



Tech-Prep to Programs of Study:

Perkins V Accountability and
the Focus on Improvement across Segments

through

(Rigorous) Programs of Study

Panel Presentation

CCCAOE Fall 2011



Your Panel

- Natalie Ray,
 - Program Director (HASPI), Grossmont-Cuyamaca CCD
- Ron Selge,
 - Dean, Career Technical Education, Chancellor's Office
- Maureen White, EdD.,
 - Career Technical Education, Chancellor's Office
- W. Charles Wiseley, EdD.,
 - Career Technical Education, Chancellor's Office



Who is in the room?

- Faculty – CTE, NonCTE, Basic Skills
- Deans/Admin/Econ Dev Directors
- CYE Transition (TechPrep) Coordinators
- Counselors
- Researchers
- Affiliates
- Others



Topics to Consider

- Things we are watching (i.e., only funding POS, accountability, etc.)
- What can we count (NSWG)
- Linking industry, Econ Dev, CTE, & Perkins in statewide initiatives & as a measure
- USDE Self-assessment instrument with a rubric
- POS strengthen curriculum for all students

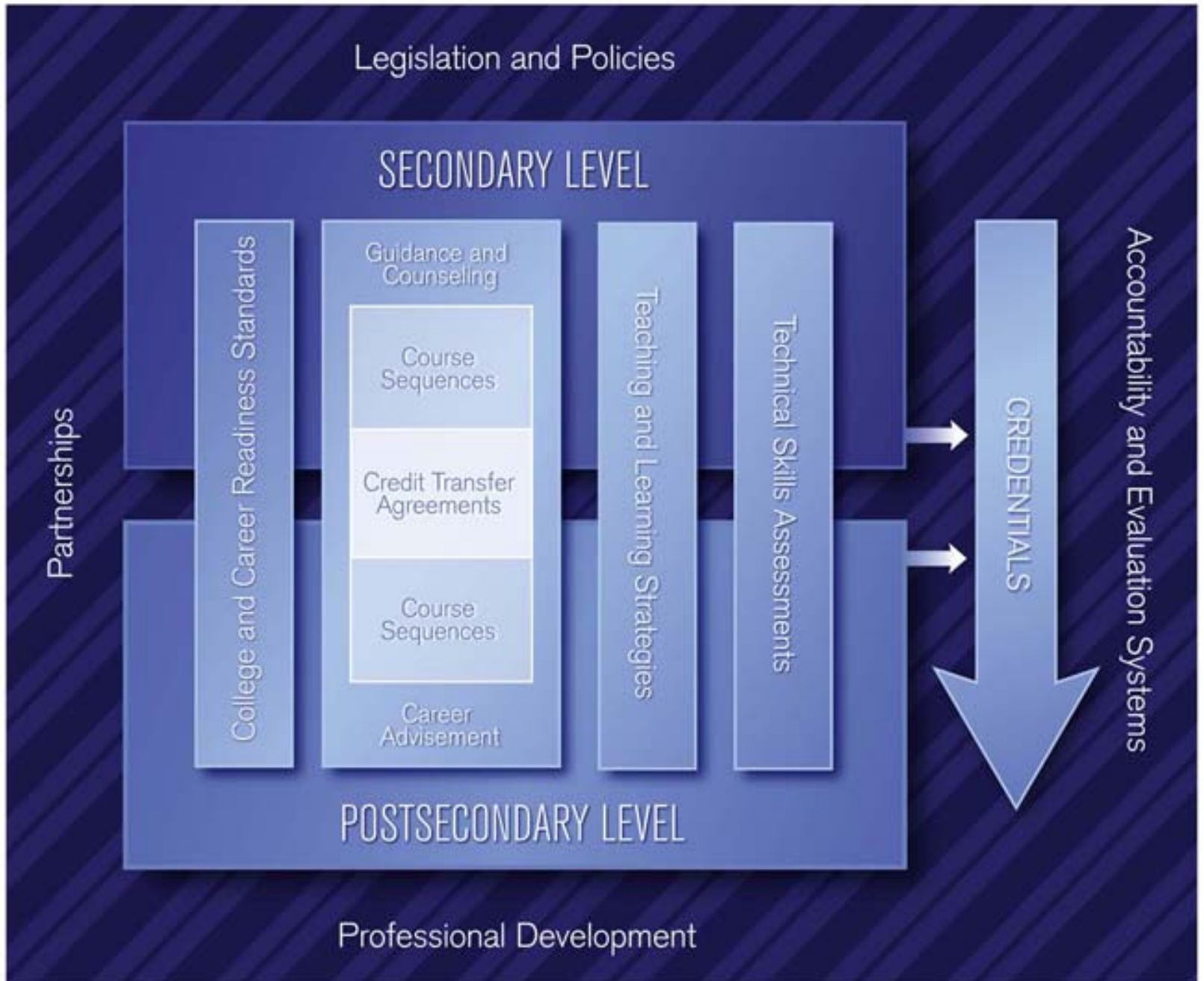


Programs of Study (POS)

- Perkins IV (2006)
- Required Elements:
 - Incorporate & align secondary and postsecondary elements,
 - Include academic & CTE content in a coordinated, ***non-duplicative*** progression of courses,
 - Offer the opportunity, where appropriate, for secondary students to acquire postsecondary credits, and
 - Lead to an industry-recognized credential or postsecondary certificate, or an associate or baccalaureate degree.
- **OVAE - USDE**
 - **Career and Technical Programs of Study: A Design Framework**

USDE

PROGRAM OF STUDY DESIGN FRAMEWORK





Program of Study Components:

- 1. Legislation and Policies**
- 2. Partnerships among Education, Business, and Other Community Stakeholders**
- 3. Sustainable Leadership and Shared Planning**
- 4. Rigorous Academic and Technical Standards Aligned with Curriculum and Assessments**
- 5. Aligned Secondary and Postsecondary Education Elements**
- 6. Credit Transfer Agreements**
- 7. Accountability and Evaluation Criteria**
- 8. Guidance, Counseling and Advisement**
- 9. Professional development**
- 10. Innovative Teaching and Learning Strategies**

Source: OVAE, Career and Technical Programs of Study: A Design Framework
http://cte.ed.gov/file/POS_Framework_Unpacking_1-20-10.pdf



National Research Center for Career Technical Education

- Funded by the U.S.D.E.
through the Perkins Act.
- Research on topics:
 - of interest to the department,
 - prepare for reauthorization, and
 - evaluate current efforts of implementation.



NRCCTE Studies

- National Research Center for CTE
- 3 year study for re-authorization of Perkins (2006)
 - 4 POS Projects - \$4,500,000 OVAE grant
 - different perspectives & methodologies
 - 3 POS longitudinal studies
 - common data collection methods
 - 1 case study of six states implementation
 - Perkins IV mandated components
 - presents findings related to 10 components of OVAE Design Framework



NRCCTE Research Snapshot

Study #1:

- Mature Programs of Study: A Postsecondary Perspective

- Conducted with national Institute for Work and Learning
- 3 community colleges
- documented success of assisting high school CTE students to transition to college; strong articulation
- Methodology: surveys, transcript analysis, case studies



NRCCTE Research Snapshot

Study #2:

- POS as State Policy Mandate:

- A Longitudinal Study of the South Carolina Personal Pathways to Success Initiative – current study
- Conducted by the National Dropout Prevention Center at Clemson Univ

- Examining SC's Education & Economic Development Act (EEDA 2005).

- EEDA = Career focused school reform model

- to improve student achievement & preparedness for
 - postsecondary education &
 - high skill, high wage jobs
 - with focus on career awareness, exploration
- through creation of local career pathways and POS

- EEDA preceded and influenced Perkins IV; mandated reforms incorporate basic and supporting components of POS



NRCCTE Research Snapshot

Study #3:

- Rigorous Tests of Student Outcomes in CTE Programs of Study
 - University of Louisville in 4 urban high schools
 - Lottery used in 3 schools when students applying to POS exceeded programs
 - Compared with no lottery in one school
- Measuring outcomes with control vs. no lottery
 - areas of academic achievement,
 - technical skills achievement,
 - high school completion, and
 - employability



NRCCTE Research Snapshot

Study #4:

- Six Stories in Six States: Programs of Study

- University of Minnesota researchers

- Case study of POS implementation

- how technical assistance systems evolved, with successes & challenges for states with POS
- Sample of states based on geographic and administrative heterogeneity
- All states had excellent examples of good collaborations, alignment, inter-institutional articulation & matriculation between secondary & postsecondary, integration of academics with CTE courses, long-term plans for achieving Perkins IV goals for 2013



NRCCTE Early Findings

- End of July 2010 from 4 projects
 - indicate
 - all study sites are implementing POS
 - gaps between Perkins IV expectations and actual POS at state, district or school levels
- Major gap is
 - alignment between HS and college instruction and
 - integration of academic & technical content.



NRCCTE Cross-study Findings

Related to 4 studies (POS required elements):

1. Incorporate and align secondary & postsecondary (POS) educational elements
2. Include coherent, rigorous academic & relevant career and technical (CTE) content in a coordinated, non-duplicative progression of courses
3. May include the opportunity for secondary students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits
4. Lead to an industry-recognized credential of certificate at the postsecondary level, or an associate or BA/BS



NRCCTE Summary

- Some POS mandated components in place or in process
 - too early to determine if components will produce students likely to graduate high school, be prepared to continue education or earn industry-recognized credentials
- Clear career focus (POS) increases engagement & improves academic performance
 - students have smoother transition from education to employment
- Even well-established sites only small % of graduates enroll in same POS at postsecondary level
- Additional coding and analysis will enable researchers to determine whether students stayed in same career or industry cluster



NRCCTE Summary

- Career development theory:
 - low rate of continuation is not surprising
 - when high school students study in a POS, they are exploring careers, and can change plans as other interests crystalize.
- **This is not failure of programs or students**
- Participating in POS [theoretically] increases students' understanding of occupations and how their interests and skills align.
- Change in direction is expected at secondary level



NRCCTE References

- <http://nrccte.org>
- <http://cte.ed.gov/nationalinitiatives/rposdesignframework.cfm>



Recent Research on Getting In...

- Getting into a Program
 - Davis Jenkins, April 2011
 - *Get with the Program: Accelerating CC Students' Entry into and Completion of Programs of Study*
 - Moore & Schulock, August 2011
 - *Sense of Direction: the Importance of Helping CC Students Select and Enter a Program of Study*
 - Local college studies - similar results
 - more units : more likely to complete
 - Jenkins & Weiss, Sept 2011
 - *Charting Pathways to Completion for Low-Income CC Students*



Next Steps Working Group & G-9

- POS for Perkins V
 - Clear focus on programs of study
 - Core indicators - Indicators of performance of POS
 - Questions about funding only programs of study?
 - Hints of proposing measures such as those defined for Tech Prep.
 - Consortia required



Tech Prep Indicators

- Secondary Tech Prep Graduates
 - enrolled in college.
 - enrolled in college in the pathway field.
- Secondary Tech Prep Participants
 - receive an Industry-Recognized Credential
 - earn college credit in High School
 - graduate HS and enroll in college Remedial Courses.



Tech Prep Indicators

- Postsecondary Tech Prep Participants who
 - completed a CTE Program and
 - were employed within 12 months after completion,
 - received an industry-recognized credential/certificate,
 - received an AA/AS Degree or 2-Year Certificate within the normal time for completion.
 - received a Bachelor's Degree within six years of community college first enrollment.



A Little Background

- The California Community Colleges (CCC)
 - Serves over 2.7 million students annually.
 - The largest system of higher education in the nation.
 - Has 112 colleges organized into 72 districts.
 - Provides workforce training, retraining, and skill upgrades; offers liberal arts instruction including developmental education and ESL; and prepares students for transfer to four-year universities.
- Similarly, the California Department of Education (CDE)
 - Serves over 6.2 million students annually.
 - Includes over 1,040 school districts.
 - Comprises the nation's largest K-12 education system.
 - Explicit CDE priority is to increase the number of HS graduates ready for college and career.
- CCC Chancellor's Office and CDE together developed pathways that provide continuity for CTE
 - from the middle grades through community college and beyond.

Equip students “with the knowledge and capabilities they need for careers in the changing California workforce, careers that require high-level skills and pay high wages.”



2010-11 Programs of Study

Tech Prep Application Statewide Stats

- 4,048 College – High Schools / ROP Agreements
- 2,645 (65%) – Result in College Credits in HS
 - Transcribed
- 2,262 - Credit by Exam
 - 851 Dual Credit
- 383 – Dual Enrollment only



Sectors by POS Counts

15 California Sectors	HS-College POS
08. Finance and Business	634
02. Arts, Media and Entertainment	564
09. Health Science and Medical Technology	381
11. Information Technology	364
04. Education, Child Development, and Family Services	340
01. Agriculture and Natural Resources	301
15. Transportation	296
06. Engineering and Design	272
14. Public Services	234
10. Hospitality, Tourism and Recreation	193
12. Manufacturing and Product Development	169
03. Building Trades and Construction	138
07. Fashion and Interiors	83
05. Energy and Utilities	56
13. Marketing; Sales and Service	23



Top Pathways by POS Counts

Pathway	POS
AUTOMOTIVE TECHNOLOGY	255
CHILD DEVELOPMENT/EARLY CARE AND EDUCATION	253
OFFICE TECHNOLOGY/OFFICE COMPUTER APPLICATIONS	225
DIGITAL MEDIA	192
NUTRITION, FOODS, AND CULINARY ARTS	143
COMPUTER INFORMATION SYSTEMS	137
MANUFACTURING AND INDUSTRIAL TECHNOLOGY	136
BUSINESS AND MANAGEMENT	131
ADMINISTRATION OF JUSTICE	124
DRAFTING TECHNOLOGY	115
ACCOUNTING	113
HEALTH OCCUPATIONS, GENERAL	97



Mira Costa College

Sector	TOP Code	Pathways Type	Schools	Credit By Exam.	Concurrent Enroll
02	0605-Audio/Visual Technician	Title I-C POS	1		
02	0614-DIGITAL MEDIA	Title I-C POS	1		
05	0935-ELECTRO-MECHANICAL TECHNOLOGY	Course Seq	1		
06	0924-ENGINEERING TECHNOLOGY, GENERAL	TP 2+2 POS	6	Y	N
08	0500-Business and Management	TP 2+2 POS	5	Y	N
09	0430-Biotechnology and Biomedical Technology	TP 2+2 POS	1	Y	N
09	1217-SURGICAL TECHNICIAN	TP 2+2 POS	1	Y	N
09	1223-HEALTH INFORMATION TECHNOLOGY	TP 2+2 POS	2	Y	N
13	3000-Commercial Services	TP 2+2 POS	2	Y	N
13	3099-OTHER COMMERCIAL SERVICES	TP 2+2 POS	5	Y	N
15	0948-AUTOMOTIVE TECHNOLOGY	TP 2+2 POS	2	Y	N
			27		



HIGH SCHOOL DISTRICT: **SAN DIEGUITO UNION HS DISTRICT**

COLLEGE: **MiraCosta College**

INDUSTRY: **Health Science & Medical Technology**

PATHWAY: **Biotechnology Research & Development**

PROGRAM: **Biotech Lab Technicians & Professionals**

Signature of Secondary Administrator: 	Date: 10/11/10
Signature of Postsecondary Administrator: 	Date: 10/21/10

ADULT LEARNER ENTRY POINTS	GRADE	ENGLISH	MATH	SCIENCE	SOCIAL STUDIES	Required - Recommended Elective - Other Elective and Career & Technical Education Courses	
SECONDA RY	9	English 9	Geometry	Biology		Introduction to Biotechnology	P.E./Health
	10	English 10	Algebra II	Chemistry for Biotechnology	World History	Health Care Essentials	
	11	English 11	Pre-Calculus	Physics	U.S. History	Biotechnology I	World Languages
	12	English 12	Calculus	Other Science	American Government Economics	Biotechnology Applications - Articulated w/BTEC 110	Internship and Research Design
Successful Completion of MiraCosta College Math and English Competency Exams							

ADULT LEARNER ENTRY POINTS		Laboratory Skills Certificate of Proficiency total 11-12.5 units required 4 units earned in HS	Bioprocess Technology Certificate of Achievement total 12-12.5 units required 4 units earned in HS	Research & Development Certificate of Achievement total 40-43.5 units required 4 units earned in HS
		POSTSECONDA RY	1st Semester	BTEC 120 (3)
	2nd Semester	Select at least 4 courses from the following: BTEC 201 (1), BTEC 202 (1), BTEC 203 (1), BTEC 204 (1), BTEC 206 (1), BTEC 207 (1), BTEC 210 (1), BTEC 211 (1), BTEC 215 (1.5), BTEC 221 (1.5), BTEC 222 (1.5), BTEC 292 (1), BTEC 299 (1)	BTEC 211 (1) & BTEC 221 (1.5) & BTEC 222 (1.5) & Select at least 1 course from the following: BTEC 210 (1), BTEC 215 (1.5), BTEC 292 (1), BTEC 299 (1)	BTEC 120 (3) & BTEC 180/BIO 180 (4) & CHEM 108 (3)
	3rd Semester			CHEM 110 (5) & either CSIT 101 (3) OR CSIT 115 (3) OR CSIT 128 (3) OR BTEC 210 (1)
	4th Semester			CHEM 111 (5) & select at least 4 units from the following: BTEC 201 (1), BTEC 202 (1), BTEC 203 (1), BTEC 204 (1), BTEC 206 (1), BTEC 207 (1), BTEC 211 (1), BTEC 215 (1.5), BTEC 221 (1.5), BTEC 222 (1.5), BTEC 292 (.5-3), BTEC 299 (1-4)


*This program of study is a sample pathway.
Certificate courses may be used to satisfy associate degree requirements.
Speak with a counselor to establish your individual career plan.*



Required Courses
Recommended Elective Courses (H.S. Elect. sometimes occur on varying days (i.e. A/B schedule))
Credit-Based Transition Programs (e.g. Dual/Concurrent Enrollment, Articulated Courses, 2+2+2) (+=H.S. to Com. College (*=Com. College to 4-Yr Institution) (-=Opportunity to test out)
Mandatory Assessments, Advising, and Additional Preparation

<http://www.miracosta.edu/instruction/techprep/programsofstudy.html>

STUDENT/PARENT
Jump start your career by earning college credit for high school/ROPC work. 

FACULTY/TEACHER
Articulation can help your students enhance your existing program. 

ADVISOR/COUNSELOR
Help your students get ahead through credit for High School/ROPC work. 



What's New

Please visit the CTE Awareness Campaign website [Click here >](#)

Articulation Templates



Use these templates to draft local agreements

Statewide Career Pathways articulation templates make creating local articulation agreements a snap.

[View approved templates >](#)

Agreements



Agreements are generated based on approved templates between a secondary school and a post-secondary institution, usually a community college.

[View existing agreements >](#)
[Upload your agreement >](#)



CDE - CTE Online website

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CTE Online

Connecting Career Technical Education Programs & Professionals

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Video Production Model

Units:

- Orientation & Safety
- + Historical Foundations of Cinema & Television
- + Basic Camera Operation & Shot Composition
- + Writing for the Screen
- + Pre-Production
- + Basic Narrative Production
- + Audio for Film and Video
- + Basic Lighting for Film & Video
- + Commercial, PSA, & Promo Video
- + Basic Picture & Sound Editing
- + Art Direction & Production Design
- + Documentary, News, & Reality
- + Multicamera Studio & Live Production
 - Advanced Camera Operation
 - Advanced Lighting for Film & Video
- + Intermediate Narrative Production
- + Music & Scoring



Course Industry Sector
Arts, Media & Entertainment

COURSE ORIGINALLY CREATED BY: [CTE ONLINE](#)

Video Production Model

Course Overview / Details

The purpose of this course is to provide a project-based visual arts program, which guides students to achieve the standards in the visual arts and career technical training, by providing students with the technical instruction and practical experiences for aspiring video and film makers in the production of film, video, and new media projects for business and entertainment. Students experience both the creative and technical aspects of filmmaking in conjunction with learning about historical and contemporary traditions and conventions. Students are instructed on the three stages of project creation. In pre-production, students learn the basic principles of story development, screenplay writing, storyboarding, scheduling and budget planning. Instruction in the production stage includes basic visual composition, color theory, set up and operation of camera, sound, and lighting equipment. Students learn to use cutting-edge software applications for video and audio post-production. Mastering and delivery methods, in both traditional and new media, are explored. The course also includes the basics of job shadowing, internships, and job placement. The competencies in this course are aligned with the California

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Industry Sector: Arts, Media and Entertainment

Pathway: Media and Design Arts (Paramount USD)



California Sample Program of Study

Level	Grade	English Language Arts	Math	Social Studies	Science	Career Technical Education Course	Other Required Courses or Recommended Electives		Sample Occupations relating to this pathway (including SOC Code)
MIDDLE SCHOOL	7	Language Arts	Pre-Algebra	Social Studies	Life Science	Computer Technology	Physical Education	Art, Beginning Band, Choral Music, Spanish	Occupations requiring a high school diploma <ul style="list-style-type: none"> > Camera Operators > Production Assistant > Independent Filmmaker Occupations requiring some post-secondary <ul style="list-style-type: none"> > Audio & Visual Equip. Tech (27-4011.00) > Sound Engineering Tech (27-4014.00) > Set and Exhibit Designers (27-1027.00)
	8	Language Arts	Algebra I or Alg. Readiness	Social Studies	Physical Science	Computer Technology	Physical Education	Art, Beginning Band, Choral Music, Spanish	
SECONDARY	9	Language Arts 1	Algebra 1		Integrated Science	Intro to Media Support & Services	Physical Education, Health	VAPA (Art, Choir, Theatre Arts, Band, Music Appreciation)	Occupations requiring a 2 year Degree <ul style="list-style-type: none"> > Television, video, and motion picture camera operators and editors (27-4030) > Camera Operators, television, video, and motion picture (27-4031) > Film and video editors (27-4032) Occupations requiring a BA/BS Degree <ul style="list-style-type: none"> > Same as above > Photographers (27-4021.00)
	10	Language Arts 2	Geometry	World History	Biology	Media Design and Development	Physical Education	French or Spanish	
	11	Language Arts 3	Algebra 2	United States History	Chemistry or Physics	Film & Video Prod. 1 , Graphic Design , Photography 1		French or Spanish	
	12	Language Arts 4	Pre-Calculus or Calculus	Principles of American Democracy/Economics		Film & Video Prod. 1 & 2 , Graphic Design , Photography 1	Trigonometry, Physiology		
POSTSECONDARY	Articulated dual credit courses must be taken/moved to the secondary level for articulation/dual credit purposes. (Planning and seeking an articulation agreement.)								Industry recognized certifications, licenses, credentials or apprenticeships related to this pathway. <ul style="list-style-type: none"> > Final Cut Pro > After Effect's Certification Suggested Majors: <ul style="list-style-type: none"> > Film/Cinema > Cinematography and Film/Video Production
	13	El Camino CC Film/Video 1,3,4, 20,21,22,24,28ab	Long Beach CC Film 1, 10A-D, 11A-D,						
	14	Film/Video 32ab, 34ab,36ab,50, 51, 52,53, 54abc, 95abcd, 99abc	Film 20AB, 21AB, 35AD, 60AD						
	15	CSULB Film and Electronics Arts	UCLA Film, Television, and Digital Media						
	16								
Junior High/Middle School: Hollydale (K-8), Alondra (6-8), Jackson (4-8), Paramount Park (6-8), Zamboni (6-8)						Required Courses			
High School: Paramount High School						Career Technical Education Courses			
Community College: El Camino College and Long Beach City College						Other Required Courses and Recommended Electives			
College/University: CSU/UC						Dual/Concurrent Enrollment – Articulated Courses			



Statewide Initiatives

- CTE Pathways Initiative (SB70 & 1133)
 - \$20 million 2005, 2006
 - \$41 - \$68 million 2007 – 2011
- Economic Development Initiatives
 - \$48 to \$23 million
- Tech Prep (\$15 million)
- Perkins Basic Grant
 - CCC -\$55 million
 - CDE - \$46 million



A Statewide Econ Dev Initiative

Health and Science Pipeline Initiative (HASPI) & Health Workforce Initiative (Econ Dev Hub)

- HASPI established in 2006 to build and implement middle and High School Health Career Pathways
 - Programs in all nine districts throughout San Diego County.
 - TP -> SB70 Quickstart
- Expanding since 2009 and by 2011-12 includes schools & colleges statewide
- Collaboration of education, industry, and community networks improving students' success.
- The three primary program goals are to:
 - Increase students' awareness of health career opportunities
 - Improve performance in middle school, high school, and college science courses
 - Strengthen transition and retention rates in college training programs
- "Boosting performance in mathematics and science is the key to preparing students for careers in the medical field."



A Statewide Econ Dev Initiative

- The HASPI infuses core academic sciences like biology, chemistry, physiology, and microbiology with health and medical themes that help middle and high school students.
 - Makes the connection between coursework and career-related concepts, research, and terminology.
- Combines
 - Contextualized curricula, internship programs, and career exploration activities;
 - Program and professional development, site implementation teams, and multi-level regional collaboration; to
 - Create a comprehensive plan for building the healthcare workforce pipeline.
- Students who complete a HASPI Health Career Pathway course sequence will be well-prepared to pursue any health training program of their choice, from technician to physician.
- The program offers workshops that train middle and high school teachers on implementation of the HASPI model at their school sites.



Questions?

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