FA12
SLO 3B	ID		ID			ID	SP13
SLO 3C	ID		ID			ID	SP13
SLO 4A	ID		ID			I	SP14
SLO 4B	ID		ID			I	SP14

REC 205 – Advanced Audio Technology (4 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	DM		DM		DM		SP12
SLO 1B	DM		DM		DM	DM	FA13
SLO 1C	DM		DM			DM	SP12
SLO 2A	DM		DM		DM	DM	SP14
SLO 2B	DM		DM		DM	DM	FA13
SLO 3A	DM		IDM			DM	SP13
SLO 3B	DM		DM			DM	FA12
SLO 4A	DM		DM		DM	DM	FA12

REC 215 – Recording Studio Workshop II (4 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	DM		DM		IDM	IDM	SP13
SLO 1B	DM		DM		DM	DM	FA13
SLO 2A	DM		DM		DM	DM	SP13
SLO 2B	DM		DM	DM	DM	DM	FA13
SLO 3A	DM		DM	DM	DM	DM	SP12
SLO 3B	DM		DM	DM			SP12
SLO 4A	IDM		IDM			IDM	FA12

	CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	Date of Assessment
REC 225 – Digital Audio Technology II (4 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	DM		DM		DM	DM	SP14
SLO 1B	DM		DM		DM	DM	FA13
SLO 2A	DM		DM	D	DM	DM	SP12
SLO 2B	DM		DM	D		DM	FA12
SLO 3A	DM		DM		DM	DM	FA12
SLO 3B	DM		IDM		DM	DM	SP13
SLO 4A	DM		DM		DM	DM	SP13
SLO 4B	DM		IDM	DM	DM	DM	SP12
SLO 4C	DM		IDM		DM		SP14

REC 235 – Acoustics for Engineers (3 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	DM	D	DM				SP12
SLO 1B	DM	DM	DM				SP12
SLO 1C	DM	DM	DM				FA12
SLO 2A	DM	DM	DM				FA12
SLO 2B	IDM	IDM	IDM				SP13
SLO 2C	IDM	IDM	IDM				SP13
SLO 3A	IDM	IDM	IDM				SP13
SLO 3B	DM	DM	DM				FA13
SLO 3C	IDM	IDM	IDM				FA13
SLO 3D	IDM	IDM	IDM				SP14
SLO 4A	DM	DM	DM			D	SP14
SLO 4B	IDM	IDM	IDM		DM	D	SP14
SLO 4C	IDM	IDM	IDM				FA12

	CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	Date of Assessment
REC 245 – Music Business and Audio Careers (3 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	IDM		IDM				SP12
SLO 1B	IDM		IDM				FA12
SLO 1C	IDM		IDM				SP13
SLO 1D	IDM		IDM				FA13
SLO 1E	IDM		IDM				FA14
SLO 2A	IDM	ID	IDM				SP12
SLO 2B	IDM	ID	IDM				SP14
SLO 3A	IDM		IDM				FA12
SLO 3B	IDM		IDM				SP13
SLO 3C	IDM		IDM				FA13
SLO 3D	DM		IDM				SP14
SLO 4A	ID		IDM	ID		ID	FA14
SLO 4B	IDM		IDM	ID		ID	FA14
REC 255 – Advanced Live Sound Reinforcement (4 Units), Applicability-C Last Offered: 2/12, Last Curriculum Date: FA '08, Curriculum Revision Date:							
SLO 1A	DM		IDM	ID			SP14
SLO 1B	DM		IDM	ID			SP15
SLO 2A	DM	ID	IDM		ID	IDM	SP14
SLO 2B	DM	ID	IDM		ID	IDM	SP15
SLO 3A	DM		IDM			DM	SP12
SLO 3B	DM		IDM			DM	SP12
SLO 3C	DM		IDM			ID	SP13
SLO 3D	DM		IDM		ID	DM	SP13
SLO 3E	DM		IDM	ID	ID	IDM	SP15

10. Review of previous recommendations

Mission:

a. Modify and up-date program curriculum in response to evolving professional criteria in the music recording, live sound, motion picture, television and gaming industries.
-- Response: All curriculum updated in Fall 2008 at the time of SLO revision.

b. Consistently develop effective pedagogical strategies to meet current and future SLO objectives.
-- Response: Faculty regularly meet to assess strategies and adopt effective approaches.

c. Devise course outlines which focus on development of key technical and judgmental skills required of all industry fields.
-- Response: All course outlines have been revised to meet these criteria.

d. Develop new courses and programs responsive to changing skill sets spawned by the on-going technological advancement in the industry.
-- Response: Pre-requisite courses have been re-designed (Survey of Entertainment Technology) or replaced with more effective courses (Introduction to Audio Engineering, Music Theory for Engineers) to answer this recommendation. Record Production and Pro Tools Intensive courses have also been written.

e. Consistently provide and maintain up-to-date hardware, software, and related technologies currently utilized in the field, as well as those being adopted by emerging industry disciplines.
-- Response: Main studios 'A' and 'B' were updated with SSL production consoles in 2010, along with software and monitor upgrades. The existing configuration of VT320 Media Lab was upgraded with new computers, music keyboards and updated software during Summer 2011. This was not a complete replacement as some equipment was still viable at that time.

Need:

a. Mount a consistent, aggressive and coordinated outreach, and recruitment program which competes favorably with similar career preparation programs in the region.
-- Response: Recording Technology is regularly represented at college and career fairs at regional high schools. The department displayed a 'mixing station' at the inaugural Eighth Grade Majors Fair in 2011, and conducts audio engineering workshops at the annual Citrus College Open House.

b. Make use of all media, including print, electronic and internet sources, in raising public awareness of the program’s viability and Citrus College’s status as a Regional Center for industry-related studies.
-- Response: Budgets have restricted print media use. The recording technology website and social media are currently being developed to help meet this recommendation.

c. Continue to plan and execute periodic openhouses and department tours for regional high school and community college students, counselors and faculty.
-- Response: This is part of the ongoing Recording Technology outreach.

d. Provide the program Advisory Committee a stipend to periodically assess the specific personnel needs of the industry, identify recruitment opportunities and act as a liaison to the industry.
-- Response: Advisory Committee participation is voluntary by College policy, thereby nullifying this previous recommendation.

e. Prepare a study of relevant data regarding current status and projected growth of Entertainment Technology industries as well as ascertain emerging practical and technological trends in media production and distribution.
-- Response: Research completed in 2011 for an A.S. degree application, combined with annual Advisory Committee input have produced an effective answer to this recommendation (see Attachment B). The A.S.in Recording Technology was approved by the Chancellor's Office Spring 2012.

f. Recruit and coordinate student “Street Teams” to distribute program information and interact with potential enrollees at performance venues, schools, studios, and industry-related merchandisers.
-- Response: Since its rollout in 2009, this recommedation has been abandoned, it proved to be less effective than anticipated.

Quality:

a. Routinely evaluate and revise course outlines to reflect changing industry standards and the evolving instructional strategies required to serve them.
-- Response; All curriculum were updated in Fall 2008 at the time of SLO revision. Revisions are in process with input from the Advisory Committee.

b. Revise and update student learning outcome language to reflect current core as well as discipline specific competencies in all Recording Technology Program courses.
-- Response: All class SLO's are in the process and scheduled for completion between Spring 2012 and Fall 2014 per the Curriculum/SLO Assessment Map, Section 9.

c. Regularly analyze, review, and up-date course syllabi and curricula to address evolutionary changes in required core industry knowledge and skill sets.
-- Response: Revisions to course syllabi were initiated Fall 2011 for Spring 2012.

d. Increase awareness of developing career opportunities and technological advancements in the field through continued attendance at industry conventions, symposia, conferences and workshops.
-- Response: Recording Technology faculty and staff regularly attend industry conventions (AES, NAB, NAMM) and workshops (The Recording Academy, Grammy-U).

e. Maintain updated information regarding equivalent community college and other professional programs offering education and training in entertainment technology disciplines.
-- Response: Research completed in 2011 for an A.S. degree application, combined with regular communications and visits to regional campuses have produced an effective answer to this recommendation.

f. Create and maintain a database of past Recording Technology Program certificated graduates tracking industry employment, annual earnings and career advancement in years one, five, and ten following completion of the program.
-- Response: Lack of personnel and time constraints have made this recommendation impractical, though regular communications with program graduates, combined with former student visits to Citrus AES meetings have contributed in part to satisfying this recommendation.

g. Increase current placement efforts through periodic e-mail and letter/internet campaigns informing employers at regional recording studios, audio post-production, and motion picture facilities of availability of skilled, certificated graduates to fill entry-level and internship positions.
-- Response: Letters to regional facilities were last sent Spring 2009. Current plans call for expanded use of e-mail and the program's Facebook page. Regular tours of studios and post-

production facilities by the Citrus AES chapter have also helped to effectively answer this recommendation.

h. Explore the creation of learning communities within the Fine and Performing Arts departments to create projects, programs and assignments requiring interaction and cooperation among Recording Technology students and music, drama, dance, art, and photography students and faculty.
-- Response: The program has developed a production environment identical to that found in film, TV, theatre and concert production. Students regularly work with Music, Theatre and Dance students/faculty to record and create the necessary sounds cues for the various programs.

i. Promote elevating minimum TOEFL scores for Recording Technology Program entering students from the campus-wide standard of 450 to 600.
-- Response: The program will enlist International Student Office's help in assessing appropriate TOEFL scores for technical programs.

Feasibility:

a. Respond swiftly to continuing technological advancements in audio and media production fields by consistently providing updated hardware and software systems which represent current industry standards.
-- Response: Main studios 'A' and 'B' were updated with Solid State Logic consoles in 2010, along with computer, software and surround monitor upgrades. The existing configuration of VT320 Media Lab was upgraded with new computers, music keyboards and updated software during Summer 2011. This was not a complete replacement as some equipment was still viable at that time.

b. Provide consistent, skilled maintenance and periodic modifications to program facilities in order to meet developing professional criteria and technological advances of the industry.
-- Response: Program staff, with assistance from part-time student volunteers, consistenly provide expert maintenance to all components of the studios and Media Lab.

c. Devote its resources and support to the addition of a Career/Vocational counselor, who is knowledgeable in the media production industry, to the Citrus staff. This will enhance both the effectiveness of communication and the opportunities for strong, meaningful support from Counseling.
-- Response: An ongoing effort is underway to coordinate with Counseling in fulfilling this critical need. In 2009, Dean of CTE identified funding for counseling assistance within the FPA division. Unfortunately, due to extenuating circumstances, the position was not filled, we will research additional options.

d. Acquire regular updates to the program library collection of texts, manuals, reference volumes, and research materials to keep pace with industry developments and technological advances in the field.
Response: The program's library collection is continuously updated with new industry periodicals, technical papers and relevant texts.

e. Explore every means for offering expanded hours in the Media/MIDI lab and recording studios to enhance skill development opportunities and serve industry needs for skilled, entry-level personnel.
-- Response: Lab monitors are currently provided to partially satisfy this recommendation. Budget restricts the number of hours available.

f. Increase emphasis on the integration of video, film and video sound design, and multi-media production techniques, which meet current and future industry criteria for media production professionals.
-- Response: Video editing sofware was installed in all program computers in 2011 due to requests for basic video editing skills.

g. Enhance opportunities for consultation with the program Advisory Committee, faculty peers and industry colleagues to increase the program's responsiveness to vanguard developments in the Entertainment Technology field.
-- Response: Advisory Committee members have graciously devoted time to provide the program with their valuable expertise. Faculty and staff have regular communication with many professionals (both Advisory and additional) to stay current with industry expectations.

Compliance:
NONE

11. Evaluation Criteria – Mission

Current status
Recording Technology has prepared many students from diverse populations for success in the entertainment industry. Efforts to improve outreach and fund the growth of the program will continue. The Recording Technology A.S. degree was granted April, 2012 by the Chancellor's Office.

Commendations

a. The Recording Technology Program conforms to the mission statement of the District.
b. Current demographic ethnic distribution data indicate student enrollment in the program favorably represents the ethnic balance of the district (see Attachment A).
c. Recording Technology faculty and students participated in the Spring Open House, presenting an audio recording workshop for over 80 visiting students and faculty.
d. Student success is evidenced by retention rate data consistently exceeding 96 percent, completion rates above 80 percent, and regular correspondence from certificated students employed by regional and national firms, such as Warner Brothers Studios, the Disney Company, Cirque du Soleil, Gibson Guitars and the Record Plant Studios (see Attachment A). Recent graduate, Lawrence Reyes, received a sound editing Emmy award in 2011.
e. Program students and faculty collaborated with the Music department to produce a Music Video featuring the Citrus Pop Rock Ensemble in a live studio session. The video is part of a Recording Technology interactive display presented at high school, college, and career fairs.
f. Recording Technology joined with Emerging Theatre Technologies to participate in the inaugural Eighth Grade Majors Fair organized by Azusa Pacific University, serving at-risk middle school students in fostering interest in higher education.

g. Application for an Associate of Science Degree in Recording Technology was approved by the Chancellor's Office, April 2012.
h. Recording Technology Program has worked to improve Non-Traditional students in the program with continued success and in 2010, female enrollment doubled to 17.4%.

Recommendations

a. Initiate an outreach campaign to increase awareness of Recording Technology program and entertainment production careers in general and specifically encourage female students to explore careers in the field.
b. Develop grant proposals to fund further expansion of the program's curriculum and resources to effectively meet the needs of the entertainment industry in recording, live sound and post-production.

12. Evaluation Criteria – Need

Current status

The program continues to see many graduates find successful employment and tremendous interest for students seeking to enter the program.

Commendations

a. The Recording Technology faculty have revised the program curriculum to consistently meet the evolving needs of the media production industry.
b. Labor market data collected as part of the A.S. degree application indicate consistent growth in the sound engineering field. The same data show a steady demand for trained, entry-level studio audio, live sound and post-production personnel (see Attachment B).
c. Program faculty and staff meet regularly with Advisory Committee professionals to ascertain and respond to the changing technical and personnel needs of the field (see Attachment C).
d. Faculty and students attending numerous high school college and career fairs in the region have found a consistently high level of interest in the field and in the Recording Technology program.

Recommendations

a. As Advisory Council recommends and budget allows, develop additional ancillary curriculum outside of the certificate program, specific to industry employment growth areas, e.g. Live Sound for Touring and Video Game Sound.
b. Work to provide additional sections of the Recording Techology pre-requisite courses (REC100, REC103, REC140) to balance the demand for and entry into the program; and maximize numbers of completers.

13. Evaluation Criteria – Quality

Current status

Course outlines have been reviewed and SLO's developed for all Recording Technology courses. Assessment of course SLO's is in process with assessment cycle due to be completed between Spring 2012 and Fall 2014. Additional faculty training for industry software certifications is necessary. Advisory Committee members have confirmed the direction of the Recording Technology program correlates to the industry.

Commendations

a. The Recording Studios and lab were updated in 2010 and 2011 respectively to bring facilities largely into line with current industry expectations of equipment and software. There are still areas in need of update.
b. Course Outlines of Record were updated in 2008 with the addition of course SLOs and the revision of curricula to current technology and trends.
c. Faculty attend educational conferences, symposia and leadership training on regular basis, as well as participate in industry-related workshops, technology demonstrations, and Audio Engineering Society, National Association of Broadcasters, and National Association of Music Merchandiser convention events.
d. Faculty have initiated training for Instructor Certification for Avid Pro Tools Certification. Advisory Council recommended that Pro Tools certification would be of benefit to the students. CTE Faculty Development funds are providing for training, scheduled for June 2012.
e. Graduates have received awards for the excellence of their work including Golden Globe and Emmy Awards. Other graduates are routinely called to engineer for concert touring acts.
f. Recording Technology students regulary collaborate with music, drama and dance students and faculty. This learning community allows: Recording Technology students to record and edit music and sound effects; the music students the opportunity to be recorded and hear the results; and the dance and theatre students the music/sound effects needed for their productions. It is intended to work how the industry works, every person has a role to play in the production.
g. Expand the current program curriculum to encompass media production-related skills now in demand in the industry. New courses in media production, including digital cinema, sound-for-picture, concert sound, computer gaming and internet/web media will provide additional training and skills to meet the changing job description and skill requirements in the field. This is a recommendation from the 2010-2011 Annual Review. Sound-for-picture and concert sound are already in the program. Media production, digital cinema, computer gaming and internet/web media are out of scope of the Recording Technology Program and would need to be a separate program.

Recommendations

a. Current class outlines will be revised to streamline and update SLO's and address changes in industry standards by 2014.
b. Regularly analyze, review, and update course syllabi and curricula to address changes in required core industry knowledge and skill sets.
c. Attend industry conventions, conferences and workshops to remain current in technology and career trends in entertainment.
d. Promote elevating minimum TOEFL scores for Recording Technology Program entering students from the campus-wide standard of 450 to 600, enlisting International Student Office's help in assessing appropriate TOEFL scores for technical programs.
e. Offer additional sections of the Recording Technology pre-requisite courses, REC103, Introduction to Audio Engineering, and REC140, Music Theory for Recording Engineers, during the regular and inter-session semesters to enable more students to complete prerequisites prior to the block program. This is affecting quality and quantity of students applying to the program.

14. Evaluation Criteria – Feasibility

Current status

The program has been able to maintain facilities due to Bond, VTEA and instructional moneys. The changing industry requires continually improving and updating facilities, equipment and software to continue producing high quality graduates. Given current budget conditions, we will continue to research grant opportunities to provide for these needs.

Commendations

a. Recording facilities have been kept relatively current due to funds from VTEA, department funding and Citrus' Measure G Bond funding.
b. VTEA funds were specifically spent on live sound equipment, location recording equipment, microphones, additional audio software and faculty training.
c. Use of the Haugh Performing Arts Center for live sound classes and other recordings has provided tremendous lab opportunity for students to practice skills in a real concert environment.

Recommendations

a. Addition (or training) of a Career/Vocational counselor, who is knowledgeable in the entertainment industry. This will enhance both the effectiveness of communication and the opportunities for strong, meaningful support from Counseling.
b. The Recording Program is still in need of a full-time faculty member to replace the position lost in 2003.
c. Continue regular updates of audio production software as released to provide students with the most current training. This includes Mac OS, Avid Pro Tools, MOTU Digital Performer, Propellerhead Reason, Apple Logic Pro, Sonnox and Waves Plugins, and Apple Final Cut Express.
d. Addition of software applications recommended by the Advisory Committee to stay current with production standards.
e. Update audio production hardware to current levels. Subsequent to the update in summer 2011, the VT 320 lab audio interfaces are now unsupported by manufacturers and incompatable with some software (will soon be all software as drivers cease to be updated). Studios A and B are in need of microphone preamps to match the current recording standards.
f. Replacement of computers on a three year timeline: Studio computers in 2012 and VT320 Lab Computers in 2014.
g. Replace VT320 furniture to add more desks, enabling higher class size. Would also include computers, software and audio/music hardware to complement existing stations.
h. The introductory studio, PA154b, needs work on heating and air-conditioning. It currently experiences both extremes making it difficult to work in for any length of time. A work order has been initiated to check the air balance in that room.
i. Upgrade PA154A to current standards of technology. Most of existing hardware is over ten years old.
j. Remodel PA154a to a useable acoustic environment including isolation from surrounding practice rooms and acoustic treatment for proper listening environment. This will facilitate a better recording environment as well as better recordings for the Instrumental Music program who benefit from being recorded.

k. Explore space to create a "Studio-in-the-Round" type of recording situation (a studio with 4-6 control rooms around it) either colocated with a recording space or remotely via cabling. First semester students have a distinct lack of hands-on time in the basics of studio setup, proper gain structure, multi-track recording and the inherent signal flow problems.
l. Addition of concert sound systems (with recording capacity) to train students for the rapid growth of tour sound jobs that began in the last five years and appears to be increasing in demand. Per Advisory Council, the majority of income for major music artists is derived from concert tours, not album sales, hence the tremendous leap in demand.
m. The Haugh Performing Arts Center sound system will need to be replaced within five years to remain current with equipment and techniques stardards to the live sound industry. The system was originally installed in 2007.

15. Evaluation Criteria – Compliance

Current status
Recording Technology is in compliance with all requirements, standards and regulations except for excessive Sound Pressure Levels in certain rooms.

Commendations
a. The course requisites of the Recording Technology Program meet all Federal, State, and District requirements.
b. Recording Technology Program course outlines of record meet State, District, and Federal regulations for content.
c. Advisory Committee meetings are scheduled regularly. Recent meeting minutes are attached.

Recommendations
a. PA154 and VT117 need acoustic treatment to dampen sound pressure levels. Measurements currently exceed recommended levels/exposures set by OSHA. This was also noted in the State's Room Inventory in 2007.

16. Recommendations

Rank	Description of recommendation (actions or behaviors to be completed)	Responsible person(s)	Target Date	Personnel	Facilities	Equip. / Software	Supplies
1	Outreach campaign	O'Hara	2013	☐	☐	☐	☒
2	Develop Grant Proposals	Caudle	ongoing	☐	☐	☐	☒
3	Develop curricula	O'Hara,Caudle, Jaquette	as recommended	☐	☐	☐	☐
4	Add sections of Pre-requisite course	Slack	When budget allows	☐	☐	☐	☐
5	Revise Class Outlines and SLOs	O'Hara, Caudle	2013	☐	☐	☐	☐
6	Update courses to industry needs	O'Hara,Caudle, Jaquette	ongoing	☐	☐	☐	☐
7	Attend Industry Conventions	O'Hara,Caudle, Jaquette	When budget allows	☐	☐	☐	☒
8	Elevate TOEFL scores	O'Hara	2013	☐	☐	☐	☐
9	Career/Vocational counselor, who is knowledgeable in the entertainment industry.	O'Hara	2013	☒	☐	☐	☐
10	Recording Technology Faculty	Slack / Faculty	2015	☒	☐	☐	☐
11	Software updates of audio production	Caudle	ongoing	☐	☐	☒	☐
12	Addition of software applications recommended by Advisory Committee	Caudle	as recommended	☐	☐	☒	☐
13	Update audio production hardware to current levels	Caudle	ongoing	☐	☐	☒	☐
14	Replace computers on a three year timeline	Caudle	2012/14	☐	☐	☒	☐
15	Replace VT320 furniture	Caudle	2015	☐	☐	☒	☐
16	Upgrade PA154A to current standards of technology	Caudle	2013	☐	☒	☒	☐
17	Remodel PA154a to a useable acoustic environment	Caudle	2014	☐	☒	☐	☐
18	Explore "Studio-in-the-Round" type of recording situation	Caudle/Jaquette	2017	☐	☒	☒	☐
19	Haugh Sound Update See Feasibility Commendation B and Recommendation M.	Caudle	2015	☐	☒	☒	☒
20	Live Sound System	Caudle	2014	☐	☐	☒	☐
21	PA154 and VT117 acoustic treatment	Caudle / Slack	2013	☐	☒	☐	☐

Comments

Additional full time faculty will only help to augment an already strong program. Equipment/software upgrades are mandatory to staying current with the industry.

17. Budget Recommendations

Resources are needed in the following areas:

Certificated Personnel (FNIC)

Position	Discuss impact on goals / SLOs	Impact ◊	Priority ‡
Recording Faculty	Necessary for depth/breath of program crucial to growth and to remain competitive in the entertainment industry.	FQ	B

Classified Personnel

Position	Discuss impact on goals / SLOs	Impact ◊	Priority ‡

Facilities

Facilities / repairs or modifications needed	Discuss impact on goals / SLOs	Bldg / Room	Impact ◊	Priority ‡
VT 320 Updates	Additional computer stations will increase certificate completion numbers and increase FTE.	VT320	NF	B
PA154A Updates	Remodeling this room will significantly enhance the quality of learning in this introductory studio.	PA154A	QFC	B

Computers / Software (Tecs)

Item	Discuss impact on goals / SLOs	Cost	Impact ◊	Priority ‡
Computer and Software updates	Computer and software updates are mandatory to staying current with the industry, espcially with the shift in digital audio to computer based processing.	$80,000	F	B

Equipment

Item	Discuss impact on goals / SLOs	Cost	Impact ◊	Priority ‡
Audio Equipment Updates and Live Sound System	Equipment updates are mandatory to staying current with the industry. Touring system is necessary to meet industry need of live sound technicians.	$150,000	QF	B
Haugh Sound Update	Equipment/software upgrades are mandatory to staying current with the industry. See Feasibility Commendation B and Recommendation M.	$400,000	QF	BC

Supplies (Division)

Item	Discuss impact on goals / SLOs	Cost	Impact ◊	Priority ‡

◊ **Impact:**
M = Mission: Does program meet the District's mission and established core competencies? Does program reflect the District's diversity?
N = Need: How is program addressing needs based on labor market data, enrollment, articulation, advisory committee, regional agreements, etc.?
Q = Quality: Are lecture/lab unit values appropriate? Have the course outlines been reviewed / updated regularly? Are disciplines appropriate? Is faculty development adequate? Does program support State and District emphasis on critical thinking, problem solving and written expression? Does program meet stated objectives in the form of SLOs? Are course pre-requisites and co-requisites validated?
F = Feasibility: Are facilities, equipment, and library resources adequate? Are evening programs and services adequate? Are course offerings frequent enough for students to make adequate progress in both day and evening programs? Does the program have adequate communication with & support from Counseling?
C = Compliance: Do course requisites meet Federal, State & District requirements? Do the course outlines meet state, district & federal regulations for content? Do vocational programs have regular advisory meetings?

‡ **Priority: (Note: When discussing priority, consider the following and address in Column 2)**
A. Is this goal mandated by law, rule, or district policy?
B. Is this goal essential to program success?
C. Is this goal necessary to maintain / improve program student learning outcomes?

Attachment A: Key Performance Indicator data pages

	Key Performance Indicators	Fall04	Fall05	Fall06	Fall07	Fall08	Fall09
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Program Access						
1	Majors (total)						
2	New Majors						
3	Courses Offered	8.0	8.0	8.0	11.0	13.0	13.0
4	Sections Offered	16.0	16.0	12.0	16.0	16.0	14.0
5	Morning Secions	6.0	6.0	6.0	6.0	5.0	7.0
6	Afternoon Sections	9.0	9.0	5.0	9.0	9.0	7.0
7	Evening Sections	1.0	1.0	1.0	1.0	2.0	
8	Arranged Sections						
9	Weekend Sections						
10	Short Term Sections	0.0	0.0	0.0	0.0	0.0	0.0
11	DistanceEd Full-Term Sections	0.0	0.0	0.0	0.0	0.0	0.0
12	DistanceEd Short-Term Sections						
13	Enrollment	376	354	314	477	553	467
14	Weekly Student Contact hours (WSCH)	2032.9	1898.8	1724.6	1522.5	3214.5	2825.9
15	Full-Time Equivalent Students (FTES)	69.7	65.1	59.1	47.0	99.2	87.2
	Program Resources						
16	Full-Time Equivalent Faculty (FTEF)	3.8	3.8	2.9	1.9	3.9	3.5
17	Credit Reimbursement Rate	**$2,922.30**	**$3,259.71**	**$3,476.34**	**$3,668.28**	**$3,834.46**	**$3,834.46**
	Program Operation						
18	WSCH/FTEF	533.6	498.4	598.8	788.9	830.6	800.5
19	FTES/FTEF	18.3	17.1	20.5	24.3	25.6	24.7
20	Fill Rate at Census	75.0	68.1	80.5	83.4	89.6	101.5
	Program Success						
21	Course Retention	92.8	94.1	88.2	99.2	97.3	96.8
22	Course Success	77.1	69.5	69.4	75.5	72.7	78.6

	Key Performance Indicators				Winter08	Winter09	Winter10
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Program Access						
1	Majors (total)						
2	New Majors						
3	Courses Offered				2.0		
4	Sections Offered				2.0		
5	Morning Secions				2.0		
6	Afternoon Sections						
7	Evening Sections						
8	Arranged Sections						
9	Weekend Sections						
10	Short Term Sections				2.0		
11	DistanceEd Full-Term Sections						
12	DistanceEd Short-Term Sections				0.0		
13	Enrollment				51		
14	Weekly Student Contact hours (WSCH)				205.8	0.0	0.0
15	Full-Time Equivalent Students (FTES)				6.4		
	Program Resources						
16	Full-Time Equivalent Faculty (FTEF)				0.3		
17	Credit Reimbursement Rate				**$3,668.28**	**$3,834.46**	**$3,834.46**
	Program Operation						
18	WSCH/FTEF				663.8		
19	FTES/FTEF				20.5		
20	Fill Rate at Census				56.0		
	Program Success						
21	Course Retention				96.1		
22	Course Success				80.4		

	Key Performance Indicators	Spring05	Spring06	Spring07	Spring08	Spring09	Spring10
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Program Access						
1	Majors (total)						
2	New Majors						
3	Courses Offered	8.0	8.0	8.0	12.0	14.0	14.0
4	Sections Offered	16.0	13.0	16.0	17.0	14.0	14.0
5	Morning Secions	6.0	6.0	6.0	7.0	8.0	9.0
6	Afternoon Sections	9.0	6.0	9.0	9.0	6.0	5.0
7	Evening Sections	1.0	1.0	1.0	1.0		
8	Arranged Sections						
9	Weekend Sections						
10	Short Term Sections	0.0	0.0	0.0	0.0	0.0	0.0
11	DistanceEd Full-Term Sections	0.0	0.0	0.0	0.0	0.0	0.0
12	DistanceEd Short-Term Sections						
13	Enrollment	357	329	340	439	479	465
14	Weekly Student Contact hours (WSCH)	1915.4	1775.4	1875.4	1618.4	2813.3	2716.4
15	Full-Time Equivalent Students (FTES)	65.7	60.9	64.3	49.9	86.8	83.8
	Program Resources						
16	Full-Time Equivalent Faculty (FTEF)	3.8	3.0	3.8	2.4	3.5	5.0
17	Credit Reimbursement Rate	**$2,922.30**	**$3,259.71**	**$3,476.34**	**$3,668.28**	**$3,834.46**	**$3,834.46**
	Program Operation						
18	WSCH/FTEF	502.7	593.8	492.2	671.5	801.5	547.7
19	FTES/FTEF	17.2	20.4	16.9	20.7	24.7	16.9
20	Fill Rate at Census	63.2	75.5	66.4	81.3	91.2	91.2
	Program Success						
21	Course Retention	93.8	94.5	93.8	98.4	97.7	96.8
22	Course Success	71.7	74.5	67.4	82.0	78.3	81.5

	Key Performance Indicators	Summer04	Summer05	Summer06	Summer07	Summer08	Summer09
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Program Access						
1	Majors (total)						
2	New Majors						
3	Courses Offered	1.0	1.0	1.0	1.0	1.0	
4	Sections Offered	1.0	1.0	1.0	1.0	1.0	
5	Morning Secions	1.0	1.0	1.0	1.0		
6	Afternoon Sections					1.0	
7	Evening Sections						
8	Arranged Sections						
9	Weekend Sections						
10	Short Term Sections	1.0	1.0	1.0	1.0	1.0	
11	DistanceEd Full-Term Sections						
12	DistanceEd Short-Term Sections	0.0	0.0	0.0	0.0	0.0	
13	Enrollment	38	38	35	45	35	
14	Weekly Student Contact hours (WSCH)	147.9	147.9	136.2	189.9	164.0	0.0
15	Full-Time Equivalent Students (FTES)	5.1	5.1	4.7	6.5	5.1	
	Program Resources						
16	Full-Time Equivalent Faculty (FTEF)	0.2	0.2	0.2	0.2	0.2	
17	Credit Reimbursement Rate	**$2,922.30**	**$3,259.71**	**$3,476.34**	**$3,668.28**	**$3,834.46**	**$3,834.46**
	Program Operation						
18	WSCH/FTEF	924.2	924.2	851.3	1116.9	863.1	
19	FTES/FTEF	31.7	31.7	29.2	38.3	26.6	
20	Fill Rate at Census	63.3	61.7	58.3	73.3	46.7	
	Program Success						
21	Course Retention	97.4	100.0	100.0	97.8	100.0	
22	Course Success	73.7	57.9	60.0	68.9	62.9	

		04-05		05-06		06-07		07-08		08-09		09-10	
		Year1		Year2		Year3		Year4		Year5		Year6	
Gender													
	Female	27	7.7%	35	10.6%	30	9.7%	43	11.7%	37	9.8%	54	17.4%
	Male	325	92.3%	295	89.4%	279	90.3%	321	87.2%	324	85.9%	246	79.1%
	Missing							4	1.1%	16	4.2%	11	3.5%
	Total	352	100.0%	330	100.0%	309	100.0%	368	100.0%	377	100.0%	311	100.0%
Age													
	19 or younger	120	34.1%	130	39.4%	131	42.4%	136	37.0%	145	38.5%	114	36.7%
	20-24	167	47.4%	137	41.5%	130	42.1%	164	44.6%	150	39.8%	136	43.7%
	25-29	43	12.2%	33	10.0%	22	7.1%	38	10.3%	52	13.8%	38	12.2%
	30-34	12	3.4%	14	4.2%	13	4.2%	17	4.6%	15	4.0%	10	3.2%
	35-39	7	2.0%	10	3.0%	6	1.9%	4	1.1%	6	1.6%	3	1.0%
	40-49	3	0.9%	4	1.2%	3	1.0%	7	1.9%	8	2.1%	5	1.6%
	50 and above			2	0.6%	4	1.3%	2	0.5%	1	0.3%	5	1.6%
	Total	352	100.0%	330	100.0%	309	100.0%	368	100.0%	377	100.0%	311	100.0%
Ethnicity													
	Asian	60	17.0%	30	9.1%	35	11.3%	33	9.0%	24	6.4%	14	4.5%
	Black or African American	24	6.8%	32	9.7%	27	8.7%	34	9.2%	25	6.6%	19	6.1%
	Hispanic/Latino	135	38.4%	138	41.8%	140	45.3%	144	39.1%	145	38.5%	94	30.2%
	American Indian or Alaska Native	2	0.6%			3	1.0%	3	0.8%	4	1.1%		
	Native Hawaiian or Other Pacific Islander							5	1.4%	1	0.3%		
	White	101	28.7%	102	30.9%	78	25.2%	100	27.2%	96	25.5%	61	19.6%
	Two or More Races											1	0.3%
	Unknown/Non-Respondent	30	8.5%	28	8.5%	26	8.4%	49	13.3%	82	21.8%	122	39.2%
	Total	352	100.0%	330	100.0%	309	100.0%	368	100.0%	377	100.0%	311	100.0%
Educational Goal													
	Degree & Transfer	124	35.2%	99	30.0%	96	31.1%	39	10.6%	65	17.2%	88	28.3%
	Transfer	53	15.1%	60	18.2%	51	16.5%	4	1.1%	12	3.2%	11	3.5%
	AA/AS	11	3.1%	11	3.3%	13	4.2%	48	13.0%	71	18.8%	34	10.9%
	License	21	6.0%	31	9.4%	35	11.3%	4	1.1%	14	3.7%	8	2.6%
	Certificate	91	25.9%	88	26.7%	71	23.0%	38	10.3%	45	11.9%	44	14.1%
	Job Skills	15	4.3%	8	2.4%	10	3.2%	38	10.3%	58	15.4%	51	16.4%
	Basic Skills							7	1.9%	7	1.9%	10	3.2%
	Undecided							31	8.4%	49	13.0%	38	12.2%
	Not Reported	37	10.5%	33	10.0%	33	10.7%	159	43.2%	56	14.9%	27	8.7%
	Total	352	100.0%	330	100.0%	309	100.0%	368	100.0%	377	100.0%	311	100.0%

	Key Performance Indicators	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
		Year1	Year2	Year3	Year4	Year5	Year6
	Program Resources						
23	Revenue: FTES*Reimbursement Rate	$410,126.93	$425,848.51	$441,634.23	$402,703.78	$732,611.93	$652,931.85
24	Total District Adopted Program Budget	NO DATA	524,080	429,980	473,829	466,204	461,542
25	Support Personnel (wage without benefit, 2200 and 2400 in budget)	189,789	119,128	108,268	139,341	102,773	137,741
26	Supplies (4300 in budget)	19,466	17,719	24,307	19,455	20,723	19,747
27	Cost	527,104	428,392	419,814	453,307	444,910	449,899
28	Total FTES for the year	140.44	130.64	127.04	109.78	191.06	170.28
29	Cost per FTES	3,753.23	3,279.18	3,304.58	4,129.23	2,328.64	2,642.11
	Degrees and Certificates						
30	Degree						
31	Certificates: Audio Recording Tech.	60	53	16	51	40	46
32	Skill Awards						
33	Licenses (reported by department)						
	Career Technical Education Programs						
34	VTEA Grant			$90,000	$27,000	$40,000	$23,000
35	Industry Contributions to Program Resources						
36	Available Jobs						
37	Attach one copy of the three most recent College Core Indicator Information forms for each of the appropriate TOP codes						
38	Please include "Student Satisfaction" and "Employer Satisfaction" in the program review write-up.						
39	Labor market data						

Attachment B: California EDD Labor Market Data

Sound Engineering Technicians (SOC Code : 27-4014)
Audio and Video Equipment Technicians (SOC Code: 27-4011)

Sound Engineering Technicians
(SOC Code : 27-4014)
in California

Operate machines and equipment to record, synchronize, mix, or reproduce music, voices, or sound effects in sporting arenas, theater productions, recording studios, or movie and video productions.

Employers are usually looking for candidates with Post secondary vocational training

Occupational Wages

Area	Year	Period	Hourly Mean	Hourly by Percentile 25th	Median	75th
California	2011	1st Qtr	$33.52	$19.32	$25.86	$38.34

Occupational Projections of Employment (also called "Outlook" or "Demand")

		Employment		Employment Change		
Area	Estimated Year-Projected Year	Estimated	Projected	Number	Percent	Annual Avg Openings
California	2008-2018	4,600	4,800	200	4.3	160

Industries Employing This Occupation

Industry Title	Number of Employers in State of California	Percent of Total Employment for Occupation in State of California
Motion Picture and Video Industries	7,083	38.3%
Sound Recording Industries	2,928	14.1%
Radio and Television Broadcasting	1,671	8.5%
Independent Artists/Writers /Performers	4,589	3.2%
Computer Systems Design and Rel Services	10,628	2.8%
Religious Organizations	27,054	2.3%
Software Publishers	163	1.2%

Training Programs

Program Title

Communications Technology/Technician
Recording Arts Technology/Technician

About This Occupation (from O*NET - The Occupation Information Network)

Top Tasks (Specific duties and responsibilities of this job.)

- Confer with producers, performers, and others to determine and achieve the desired sound for a production, such as a musical recording or a film.
- Set up, test, and adjust recording equipment for recording sessions and live performances;
- tear down equipment after event completion.
- Regulate volume level and sound quality during recording sessions, using control consoles. Prepare for recording sessions by performing activities such as selecting and setting up microphones.
- Report equipment problems and ensure that required repairs are made.
- Mix and edit voices, music, and taped sound effects for live performances and for prerecorded events, using sound mixing boards.
- Synchronize and equalize prerecorded dialogue, music, and sound effects with visual action of motion pictures or television productions, using control consoles.
- Record speech, music, and other sounds on recording media, using recording equipment. Reproduce and duplicate sound recordings from original recording media, using sound editing and duplication equipment.
- Separate instruments, vocals, and other sounds, and combine sounds later during the mixing or postproduction stage.

More Tasks for Sound Engineering Technicians

Top Skills used in this Job

Speaking - Talking to others to convey information effectively.
Active Listening - Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
Reading Comprehension - Understanding written sentences and paragraphs in work related documents.

Critical Thinking - Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
Monitoring - Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
Complex Problem Solving - Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
Operation Monitoring - Watching gauges, dials, or other indicators to make sure a machine is working properly.
Writing - Communicating effectively in writing as appropriate for the needs of the audience.
Active Learning - Understanding the implications of new information for both current and future problem-solving and decision-making.
Coordination - Adjusting actions in relation to others` actions.

More Abilities for Sound Engineering Technicians

Top Work Values (Aspects of this job that create satisfaction.)
Independence - Occupations that satisfy this work value allow employees to work on their own and make decisions.
Relationships - Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment.

More Work Values for Sound Engineering Technicians

Top Interests (The types of activities someone in this job would like.)
Realistic - Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outsi **Artistic** - Artistic occupations frequently involve working with forms, designs and patterns. They often require self-expression and the work can be done without following a clear set of rules.

Audio and Video Equipment Technicians
(SOC Code : 27-4011)
in California

Set up or set up and operate audio and video equipment including microphones, sound speakers, video screens, projectors, video monitors, recording equipment, connecting wires and cables, sound and mixing boards, and related electronic equipment for concerts, sports events, meetings and conventions, presentations, and news conferences. May also set up and operate associated spotlights and other custom lighting systems. Exclude "Sound Engineering Technicians" (27-4014).

Employers usually expect an employee in this occupation to be able to do the job after Long-term on-the-job training (> 12 months) .

Occupational Wages

Area	Year	Period	Hourly Mean	Hourly by Percentile		
				25th	Median	75th
California	2011	1st Qtr	$23.94	$15.98	$21.62	$30.32

Occupational Projections of Employment (also called "Outlook" or "Demand")

Area	Estimated Year-Projected Year	Employment Estimated	Employment Projected	Employment Number Change	Employment Percent Change	Annual Avg Openings
California	2008 - 2018	10,800	11,600	800	7.4	410

Industries Employing This Occupation

Industry Title	Number of Employers in State of California	Percent of Total Employment for Occupation in State
Motion Picture and Video Industries	7,083	13.3%
Independent Artists/Writers/Basic Skills / Performers	4,589	10.5%
Machinery & Equipment Rental & Leasing	1,648	8.5%
Cable and Other Subscription	27,054	5.1%
Radio and Television Broadcasting	1,671	4.3%
Programming	600	3.8%
Performing Arts Companies	3,511	3.5%
Consumer Goods Rental	3,906	2.1%
Museums, Parks and Historical Sites	3,181	1.8%
Colleges and Universities	1,466	1.6%
Spectator Sports	565	1.6%
Accommodation	10,248	1.3%
Elementary and Secondary Schools	16,247	1.2%

Training Programs
Program Title
Photographic and Film/Video Technology/Technician & Assistan
Recording Arts Technology/Technician

About This Occupation (from O*NET - The Occupation Information Network)
Top Tasks (Specific duties and responsibilities of this job.)

- Notify supervisors when major equipment repairs are needed.
- Monitor incoming and outgoing pictures and sound feeds to ensure quality, and notify directors of any possible problems.
- Mix and regulate sound inputs and feeds, or coordinate audio feeds with television pictures.
- Install, adjust, and operate electronic equipment used to record, edit, and transmit radio and television programs, cable programs, and motion pictures.
- Design layouts of audio and video equipment, and perform upgrades and maintenance. Perform minor repairs and routine cleaning of audio and video equipment.
- Diagnose and resolve media system problems in classrooms.
- Switch sources of video input from one camera or studio to another, from film to live programming, or from network to local programming.
- Meet with directors and senior members of camera crews to discuss assignments and determine filming sequences, camera movements, and picture composition.

Construct and position properties, sets, lighting equipment, and other equipment.

More Tasks for Audio and Video Equipment Technicians
Top Skills used in this Job

Operation Monitoring - Watching gauges, dials, or other indicators to make sure a machine is working properly.
Monitoring - Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
Reading Comprehension - Understanding written sentences and paragraphs in work related documents.
Critical Thinking - Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
Writing - Communicating effectively in writing as appropriate for the needs of the audience.
Active Listening - Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
Speaking - Talking to others to convey information effectively.

Complex Problem Solving - Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions. **Coordination** - Adjusting actions in relation to others` actions.
Judgment and Decision Making - Considering the relative costs and benefits of potential actions to choose the most appropriate one.

More Abilities for Audio and Video Equipment Technicians

Top Work Values (Aspects of this job that create satisfaction.)
Relationships - Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. **Support** - Occupations that satisfy this work value offer supportive management that stands behind employees.

More Work Values for Audio and Video Equipment Technicians

Top Interests (The types of activities someone in this job would like.)
Realistic - Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside.
Investigative - Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

Attachment C: Advisory Committee Minutes 2008-2012

Recording Technology Advisory Board
March 20, 2012

Topic	Discussion
Attendees	Robert Slack – Dean, Fine and Performing Arts Stephen O'Hara – Faculty, Recording Technology Tim Jaquette – Citrus Recording Supervisor Al Schmitt – Freelance Engineer Doc Goldstein – VP Post Production Universal Studios Fred Vogler – Owner - Vogler Audio Media Jeremy Olson – Post-Production Editor Justin Gay – Graduate - Freelance Location Mixer Lawrence Reyes – Graduate – Post-Production Editor Steve Burdick – Owner - Westlake Studios
Introductions	Robert Slack moderated, introductions made
Should our students be encouraged to become 'freelance[1] engineers or look for 'studio' employment?	• Students interested in working in the entertainment industry should be prepared for freelance employment. Very few studio opportunities exist. It's likely to form relationships with a few clients and to frequently work at those studios, but employment will likely be freelance. • Both and more. Students must be encouraged to look at any and all audio or video related jobs, including but not limited to. Mixing the news for radio or television, mixing for on-air radio, working with game companies for game audio, sound editing for feature films or television. Do NOT just think recording studio and creating music, that is limiting their opportunities. • I think studio employment, unless they have clients ready to record with them. Like young bands that have some funds. Remember if they have a home studio the cost of gear. Best to start at the bottom in a studio environment.
What are three primary skills necessary for entering the audio industry?	• Three primary skills are a good attitude, complete reliability/ dependability, comprehensive knowledge of industry tools. • Flexibility/Adaptability in a fast paced/changing environment; People skills - you are dealing with a lot of ego; Troubleshooting. • Audio Engineering Education, with a 3.0 or higher if you expect to get into Westlake; Own and be very skilled at ProTools; Good people skills. • Communication, organization, and listening to both clients and critically to your work • Trained hearing and listening, technical expertise, people skills/ability to work under great pressure. • Protools skills, being able to read music, and a basic knowledge of

	recording equipment .
What level of understanding is expected from new engineers. In your opinion, what skill sets are lacking?	• Skill sets that are often lacking are being able to critically listen to music and sound, and a command of microphone placement. Signal routing. We like a 4 year school that teaches sight reading etc.. ; Customer service skills are lacking. • The biggest lacked skill I've seen is the inability to change the rules, flexibility. • Workflow, attention to detail, file naming, track layout, and team communication. • New engineers MUST be fluent in Pro Tools, but AVID picture editing systems would also be a plus. Engineers must also be able to work with older systems because not all employers will spend money on the latest technology. • I find mostly they are not aware of the real functions of an assistant engineer. Lacking music skills(reading music, being able to understand basic music terms).
Which software platforms are most in use today? What do you or your clients use most?	• ProTools, Abelton Live, Nuendo, Pyramix and Waves are the software platforms I use the most and have the most requests for. • ADRStudio (Post-Audio) • AVID Pro Tools and ICON control surfaces, but also standard mixing consoles. • They should know Protools which is used in most studios today; also they should learn how to thread a tape machine and how to use it.
Has the mixing paradigm shifted to "in-the-box" instead of the console?	• The mixing paradigm is not all "in the box." I use outboard eq, reverb, limiting, and mic pres all of the time. • 50/50 depending on the engineer and producer • Both "in the box" and "out of the box" must be mastered. • Mixing is mostly done in the box, but a lot of the top mixers still mix on analog consoles and mix to tape.
What focus should Citrus[1] Program have for the next few years?	• Students need extensive signal flow training, technology familiarity and trends, and session and live sound etiquette. • More Location Sound emphasis. • Audio for video-games/interactive media. Video games now are like a Hollywood movie production they employ full orchestra to score the music. They hire Voice-Over artists and real Actors to voice the characters. And sound design to build the surrounding environment. Focus on the customer service skills, and have your students be proficient in Logic and ProTools. • Integrating into the curriculum a ton more of actual hands-on, start-to-finish projects, solo or group, and all types of projects. • Continue AVID Pro Tools training as well as microphone technique, consoles, and all the current technology, BUT • There should also be an emphasis on people skills and the psychology of clients under stress.
Are there emerging technologies that should be a part of the curriculum?	• Support for "live" performance is always growing. This includes understand gain before feedback and speaker placement, as well as computer sequencing programs. • Mobile devices and Web - Important to know how audio translates and is prepared for mobile devices.

	• Video games. It's a huge market and still growing, and it works totally differently than any other part of the industry, driven by software audio engines. • Online communication and delivery. Email, ftp, Dropbox, etc. • Backup software like Retrospect and Chronosync, and now cloud backup solutions as well. •Virtual systems such as cloud based technology and the use of various methods of long distance connectivity.
What changes in film/video audio post have you seen in the past year?	• I don't participate in a lot of film/video audio post. I know multi-channel mixing is continuously developing, but the quality is not necessary improving. Higher sampling and bit rates are becoming more popular, especially with new high res download options. • Nothing strikingly new except that some individuals (production mixers and sound designers in particular) are finding more and more iPhone apps to do things like take readings, record sounds, convert measurements, etc. Other than that, the continuation of trends like the slow disappearance of assistants and music editors, and the increasing use of online delivery systems • Clients want the work to come to them and do not want to drive or travel to a studio. Hence the mention of virtual and cloud based connectivity.

Recording Technology Advisory Board
March 19, 2010, 6pm
Update – April 4, 2011, 6pm
Recording Arts Conference Room

Topic	Discussion
Attendees	Robert Slack – Dean, Fine and Performing Arts Tim Jaquette – Citrus Recording Supervisor Mike Caudle – Recording Specialist Jim Lindsay – Jim Lindsay Productions Don Cambou - Producer Tom Sorce – Production Resource Group Andy Waterman – Producer/Engineer John Boylan – Music Producer
Introductions	Introductions made by Bob Slack
What updates should be made/recommended at this time in regard to updating curriculum - Is our instruction current?	Jim Lindsay – As we have all been recently, we've been witnessing a complete reorientation of the industry. Production communities who used to hire dozens of single disciplined professionals such as audio editors, camera operators, video editors and sound designers, are more focused on hiring production folks who are comfortable in both video and audio. I therefore recommend that, as the budget climate changes, we re-vamp our instruction to reflect these needs in the workplace. This is no doubt a longer term projection. Tom Sorce – In live production, everything is integrated. You have to understand the technology that you specifically work on, but you also have to understand the basics of what everybody else is doing. To the extent possible this needs to be reflected in the course outlines. Andy Waterman – The new trend is post-production houses sending projects out to facilities that have the specific abilities necessary for that project, not just picking a post house and having the work done there. It means that everyone has to know all sides of production - both audio and video - to be competent. John Boylan – The industry has always been about staying current and moving forward. That means technology, software, curriculum all have to keep progressing.
Where should our program go next in regards to updating curriculum?	Jim Lindsay – Jim Lindsey – From what I've heard I think you're on the right track. Programs like Pro-tools, Final –Cut Pro, Avid and even new Photoshop apps. All are increasingly cross platforming their respective workflows. Don Cambou – In many ways I think the challenge is to keep it all-straight and not lose sight of the creative process. Tom Sorce – The Music Industry used to make its money from

	touring, then it went to album sales, now it's back to touring. Live sound with a recording background is perfect because everything gets recorded now and lots get released. Andy Waterman – You need to head towards teaching the audio and video so that the students can get a job in any studio. It's all about bringing the work into the studio.
What do you see as a necessity for new employees?	--Tom Sorce – Cross-training is mandatory. The more skills you have in audio, video, lighting, etc…, the more valuable you are. --Jim Lindsay – As I said, you used to have multiple employees to do a given task, now you have a single employee with multiple skills. This new breed people need to not only understand the technology but also, and more importantly, use it to drive the creativity of the project. --Andy Waterman – As I said before, the post-production process has become all encompassing; you have to know all aspects of the industry.
Which software platforms are most been used today, and what do you use most?	Pro-Tools – major platform everywhere Nuendo – growing platform in post production Logic – especially with composers Digital Performer – for film composers Reason – composition, rap, hip-hop Apple Final Cut Studio – video editing Avid Media Composer – video editing
What overall focus should the recording technology program have over the next few years?	--Jim Lindsay – I told you this program is one in a million; the real trick will always be the need to balance the latest and greatest piece of hardware and software with creativity. So far it seems like you're on track. --Tom Sorce – Staying current with everything, and focusing on the final product being the best it can be. --John Boylan – To keep up with current production trends in music, you have to stay current on everything. And for students to get their feet in the door, we should have ProTools certification to show they've reached a certain level in the industry.
What changes for the film/ video/audio post part of the industry have you seen in the past year?	--Jim Lindsay – The biggest thing is fewer people doing more jobs. The camera guy is now doing location audio and lighting. The video editor is now playing music editor. Multiple skills are merging down and students need to understand one skill isn't enough. --Andy Waterman – As a music producer/engineer, I used to focus on just audio but now, to keep business coming through the door, I have to know the video side and even need to have a green screen to get some projects to come to my facility. Bob Slack thanked everyone for their time and vested interest in our program.

Recording Technology Advisory Board
March 19, 2010, 6pm
Recording Arts Conference Room

Topic	Discussion
Attendees	Robert Slack – Dean, Fine and Performing Arts Tim Jaquette – Citrus Recording Supervisor Jim Lindsay – Jim Lindsay Productions Don Cambou – Producer Tom Sorce – Production Resource Group
Introductions	Robert Slack moderated, introductions made
What's the next step in particular as it applies to merging technologies.	--Jim Lindsey – We've been witnessing a complete reorientation of the industry, production communities who used to hire dozens of single disciplined professionals such as audio editors, camera operators, video editors and sound designers, are now more than ever looking to hire production folks who are comfortable in both video and audio. --Tom Sorce – In live production, everything is integrated. You have to understand the technology that you specifically work on, but you also have to understand the basics of what everybody else is doing.
Where should our program go next in regards to updating curriculum?	--Jim Lindsey – From what I've heard I think you're on the right track. Programs like Pro-tools, Final –Cut Pro, Avid and even new Photoshop apps. All are increasingly cross platforming their respective workflows. --Don Cambou – In many ways I think the challenge is to keep it all-straight and not lose sight of the creative process. --Tom Sorce – The Music Industry used to make its money from touring, then it went to album sales, now it's back to touring. Live sound with a recording background is perfect because everything gets recorded now and lots get released.
What do you see as a necessity for new employees?	--Tom Sorce – Cross-training is mandatory. The more skills you have in audio, video, lighting, etc…, the more valuable you are. --Jim Lindsey – As I said, you used to have multiple employees to do a given task; now you have a single employee with multiple skills. --Don Cambou – I know the last hires I was involved in were far more diversified than in the past. --Jim Lindsey– This new breed people need to not only understand the technology but also, and more importantly, use it to drive the creativity of the project.
Which software platforms are most been used today, and what do you use most?	• Pro-Tools – major platform everywhere • Nuendo – growing platform in post production • Logic – especially with composers • Digital Performer – for film composers • Reason – composition, rap, hip-hop • Apple Final Cut Studio – post-production work

What overall focus should the recording technology program have over the next few years?	--Jim Lindsey – I told you this program is one in a million, the real trick will always be the need to balance the latest and greatest piece of hardware and software with creativity. So far it seems like you're on track. --Tom Sorce – Staying current with everything and focusing on the final product being the best it can be.
What changes for the film/ video/audio post part of the industry have you seen in the past year?	Jim Lindsey – The biggest thing is fewer people doing more jobs. The camera guy is now doing location audio and lighting. The video editor is now playing music editor. Multiple skills are merging down and students need to understand one skill isn't enough.

Citrus Recording Technology Advisory Council

Meeting Minutes: September – November, 2009

Professional	**Faculty/Staff**	**Student**	**Community**
Al Schmitt	Stephen O'Hara	Jon McCarns-Yoland	Sonia Hernandez
Steve Genewick	Tim Jaquette		Dan kimpel
Candace Stewart	Joe Barrera		
Steve Burdick	Mike Caudle		
'Doc' Goldstein			
Ray Lignowski			

The following are the collected minutes of the Recording Technology Program Advisory Council member meetings held between September 17, 2009 and November 20, 2009. Due to travel and production obligations, members of the council were not available to participate in a collective meeting. An open question was put to all members of the council: *Considering the current state of the Entertainment Industry, what educational focus should the Citrus Recording Technology program have?*

- Sonia Hernandez: *September 17, 2009 at Citrus College*. A Community member of the council, Sonia is a graduate of the Citrus Recording Technology program, working as a Cinema Scan and MTI operator at *E-Film*, a digital intermediate film post-production house in Burbank. Sonia stressed the importance of film-related audio studies; "Students should be exposed to as many career options as possible. Sound-for-picture studies open the door to work in the film and video industries." Sonia also stressed industry savvy and an understanding of how the music and film businesses work; "Kids need to know how to deal with pressure and deadlines. And what to do when a producer or director 'goes-off' on them. There are a lot of personalities to deal with in the industry, and not all of them are reasonable or kind!" Sonia emphasized the importance of digital technology and training to industry standards on the most popular applications, such as Pro Tools, Logic Pro and Reason.

- 'Doc' Goldstein: *October 9, 2009, at Universal Studios, Studio City*. Mr. Goldstein is Director of the Academy Award winning Sound Department at Universal Studios. His first response was, "You have to be a Pro Tools expert to compete in the motion picture sound field. Don't just 'know' Pro Tools, but be a real wizard." And not just any Pro Tools; "We are always moving to up-date our applications. As soon as our clientele has adapted to Pro Tools 8 (the latest version of the software), our guys need to be completely up to speed. We have to accommodate whatever current technology needs our clients have." He continued, "The film side of the industry has gone completely over to digital. It's really important that a program like yours offers training on all the platforms. I'm also seeing more applicants with degrees in the field, which is a good thing!"

  Mr. Goldstein went on to stress the importance of a music background; "I started out working in the music rooms and spent several years engineering and producing music projects. That background made my transition to motion pictures much easier. Mixing for picture and mixing for music are very similar and the skills cross-over extremely well. Emphasis on music recording and mixing skills is really important." Doc also mentions the critical nature of industry 'savvy' and understanding how the work gets done; "I have

to have guys who are schooled in how to deal with people. The most important thing here is fitting in with the clientele and the staff, and understanding what they need."

- Candace Stewart: *October 23, 2009, at Firehouse Studios, Pasadena*. Formerly manager of Firehouse, Candace is now Studio Manager at East West Studios in Hollywood. Candace begins with this recommendation. "Besides knowing the technology, audio people need to understand acoustics. To get a sound in a room, you need to know how the room works." She adds, "Knowing which mic to use is important, but knowing where to put the mic and the artist in the room has just as much influence over the final sound of the performance. An engineer needs to know how sound behaves." Candace also stressed the need for thorough training on current digital hardware. "Our people need to know Pro Tools and Logic Pro, and we run on the Icon and D-Controls (digital console/interface models for Pro Tools software) in our rooms. They have to be on top of these applications. Our clients expect our engineers to handle anything they bring in the door." Ms. Stewart went on to compliment Citrus for the high caliber of students who have come from the program. "I've had several Citrus students here over the years, and they've really known their stuff. It's great to see them move on to become successful professionals."

- Dan Kimpel: *October 29, 2009, at Citrus College.* Music journalist and foremost authority on popular music songwriters, Dan is also an independent producer and an expert on career planning and networking. "The industry is really changing, especially since the internet has become such a factor in the way we create and share entertainment. I think a program like yours has to address that side of the technology too. There's such an emphasis on the audio technology, and these kids are already internet savvy. They need to be shown how to link the two together. I now do complete projects entirely across the web and only occasionally set foot in a recording studio." Drawing from his highly successful networking seminars, Dan had these comments: "I think relationships are even more important in our industry than in the past. And I know it's not easy to teach kids how to interact with people, but your faculty are all working professionals, so you know what I'm talking about. Your students need to take every opportunity they can to meet professionals in the industry. I know you have a great relationship with the Recording Academy and the AES (Audio Engineering Society), and that's a great way to get started. Volunteering at events and going to the seminars and conventions really helps them to get to know these people."
  Dan also had these words to live by; "My motto has always been, 'never say no!'. Don't lose an opportunity to network or advance your career. Whenever anyone has come to me with a project, I always say yes first, and then find out what I have to do to make it happen! It's sometimes results in a hair-raising moment or two, but being resourceful and creative is what it's all about. The more you can teach your students about every area of the industry, the better off they're going to be."

- Al Schmitt & Steve Genewick: *November 5, 2009, at Citrus College.* Al Schmitt is a fifteen-time Grammy® Award winning producer and engineer. Steve Genewick is staff engineer at Capitol Records Studios in Hollywood. Mr. Schmitt begins; "I'm really glad to hear you're planning to offer a degree. We didn't have any programs like yours when I was coming up in the field, and sure wish we had! It's a great advantage to these kids to have this kind of training." Steve Genewick continues; "I'm from a slightly younger generation (laughter) and was able to prepare myself to enter the field. It's invaluable to get you in the door and as a confidence builder." Al put in a word for the older technology. "I know everything has gone over to digital, and I do most of my work in Pro

Tools too, but I still look for guys who know the analog (pre-digital, tape-based recording) techniques. I still use it and so do a bunch of us. It's getting harder to find kids coming out of these programs who can do analog." Steve Genewick; "I think the same can be said for the analog consoles. Most of the major studios still have the SSL's and Neves and API's in their big rooms, right alongside the Icon's and Sony Oxfords and DMX's. It's really important to know both. It's great you guys have the Duality (Solid State Logic's newest 'digi-log' console) in studio 'A', 'cause it's the best of both worlds. Then the C-200 gives them a fully digital console to work on."

Session documentation came up next; Al "My biggest pet-peeve is poor documentation on a session. A lot of kids think, 'Now that we have Pro Tools, I don't have to keep track of all that stuff.' But it's just the opposite. There is nothing as frustrating and time consuming as having to go back and re-construct a session where all the tracking and mic'ing information is not there." Steve ads; "There is space on every track in Pro Tools to make notes about that track. These kids need to learn to use it! I still take notes on paper about the set-up and the microphones and positioning and all that. It's especially important now, since we have the ability of recording almost unlimited numbers of tracks in a session."

The discussion then turned to managing the recording session; Al Schmitt: "I think it's important to be always one step ahead of the client. I'm always thinking about what's coming next, and what I'm going to need for it. Kids need to learn to appreciate what the artist is going through, and to always try to anticipate what they're going to need. That's why having a music or performing background is so important; you've been there and you have a feeling for what's going on." Steve Genewick; "Reading music is a key skill. I never thought it was a big deal, but when the producer walks in and hands me the score, they expect me to be able to read it," Al: "Yeah! And playing an instrument too. I was a trumpet player before I got involved in producing and engineering. You don't really understand what musicians are saying or how they work until you are one yourself." Steve: "I think more and more that recording engineers need to know about every area of the industry. I can be doing a music session with Al and someone like Diana Krall in the evening, and then get up in the morning and go to a TV commercial date. People don't just do one thing anymore." Al: "It's true! I still mostly do music dates, but it could just as easily be a scoring session for a movie; and the video game thing is huge!" The conversation concluded with a note about being independent: Steve; "Everyone is an independent contractor now. I work at Capitol, but I hustle the clients myself." Al; "The business of music is really important. The young guys I see who know how to get out there and sell themselves are doing really well. It's not like it used to be, with the big budgets from the labels and the 'staff' producers and what not. You have to learn the business side too."

- Steve Burdick: *November 9, 2009, at Westlake Studios, Hollywood*. Mr. Burdick is co-owner and Manager of Westlake Studios, a premier, multi-facility recording studio complex. "It's all about diversity! The industry has changed so much, and a facility like ours is successful because we count on more than just music recording to generate our revenue. Our big rooms still do a lot of music – especially the hip-hop and dance crowd, but I built small production rooms at both facilities that are full all the time. Major artists book them to write and demo tunes, and the ad and gaming people use them to create their product. We do scoring dates now. If I had more space, I'd add even more rooms!" This has changed the requirements of the job also; "My interns must know Pro Tools!

But everyone here at Westlake has to know audio for film and television too. Logic. Digital Performer, Reason, all these applications are in use here every day."

Talk turned to hiring; "I don't hire people who aren't trained; I don't have to! There are good audio programs like yours and these kids take advantage of them. It saves me time and money bringing in someone with that education; especially with a degree. That tells me they have the dedication and follow through to invest in their career. I don't have to train them from the ground up because they already know the fundamentals. As you know, I hire Citrus people all the time, and they're great." Steve concluded with this thought; "I spend an hour interviewing every prospective employee, from intern to engineer, and it isn't just the technical chops I'm looking for. It's the attitude! My biggest concern is always with my clients, and we attract some very high-powered and demanding industry figures at Westlake. My people have to think on their feet and be responsive, and do it with a smile and a can-do attitude. It's fantastic when they've learned about this before they get here!"

- Ray Lignowski: *November 20, 2009, at CBS Television City, Los Angeles.* Mr. Lignowski is the Audio Supervisor at CBS Television. "Television audio has changed a lot since the days before digital, and we're using a lot of the same technology that you see in the recording studios. Of course, TV has many forms of production, and the requirements for episodic TV shows are quite different than for a game show or talk show. The neat thing is that the same recording fundamentals that you address in your program have a practical application in all production, across the board." Ray went on to focus on the TV studio; "We have multiple studios here at Television City, and produce several shows, from "The Price is Right" to "Dancing with the Stars". I know that many of our people come out of broadcast programs, since they're focused on the studio production environment and techniques. The basic skills are the same, however; a student who has had training in audio recording and live sound reinforcement can quickly be trained to do studio work. There are two kinds of audio mixing going on, one for the audience, which is like a 'live' show, and the other for the taped program, which is more like the recording studio."

  Ray went on to contrast the TV studio with series production. "The episode series are really short movies, so the sound production is very similar to motion pictures. This is where training in dialogue recording and editing, sound effects and Foley (specialized sound effects synced to the picture) is really important. If you add a film or video degree to your program out a Citrus, it would be the perfect combination to prepare your students for a television career too."

- A collective meeting of the Recording Technology Advisory Council is being planned for summer, 2010 at Capitol Records Studios.

Citrus Recording Technology Advisory Committee

Meeting Minutes: December 19, 2008

Professional	Faculty/Staff	Student	Community
Al Schmitt	Stephen O'Hara	Jason Vandergrift	Lucy Estrada
John Avila	Tim Jaquette		
Steve Burdick	Joe Barrera		
	Mike Caudle		

The following are the minutes of the Recording Technology Program Advisory Committee meeting held December 19, 2008. Al Schmitt joined the meeting at 10:35am by telephone conference call from Capitol Studios.

- Introductions were made and the meeting was called to order at 10:30am; the conference call to Al Schmitt was made. Ten questions regarding the state of the audio recording industry, technological developments in the field and program focus were previewed for the panel, and the discussion commenced.

- The first question asked that the participants to *update the committee on three significant skills necessary for entry into today's audio recording industry*. Al Schmitt responded first by stressing the importance of musical knowledge and the ability to follow a written score in the studio. On-time performance in the job and Pro Tools operating skills were next on his list. Steve Burdick stressed interpersonal communication skills as vital; all agreed. Schmitt added practical skills in working with analog tape technology and vinyl (album) mastering as important, since many audio professionals (including him) continue to favor these techniques.

- The next question asked participants to *evaluate the level of ability among current new-hires and identify what needs improvement*. Lucy Estrada noted that applicants who had been certificated or earned a degree in a program such as those offered by Citrus, Full Sail or Berklee had a higher skill level than those who had not. John Avila suggested improvement was needed in overall industry savvy and work habits. Schmitt stressed that musical knowledge needs to be improved. All agreed that their preference is to hire schooled candidates when possible.

- A discussion followed regarding *what industry savvy is required to begin a career in audio today*. Knowledge of studio operations, record labels and independent/freelance business was at the top of everyone's list, particularly since so many of today's professionals work as outside contractors and operate their own production and service businesses.

- The meeting ended with a pledge to share information and ideas throughout the coming year. All of the professional members expressed a keen interest when asked by Stephen O'Hara about devoting time to teaching recording master classes and advanced studies courses at Citrus.