CPEC

Program Planning and Review to Promote Responsiveness to Public Needs

by Stacy Wilson

Introduction

State law directs the California Postsecondary Education Commission to review and comment on the need for new degree and certificate programs proposed by the public higher education systems. The California Legislature, the Administration, and the Legislative Analyst's Office consider the review of proposals for new degree and certificate programs to be among CPEC's most important responsibilities.

This annual report provides a summary of program planning and review activities conducted by CPEC during the 2008–09 academic year. During this period, CPEC staff conducted an extensive review of a proposal to establish a medical school at UC Riverside and a nursing school at UC Davis, and conducted independent reviews of 13 additional program proposals. Staff assessed the long-range plans of the public higher education systems, and updated and modified program review agreements between CPEC and the systems to enhance the review process.

New in this Report

This annual program review report was submitted to the Commission in June 2009 as an information item to allow sufficient time for the Commissioners, the higher education systems, and educational planners to offer comments and recommendations. This section describes how the report has been enhanced based on substantive responses received by staff over the past four months. All other content of the report remains virtually unchanged.

Commission Comments and Suggestions

The Commission recommended that staff use the report as a framework for analyzing how significant higher education budget reductions are impacting institutional program planning and the state's workforce and labor market needs. This recommendation is addressed in *Report Implementation* on page 2.

LAO Comments and Suggestions

At its August 2009 meeting, the Commission concurred with the recommendation of the University of California Board of Regents to establish a School of Medicine at UC Riverside.

Contents

Because this action occurred during reporting period for the 2008–09 academic year, the Legislative Analyst's Office (LAO) recommended that a brief discussion of the need for a public medical school be included in the 2009 annual program review report. This need is discussed in the UC Program Proposal section. The list of UC graduate proposals reviewed by the Commission has been updated to include the medical school proposal and a proposal establishing a School of Public Policy at UC Riverside.

LAO noted that the list identifying CSU proposals CPEC staff expect to review during the next year was very helpful and recommended that a similar list be prepared identifying UC proposals. The University recently provided updated long-range program plans to the Commission; however, this did not include information for UC Merced. CPEC staff will prepare the complete list once this information is received.

Use and Objectives of this Report

The information and analyses in this report serve a number of purposes. Foremost, public officials and policy analysts can obtain from a single source a summary of the long-range academic and vocational program plans of CSU, UC, and the community colleges, and assess the extent to which those plans respond to emerging workforce and societal needs. Second, cost-benefit and cost-effectiveness analyses can be applied to those plans to inform the state of the projected operational and capital costs required over the next five to ten years to fund new degree and certificate programs. Third, workforce and societal needs can be prioritized and compared to higher education long-range plans to help ensure the effective use of program funding.

Report Implementation

The previous section outlined important uses and objectives of CPEC's annual program review report. This section describes strategies for realizing the identified objectives.

Henceforth, staff will prepare a biannual program review report, and will use the interim period to address key issues pertaining to institutional program planning and state workforce needs. Based on the recommendation of Commissioner Guzman, the first report will address the extent to which the current budget crisis and declines in state funding for higher education are adversely affecting institutional program planning and state workforce and labor market needs. CPEC staff will consult with the higher education systems and LAO to identify the range of data required to conduct the analysis. It is anticipated that an agenda item will be prepared for review by the Commission at its March 2010 meeting. Relevant findings will be disseminated to the California Legislature and Governor for consideration during the May 2010 revised budget discussions. Other relevant reports will follow, depending on staff workload requirements.

STATUTORY OBLIGATION

CPEC's statutory responsibilities for reviewing degree and certificate programs are expressed in Education Code § 66903–66904:

> The Commission shall have the power to require the governing boards and the institutions of public postsecondary education to submit data on plans and program costs and on other matters pertinent to effective planning and policy development. It shall review proposals for new programs, review the priorities that guide them, and review the degree of coordination with nearby public, independent, and

> private postsecondary institutions. The Commission shall make recommendations to the Governor and Legislature regarding program plans.
>
> The Commission shall serve as a stimulus to the systems and institutions by projecting and identifying societal and educational needs and encouraging adaptability to change. It shall conduct studies of projected manpower and supply to improve the information base upon which student choices are made. The Commission shall have approval authority for all proposals for new joint doctoral programs between the California State University and the independent higher education sector.

CPEC assesses program proposals based on how well they comply with the following criteria: societal need, student demand, appropriateness to institutional mission, number of existing and proposed programs in the field, total cost, maintenance and improvement of quality, and advancement of knowledge. The criteria are summarized in Appendix A.

The review process is intended to ensure that state operational and capital funds to support new degree and certificate programs are spent wisely and that new programs will produce desirable educational outcomes while contributing to societal betterment. Although each public, independent, and private higher education system has a unique mission and social purpose, the systems are united in a fundamental way: each aims to enhance the intellectual, technical, and creative capacity of its students. Because advanced knowledge — scientific, technical, and procedural knowledge — tends to be organized by fields of study and delivered through specific programs, the ultimate success and benefit of the state's higher education enterprise rests with the quality and breadth of institutional degree and certificate programs.

REVISED PROGRAM PLANNING AND REVIEW AGREEMENTS

CPEC staff held several meetings with its Program Review Advisory Committee to update and modify planning agreements. The updates will enhance CPEC's success in meeting statewide planning responsibilities and statutory obligations. Current members are Stephanie Low (community colleges), Christine Hanson (CSU), Karen Yelverton-Zamarripa (CSU), Todd Greenspan (UC), Hilary Baxter (UC), Mark Whitaker (LAO), Jessika Nobles-Jones (CPEC), and Stacy Wilson (chairperson, CPEC).

The updated agreements place greater emphasis on long-range program planning, and less on the review of individual degree and certificate program proposals, which often number in the hundreds annually. The community college system does not prepare statewide long-range program plans, because planning falls under the purview of local districts and their governing boards. A different long-range planning arrangement is under discussion with the Chancellor's Office.

Program Proposals Subject to CPEC Review

The following criteria will be used in the future to determine if an individual program proposal will be subject to formal CPEC review and comment.

Community College Program Proposals Subject to Review

Community college program proposals are subject to formal review if any of the following conditions exist:

- The program is the first of its type to be offered by a community college.
- The program involves intersystem collaboration.

- The program requires new facilities, major renovation to existing facilities, or an expenditure of more than $1.0 million in state funds for equipment.

- The program requires joint-use facilities.

- The program involves more than one district, or is likely to impact enrollment levels of neighboring districts.

CSU and UC Program Proposals Subject to Review

Undergraduate Programs. CSU and UC proposals for new undergraduate degree programs are not subject to formal review unless a specific request is made by staff.

Master's Programs. CSU and UC master's program proposals in the following discipline areas are subject to formal review and comment:

- Agriculture	- Education	- Mathematics
- Architecture	- Engineering	- Physical science
- Biological sciences	- Health professions	- Professional studies
- Business/Management	- Information science/Informatics	- Psychology

CPEC does not review master's programs in the humanities, such as literature, art history, and music, and nearly all programs in the social sciences, such as sociology and political science. Although such programs fulfill important educational and societal needs, conducting credible and focused supply-demand analyses would be difficult because graduates of those fields tend to find employment in a wide range of industries and occupations. It is difficult to imagine, for example, a set of circumstances wherein staff would not concur with a recommendation to establish an art history or rhetoric program based in part on a supply-demand analysis.

Doctoral Programs. All CSU and UC doctoral programs, whether offered independently or jointly, are subject to formal review and comment by CPEC. Education Code §66010.4 gives CPEC approval authority for all proposals for new joint doctoral programs between CSU and independent universities.

Program Review Timelines

By April 30 of each year, CSU and UC agree to submit an updated listing of degree programs its system wishes to establish over the next five to ten years. By May 7 of each year, the Program Review Advisory Committee will convene to discuss the systems' projected program plans, the priorities that guide those plans, and the extent to which plans are responding to emerging societal, workforce, and labor market needs.

The systems agree to submit program proposals as soon as possible, but no later than five months prior to the anticipated first term of program operation. CPEC staff will conduct a preliminary review and will notify the system office within 30 days if additional information or supporting documents and analyses are needed. If no additional information is needed, staff will complete its review and notify the system office of its finding and recommendation within 30 days.

If additional information is needed, CPEC staff will notify the system office of its finding and recommendation within 30 days of receipt of the additional information. More details of the review activities and timelines are on page 5.

Program Review Procedures and Timelines

Procedure	Description	Timeline
Updated long-range program plans of UC and CSU submitted to CPEC	Each year, UC and CSU will submit to CPEC in electronic form a list of projected degree programs its system wishes to establish over the next five to ten years.	By April 30 of each year
Program plans of the systems discussed	CPEC's Program Review Advisory Committee will convene to discuss the projected program plans of the systems.	By May 7 of each year
Preparation of CPEC proposal questionnaire	After a program proposal has been submitted to the system office that requires CPEC review, a CPEC questionnaire will be prepared that identifies the sections of the proposal where each specific CPEC review criterion is addressed.	Completed prior to submission of the proposal to CPEC
Program proposal and CPEC questionnaire submitted	CPEC staff would appreciate receiving a required program proposal as soon as the CPEC questionnaire is completed by the system office.	Proposal and CPEC questionnaire are to be submitted as soon as possible, but no later than 5 months prior to the anticipated first term of program operation
Preliminary CPEC review of program proposals	CPEC staff will conduct a preliminary review of a proposal and questionnaire and will notify the system office if additional questions need to be addressed and if additional supporting documents and analyses are required.	Within 30 days after receipt of the proposal and questionnaire
Final CPEC review of program proposals	If no additional information is needed, CPEC staff will complete its review and notify the system office of its finding and decision regarding program concurrence.	Within 30 days after receipt of the proposal and questionnaire
	If additional information is needed, CPEC staff will notify the system office of its findings and decision regarding concurrence after the additional information has been reviewed.	Within 30 days of receipt of additional information
CPEC proposal agenda items	For some proposals requiring high operational and capital costs, CPEC staff might elect to prepare an information agenda item for review by the Commission.	Depends on CPEC meeting schedule
Systems prepare a list of program proposals that were submitted to CPEC for review and comment	Each year, the systems will prepare a list of program proposals submitted during the reporting period that required CPEC review and comment. CPEC staff will compare the lists with its program review logs and resolve any discrepancies.	By May 1 of each year
Systems submit a list of new degree programs established during the reporting period that did not require CPEC review	Each year, the systems will submit to CPEC a list of degree programs established during the reporting period that did not require CPEC review.	By May 5 of each year

CSU PROGRAM PROPOSALS

CSU's long-range program plans for 2009–10 to 2018–19 are shown in Appendix B. In March 2009 the CSU Board of Trustees granted planning authorization for 15 baccalaureate programs, 16 master's degree programs, and six doctoral program proposals.

The following table shows the proposed graduate programs in Appendix B as grouped into seven general discipline areas by CPEC staff. About 40% are in the physical sciences and professional studies. The physical science area includes engineering, geophysics, information technology, chemistry, and statistics. The professional studies area includes accounting, business management, social work, and public policy and administration.

Labor market data indicate reasonably high demand for workers with a master's or doctoral degree in the physical sciences, biological sciences, or health sciences. The state's economy is recovering at a much slower pace than many economists had originally forecast, which will probably limit job prospects in the near term for graduates with degrees in the professional studies area.

CPEC received nine CSU proposals, six for educational doctorate programs and three for joint CSU–UC Ph.D. engineering programs. Over the past several years, CPEC has offered substantive comments and suggestions for strengthening proposal development in educational leadership. The comments and suggestions appear to be having positive effects on the quality of proposals. Staff concurred with recommendations to establish doctoral programs in educational leadership at CSU Stanislaus, CSU Northridge, and CSU East Bay.

CSU's Ten-Year Program Plans, 2009–19

General Discipline Area	Number	Percent
Physical Sciences	24	23.3%
Professional Studies	20	19.4
Humanities	14	13.6
Education	16	15.5
Biological Sciences	14	13.6
Social Sciences	7	6.8
Health Sciences	8	7.8
Total	103	100.0%

Staff also concurred with the recommendation to establish three CSU–UC joint Ph.D. programs. Those programs are listed in the UC section on page 8. Now under review are proposals to establish leadership programs at CSU Dominguez Hills, CSU Los Angeles, and San José State University. The table on page 7 lists the CSU proposals CPEC expects to receive in the immediate future.

CSU Proposals CPEC Expects to Review by June 2010

Campus	Program	Degree Level and Projected Implementation	
Bakersfield	Computer Science	MS	2009
Chico	Engineering Management	MS	2009
Dominguez Hills	Biotechnology	MS	2009
	Public Health	MPH	2009
	Communication Disorders	MA	2010
East Bay	Biological Science	MS	2009
	Accounting	MS	2009
	Biotechnology	MS	2009
Fullerton	Chemistry	MA	2009
	Statistics	MA	2009
	Integrated Marketing Communication	MS	2009
	Biotechnology	MBt	2009
	Screenwriting	MFA	2009
	Social Work	MSW	2009
Humboldt	Education	EdD	2009
Long Beach	Applied Statistics	MS	2009
Los Angeles	Biotechnology	MBt	2009
	Technology	MS	2009
Maritime Academy	Transportation and Engineering	MS	2010
Monterey Bay	Management Information	MS	2009
	Nursing	MS	2010
	Social Work	MS	2010
Northridge	Public Policy	MPP	2009
	Computer Engineering	MS	2010
	Information Technology	MS	2010
	Marketing and Design	MS	2010
	Economic Policy Analysis	MA	2010
	Technology in Human Services	MA	2010
	Assistive Technology	MS	2010
Pomona	Biotechnology	MBt	2009
	Interior Architecture	MIA	2010
	Geological Sciences	MS	2010
	Educational Leadership	EdD	2010
Sacramento	Biological Sciences	MA	2009
San Bernardino	Accountancy	MA	2009
	Kinesiology	MS	2009
San Diego	Information Systems	MS	2010
San Francisco	Special Education	MS	2009
	Audiology	AuD	2009
San José	Medical Product Development	MS	2010
San Luis Obispo	Disaster Management	MA	2010
	Fire Protection Engineering	MS	2010
	Agriculture Education	MAE	2010
	Education	EdD	2010
San Marcos	Nursing	MS	2009
	Education	EdD	2010
Sonoma	Education	EdD	2010
Stanislaus	Education and Teaching	MAT	2009

UC PROGRAM PROPOSALS

Long-Range Plans

The UC Office of the President has reorganized its academic planning unit, and has appointed new representatives to CPEC's Program Review Advisory Committee. UC recently provided CPEC with program plans for 2009–2014. The list of programs is in Appendix C.

The proposed graduate programs have been grouped into the seven general discipline areas. Nearly half are in physical and health sciences. Physical science includes chemical and environmental engineering, geophysics, climate science, chemistry, and planetary science. The health sciences area reflects to a large degree the planning initiatives of UC San Francisco and UC Irvine. Health science programs under consideration at UCSF include global health science, epidemiology, bioengineering, and health psychology and behavior. Programs proposed by UC Irvine include public health, epidemiology, medical social science, molecular medicine, therapeutics, and nursing science.

Proposals Reviewed

During the reporting period, staff reviewed and concurred with proposals to establish a medical school, a public policy school, and ten graduate programs, shown in the table at right. Three are joint doctoral engineering programs to be conducted by UC San Diego and San Diego State University.

The medical school proposal responds to findings of a 2005 UC Health Sciences Committee report, *University of California Health Sciences Education: Workforce Needs and Enrollment Planning*. Based on supply–demand analyses, the report recommended that UC increase enrollment levels in medicine, nursing, veterinary medicine, pharmacy, and public health. The report concluded that because California currently has the physical capacity to train only 25% of its physicians, the state will need at least one, possibly two, new medical schools. In the absence of expansion, demand for physicians in this state, according to various reports, is likely to outpace supply by between 5,000 and 17,000 by 2015, assuming current trends in degree production of new primary care physicians and trends in utilization patterns.

UC Five-Year Program Plans, 2009–14

General Discipline Area	Number	Percent
Physical Sciences	52	26%
Humanities	45	22%
Health Sciences	36	18%
Professional Studies	22	11%
Social Sciences	19	9%
Biological Sciences	16	8%
Education	12	6%
Total proposed	202	100%

This information does not include plans from UC Merced.

UC Proposals Approved by CPEC

Campus	Proposal	Degree
Berkeley	Professional Accountancy	MPA
Davis	School of Nursing	
	Communications	Ph.D.
Los Angeles	Bioinformatics	M.S./Ph.D.
Riverside	School of Medicine	
	School of Public Policy	
	Management	Ph.D.
	Materials Science & Engineering	M.S./Ph.D.
San Diego	Management	Ph.D.
	International Affairs	M.A.S.
	Computational Science & Mathematics	Ph.D.
San Francisco	Science and Technology	M.S.
UC San Diego–SDSU joint programs		
Electrical and Computer Engineering		
Bioengineering		
Structural Engineering		

Industry and occupational projections of the California Employment Development Department confirmed that the demand for physicians will remain high in the Inland Empire over the next ten years. A 2004 study by the Center for Health Workforce Studies showed that the Inland Empire has the state's lowest ratio of active care physicians per 100,000 residents and that its population is expected to increase by 47% between 2000 and 2015. Rapid population growth, the aging of the existing physician workforce, and low physician-to-population ratio are three factors contributing to the Inland Empire being underserved medically.

In the absence of significant public and private medical education expansion, California will continue to have to rely on foreign and out-of-state medical schools to supply three-quarters of its physicians. CPEC staff determined that it is in the state's best interest to educate a much higher proportion of the primary care physicians and biomedical researchers, especially given the range of health problems related to heart disease, cancer, asthma, and obesity, as well as observable disparities in health status by ethnicity and socioeconomic status. Because of high start-up cost associated with medical schools, CPEC staff recommended that UC carefully weigh the advantages and disadvantages of opening the school at a later date when economic circumstances are more favorable.

The joint engineering programs build on a successful partnership that involves faculty exchange and collaboration, leveraging resources, and increasing the production of engineering doctorates.

The structural engineering program is an outgrowth of common research interests in aerospace structures, geotechnical engineering, composite materials, and civil structures. Students will have access to experimental facilities at UC San Diego — including the Powell Structural Engineering Laboratories — and to SDSU's subsonic and supersonic wind tunnels, water tunnels, fabrication facilities, and geotechnical engineering laboratories. The proposal noted that the program will prepare students for careers in research, teaching, and advanced professional practice in civil and aerospace structures, earthquake and geotechnical engineering, composites, and engineering mechanics.

The doctoral program in electrical engineering will provide advanced studies and research opportunities in communication theory and systems; computer engineering; electronic circuits and systems; intelligence systems, robotics and control, photonics; and signal and image processing. UCSD is considered a leader in wireless communications. Its Center for Wireless Communications focuses on low-power circuitry (radio frequency, analog, and digital), smart antennas, communication theory (including speech, video, and image compression), communication networks, and multimedia applications. Research facilities at SDSU have enabled the institution to characterize and model low-noise devices and integrated circuits. Current efforts include work on deep submicron CMOS technology that is of high interest in the communications industry.

The joint doctoral program in bioengineering will focus on the research interests of the two institutions. The SDSU bioengineering program has focused on the theory, design, and development of

---

UC provided the following update at the Commission's December meeting.

Since the Commission's review in September 2008, UC Riverside has moved forward, recently hiring G. Richard Olds, MD as founding dean of the medical school, an appointment that received wide bi-partisan support in California. UCR's approach in opening the medial school will be to expand its existing two-year program and to partner with existing health care facilities for clinical training rather than incur the expense of constructing its own teaching hospital. There is a crisis of physician shortage and healthcare disparities in inland southern California, and the UCR School of Medicine is a move in the right direction.

medical devices. Research facilities include an experimental apparatus for conducting studies on fluid and solid mechanics in the heart and cardiovascular system. University researchers have developed a cardiac simulator to study medical devices that interface with the heart and major vessels.

Collaborative research areas with UCSD include micro and nanofluidics, molecular diagnostics, tissue engineering and scaffolding, and cardiac and valve mechanics. Graduates will have a research specialty in bioengineering with a focus in molecular biomechanics and cell and tissue engineering.

UC AND CSU GRADUATE NURSING EDUCATION PLANS

UC and CSU intend to expand nursing education programs. CSU representatives discussed with CPEC an interest in offering the Doctor of Nursing Practice (DNP) degree. AB 867 (Nava) is currently held in the Senate Appropriations Committee. The bill distinguishes the DNP from the Ph.D. in nursing offered by UC and mandates that the program be designed to enable professionals to earn the degree while working full time, train nurses for advanced practice, and prepare clinical faculty to teach in postsecondary nursing programs. Initial funding is to come from existing CSU budgets without diminishing the quality of undergraduate programs or reducing enrollments.

During the academic year, CPEC staff spent considerable time reviewing a proposal to establish the Betty Irene Moore School of Nursing at UC Davis. The nursing school is expected to expand the supply of registered nurses and nurse educators through an interdisciplinary approach, leading to the Bachelor of Science, Master of Science, and Doctor of Philosophy degrees.

CPEC staff reviewed evidence supporting the position that an educational and clinical training program involving a wide range of discipline areas will enhance the capacity and sensitivity of nursing professionals to respond more effectively and compassionately to the state's social and cultural health care needs.

Given the adverse effects of the current recession, CPEC is pleased that a $100 million grant from the Gordon and Betty Moore Foundation will fund approximately 90% of start-up costs over the next three years. State marginal cost funding per full-time-equivalent student, and student fee revenue, are not projected to account for the majority (two-thirds) of total revenue until 2020, when the foundation grant funds are depleted. The school is expected to reach a steady state in 2016–17, when enrollments will total 200 undergraduates, 200 master's students, and 56 doctoral students.

Although the Commission concurred with the recommendation to establish the nursing school at UC Davis, it is felt that nursing education and supply issues can be better understood within the context of statewide program planning. California colleges and universities presently offer 131 nursing education degree programs. Collectively, these programs graduated 7,500 students during the 2005–06 academic year. CPEC has initiated a study to address the following questions:

- What is the correct mix of nursing programs and graduates given the state's labor market needs?
- How should nursing program expansion occur across higher education systems to optimize nursing care delivery?
- What specific nursing supply issues are being addressed by each higher education system?
- What institutional practices are having unintended adverse consequences on nursing supply?

COMMUNITY COLLEGE PROGRAM PROPOSALS

The Community Colleges Chancellor's Office does not prepare a statewide long-range program plan, because planning falls under the purview of local community college districts and their governing boards. To support district-wide planning, the Chancellor's Office produced in 2003 a System Strategic Plan in consultation with the districts and external stakeholders and partners. The plan is reviewed and updated annually. It includes two elements that are germane to program planning and review: Curriculum and Program Development, and Economic and Workforce Planning.

Discussions have been initiated with the Chancellor's Office to implement a procedure that would enable CPEC to have electronic access to each district's long-range plans without having to search 72 websites. Once this procedure is operational, CPEC will be able to summarize and discuss those plans and the system's strategic plan in subsequent annual program review reports.

In the 2008–09 academic year, the system office used CPEC's review guidelines in authorizing 830 new academic and vocational programs, which are listed in Appendix D. These programs were not subject to review by CPEC because of the revised review agreements, which are outlined on page 3.

The table below lists the proposals that were subject to CPEC review and comment. After completing a thorough review, the Chancellor's Office was notified that each proposal met all review criteria. A sample of CPEC's evaluative comments are noted below.

In concurring with the proposal to establish a program in Emergency Management and Homeland Security at Citrus College, CPEC staff agreed that vigilance in disaster prevention and relief has been heightened since 9/11. In addition to the need for well-organized emergency management plans in the event of a terrorist attack, California faces natural disaster threats that also require diligent organization and response. Letters of support from police, fire, and other community response organizations helped demonstrate a need to fill career positions in emergency management with qualified graduates in the Los Angeles area.

Staff determined the program's curriculum seemed to focus almost exclusively on emergency management, with little attention devoted to what is practically meant by homeland security. Thus, the title indicates a greater breadth and scope of curriculum than actually exists in the proposed program. Staff recommended that Citrus College title the program Emergency Management to more accurately reflect the narrower curriculum.

In concurring with the proposal to establish a dental hygiene program at the College of San Mateo, CPEC staff noted that the college provided compelling evidence of regional need and local demand. The evidence included labor market information and data, letters of support from industry professionals, and the voter-approved bond that will support construction of a new facility. San Mateo College provided detailed responses about capital and administrative costs, as well as a breakdown of student charges for two-year participation in the program.

Community College Program Proposals Reviewed by CPEC, 2008–09

Campus	Program
Cerritos College	New Product Development
Diablo Valley College	Photovoltaic Energy Systems
Los Angeles City College	Korean Language
Citrus College	Emergency Management and Homeland Security
Coastline College	Process Technology
San Mateo College	Dental Hygenist

Appendix A CPEC Program Review Guidelines

Societal need

Postsecondary education institutions bear a responsibility for preparing students to meet the state's workforce and knowledge needs. Workforce demand projections serve as one indication of the need for a proposed program. Although achieving and maintaining a perfect balance between supply and demand in any given career field is impossible, it is important nevertheless that the number of persons trained in a field and the number of job openings in that field remain reasonably balanced.

Maintenance and improvement of quality

Protecting the public interest and trust requires that educational programs at all levels be high quality. Although the primary responsibility for the quality of programs rests with the institution and its system, the Commission, for its part, considers pertinent information to verify that high standards have been established for the operation and evaluation of the program.

Student demand

Within reasonable limits, students should have the opportunity to enroll in programs of study they are interested in and qualified for. Therefore, student demand for programs, indicated primarily by current and projected enrollments, is an important consideration in determining need for a new program.

Appropriateness to the institutional and system mission

Programs offered by a public institution within a given system must comply with the delineation of function for that system, as set forth in the California Master Plan for Higher Education. Proposed new programs must also be consistent with the institution's own statement of mission and must be approved by the system's statewide governing body.

Number of existing and proposed programs in the field

An inventory of existing and proposed programs provides an initial indication of the extent to which apparent duplication or undue proliferation of programs exists, both within and among the higher education systems. However, the number of programs alone cannot be regarded as an indication of unnecessary duplication. This is because (a) programs with similar titles may have varying course objectives or content, (b) there may be a demonstrated need for the program in a particular region of the state, or (c) the program might be needed for an institution to achieve academic comparability within a given system.

Total costs of the program

The relative costs of a program, when compared with the costs of other programs in the same area, constitute another criterion in the Commission's program review process. Included in the consideration of costs are the number of new faculty required based on desired student-faculty ratios, as well as costs associated with equipment, library resources, and facilities necessary to deliver the program. For a new program, it is necessary to know the source of the funds required for program delivery, both initially and in the long run.

Advancement of knowledge

The program review process encourages the growth and development of intellectual and creative scholarship. When the advancement of knowledge seems to require establishing programs in new disciplines or in new combinations of existing disciplines, such considerations as costs, student demand, or employment opportunities may become secondary.

Appendix B CSU Long-Range Program Plans

Proposed program projections, 2009–2010 through 2018–2019

Bakersfield

2009
BS Computer Engineering
BS Electrical Engineering
BS Engineering
MS Computer Science

2010
EdD Education

Channel Islands

2010
BA Anthropology
MA English
MFA Art

2011
BS Computer Engineering
MS Biology

2012
BS Health Science
MA History
MPA Public Administration

2013
BA Social Justice
BA Geography and Urban Studies
MS Applied Sociology

2014
BA Philosophy
BS Kinesiology/Athletic Training
MS Nursing

2015
BS Nutrition/Dietetics
EdD Educational Leadership

Chico

2009
BS Animal Science
BA Chemistry
BA Legal Studies
MS Engineering Management

2010
EdD Educational Leadership

2011
BA Biological Sciences*
BA Environmental Policy and Planning*
BA Natural Sciences*

Dominguez Hills

2009
MBt Biotechnology
MPH Public Health

2010
BS Exercise Science
MA Communication Disorders
MA Theatre Arts*
EdD Educational Leadership

2011
MA Spanish
MS Exercise Science

East Bay

2009
BA Women's Studies* — fast track
BS Construction Management* — fast track
MA Biological Science* — fast track
MS Accounting* — fast track
MS Biotechnology* — fast track

* Newly proposed for Trustees' planning authorization. Implementation subject to review and
  approval by the Chancellor.

CSU Long-Range Program Plans — *continued*

Fresno

2009
BS Athletic Training*

2010
BS Rehabilitation Services*

Fullerton

2009
BA Earth Science
BSE Software Engineering
MA Adult and Lifelong Learning
MA Chemistry
MA Statistics
MS Integrated Marketing Communication
MBt Biotechnology*
MFA Screenwriting
MSW Social Work

2010
MA Japanese
MA Liberal Studies

2011
MA Criminal Justice

2012
BA Chinese Studies

Humboldt

2009
BS Athletic Training*
BS Marine Biology
EdD Education

2010
BA Criminology and Justice Studies*

Long Beach

2009
BA Engineering Systems
BFA Interior Design*
MS Applied Statistics*

2010
BA Liberal Arts* — fast track

Los Angeles

2009
BA Career and Technical Studies*
BA Food Science
MBt Biotechnology
MS Technology
DNP Doctor of Nursing Practice
    joint partner to be determined
EdD Education (date changed)

2011
MS Aerospace Engineering*
PhD Complex Systems*
    with Claremont Graduate University
AuD Audiology*
    with Western University of Health Sciences

2012
BA Computer Science
BA Urban Studies
MS Systems Engineering*
PhD Forensic Sciences
    joint partner to be determined

2013
BA Computer Science
MA Liberal Studies
MS Applied Sociology

Maritime Academy

2009
BS Science and Mathematics

2010
MS Transportation and Engineering Management*

CSU Long-Range Program Plans — *continued*

Monterey Bay

2009
BA Human Development
MS Instructional Science and Technology*
MS Management and Information Technology
    (pilot conversion)

2010
BA Liberal Arts*
MA Applied Ethics and Communication
MS Nursing
MSW Social Work

2011
BA Environmental Studies*

2012
MA Critical and Applied Multicultural Studies
EdD Education

Northridge

2009
BS Computer Information Technology
    (formerly Information Technology)
MPP Master of Public Policy

2010
MS Computer Engineering
MS Information Technology*
MS Marketing and Design Management
MA Humanities
MA Economic Policy Analysis*
MA Music Industry Studies*
MA Assistive Technology in Human Service*
MS Assistive Technologies and Rehabilitation*

2011
MS Structural Engineering
MS Quality Management
MBA/JD Business Administration and Law
    joint partner to be determined

2012
BS Industrial and Quality Management

Pomona

2009
MBt Biotechnology

2010
MIA Interior Architecture*
MS Geological Sciences*
EdD Educational Leadership

Sacramento

2009
BA Career and Technical Studies*
BS Biochemistry
MA Biological Sciences

San Bernardino

2009
BA Career and Technical Studies*
MSA Accountancy

2010
BS Civil Engineering
BS Electrical Engineering
BS Mechanical Engineering
MA Music
MS Kinesiology

San Diego

2009
PhD Bioengineering* — *with UCSD*
PhD Electrical and Computer Engineering*
    with UCSD
PhD Evolutionary Biology — *with UC Riverside*
PhD Geophysics* — *with Scripps Institute of
    Oceanography and UCSD*
PhD Structural Engineering* — *with UCSD*

2010
BA Health Communication*
BFA Graphic Design
MS Information Systems*
EdD Special Education — *with UC San Diego*

CSU Long-Range Program Plans — *continued*

San Diego — continued

2011
MA Translation and Interpreting
MFA Film, Television, and Digital Media
PhD Hearing Science — *with UC San Diego*

2012
PhD Communication
    with Fielding Graduate Institute
PhD English and Children's Literature
    with UC Riverside
PhD Information Systems
    with Claremont Graduate University
PhD Social Work
    with University of Southern California

San Francisco

2009
BS Visual Communication Design
MS Special Education*
AuD Audiology

2013
MA Sociology*

San José

2009
BA Foreign Language and International Economics
BFA Dance
EdD Education

2010
BA Asian American Studies*
BS Athletic Training* — fast track
MS Medical Product Development Management*
MFA Music*

San Luis Obispo

2009
BS Anthropology and Geography
BA Sociology

2010
BS Agricultural Communication
MA Disaster Management and Homeland Security*
MS Fire Protection Engineering*
MAE Agricultural Education
EdD Education

San Marcos

2009
BA Child and Adolescent Development
BA Music
MS Nursing

2010
BA Ethnic Studies
EdD Education

Sonoma

2010
EdD Education

Stanislaus

2009
MAT Education/Teaching

2010
BA Ethnic Studies* — fast track

Appendix C UC Long-Range Program Plans, 2009–2014

Campus and Program	Degree	Status
Berkeley		
Undergraduate programs		
Urban and Metropolitan Studies	B.A.	2
Information	B.S.	1
Graduate programs		
Professional Accountancy*	M.P.Acc.	4
Public Health/Journalism	M.P.H./M.J.	3
Transnational Women and Gender Studies	M.A./Ph.D.	3
Epidemiology (joint with UCSF)	Ph.D.	3
Product Development	M.S.	1
Public Health/Engineering	M.P.H./M.S.	1
Davis		
Undergraduate programs — none for 2009		
Graduate programs		
Communication	Ph.D.	4
Environmental Policy and Management	M.S.	4
Energy (formerly Energy Systems, Technology & Policy)	M.S., Ph.D.	4
Nursing Science & Health-Care Leadership (formerly Nursing)	MS, Ph.D.	3
Study of Religion*	M.A., Ph.D.	3
Chemical Engineering Joint Program with Middle East (METU)	Jt. Ph.D.	3
Engineering Masters/MBA*	Concurrent	2
Health Informatics	Ph.D.	2
Bioinformatics	M.S./Ph.D.	2
Community Development	Ph.D.	1
Comparative Art History*	M.A., Ph.D.	1
Comparative Race Studies*	M.A., Ph.D.	1
Physician Assistant*	M.P.A.S.	1
Schools and colleges		
School of Public Health	—	4
Irvine		
Undergraduate programs		
Biomedical Computing (Formerly Bioinformatics)	B.S.	3
Cognitive Neuroscience (Bio. Sci./Soc. Sci.) *	B.S.	2
Earth & Environmental Studies *	B.A.	2
Engineering Design Software (Engineering)	B.S.	2
Environmental Health Science *	B.S.	2
Information & Computer Science	B.A.	2

Status: 1 – Suggested for list   3 – Campus administration review
          2 – Department review   4 – CCGA CPEC review

Campus and Program	Degree	Status
Software Engineering (ICS)*	B.S.	2
Statistics	B.S.	2
Biology/Science Teaching	B.A.	1
Chemistry with Conc. In Chem. Ed. with Teaching Credential	B.S.	
CS or Informatics or ICS with Teaching Credential	B.S.	1
Earth & Environmental Science with Teaching Credential	B.S.	1
Math with Spec. in Math Ed. with Teaching Credential	B.S.	1
Middle East and African Studies	B.A.	1
Physics with Conc. In Physics Ed with Teaching Cred.	B.S.	1
Graduate programs		1
Epidemiology	M.S./Ph.D.	3
Public Health & M.D.	M.P.H. & M.D.	
Biology Ed. with Teaching Cred. (formerly M.A.T. with M.S. in Bio. Sciences*	M.S.	2
Criminology, Law & Society	J.D./Ph.D. or M.A.	2
Criminology, Law and Society & Sociology*	Ph.D.	2
Engineering Design Software	M.S./Ph.D.	2
Environmental Health	Ph.D.	2
Exercise Science & Rehabilitation	M.S./Ph.D.	2
Human-Centered Computing (Formerly Informatics)	M.S./Ph.D.	2
Information & Computer Science and Business Administration	M.B.A./M.S.	2
International Studies	M.A.	2
Medical Social Sciences (formerly Latino Community Health)	M.A.	2
Molecular Medicine & Therapeutics	Ph.D.	2
Nursing Science	Ph.D.	2
Pharmaceutical Sciences	M.S./Ph.D.	2
Pharmacy *	Pharm.D.	2
Political Consultancy & Government Relations	M.A.	2
Psychology & Law	J.D./Ph.D. or M.A.	2
Public Health (previously M.S.P.H./Ph.D.)*	Ph.D.	2
Software Engineering	M.S./Ph.D.	2
Spanish	M.A.	2
Anthropology & Law*	J.D./Ph.D.	1
Biomedical & Translational Science (BATS)*	M.S.	1
Business Administration & Juris Doctorate	M.B.A./J.D.	1
Chemistry with Concentration in Theoretical Chemistry*	Ph.D.	1
Computer Science*	M.C.S.	1
Education Administration & Leadership*	Ed.D.	1
English & Law*	J.D./M.A.	1
Global Change Ecology*	Gateway Program	1
Mathematics, Computational & Syst. Bio. (MCSB)	Ph.D.	1
Nursing & Public Health*	M.S.N./M.P.H.	1
Public Health & Law*	J.D./M.P.H.	1
Schools and colleges		
School of Education		3
School of Nursing Science		3
School of Public Health		1

Campus and Program	Degree	Status
Los Angeles		
Undergraduate programs		
Armenian Studies	B.A.	2
Complex Human Systems	B.A.	2
Dance	B.A.	2
Music	B.M.	2
Public Health*	B.S. or B.A.	1
Graduate programs		
Chicana/Chicano Studies*	M.A./Ph.D.	4
African Studies & Public Health*	M.A./M.P.H.	3
Computational & Systems Biology*	M.S.	3
Environmental Health Sciences & Urban Planning*	M.S./M.A.	3
Public Policy & Health Policy*	M.P.H./M.P.P.	3
UCLA/Adolfo Ibanez EMBA*	M.B.A.	3
Bio-Medical Technology*	M.S.	2
Communication Studies	Ph.D.	2
Community Health Sciences*	M.S./Ph.D.	2
Executive Cultural Resource Management*	M.A.	2
Geographical Information Systems	MSGIS	2
Health Education & Promotion	M.P.H.	2
Healthcare Management & Policy	M.P.H.	2
Nanoscale Science & Nanotechnology*	M.S./Ph.D.	2
Translational Research	Ph.D.	2
Afro-American Studies	Ph.D.	1
Applied Statistics	M.S.	1
Asian American Studies	Ph.D.	1
Bioengineering*	Ph.D.	1
Communications Studies - Professional Masters in Journalism	M.A.	1
Design & Media Studies	Ph.D.	1
Electronic Arts (Interdisciplinary Program)	M.S. or M.A.	1
Law & Medicine	J.D./M.D.	1
Museum & Curatorial Studies	M.A.	1
Public Administration (school-wide)	E.M.P.A.	1
Risk Management	M.S.	1
Systems Engineering	M.S.	1
Teaching of Statistics	M.S.	1
Urban and Regional Planning*	M.U.R.P.	1
Women's Studies and Law*	J.D./M.A. or J.D./Ph.D.	1

Status: 1 – Suggested for list   3 – Campus administration review
2 – Department review   4 – CCGA CPEC review

Campus and Program	Degree	Status
Riverside		
Undergraduate programs		
Business Administration: Integrated 5-year program	B.S./M.B.A.	2
Foreign Languages/Administrative Studies	B.A.	2
Civil & Construction Management Program	B.S.	1
Graduate programs		
Astrophysics	M.S./Ph.D.	3
Engineering	M.Eng.	3
Environmental Sciences	M.S./Ph.D.	3
Evolution, Ecology, & Organismal Biology (Jt. w/SDSU)	Ph.D.	3
Women's Studies	M.A./Ph.D.	3
Accounting	M.Acc.	2
Business Administration, fully-employed (similar to existing P/T M.B.A.)	M.B.A.	2
Geology-Global Climate & Environmental Change	M.S./Ph.D.	2
History of Art	Ph.D.	2
Linguistics	Ph.D.	2
Media & Cultural Studies	M.A./Ph.D.	2
Public Policy	M.A./Ph.D.	2
Theatre	M.A.	2
San Diego		
Undergraduate programs		
Sixth College Individual Studies Major	B.A.	3
Engineering Science - Integrative Engineering*	B.S.	2
Environmental Technologies*	B.S.	2
Classical Studies*	B.A.	1
Computing & the Arts, Interdisciplinary*	B.A.	1
Forensic/Analytical Chemistry	B.S.	1
Language & Law*	B.A.	1
Marine Biology*	B.S.	1
Marine Science*	B.S.	1
Mathematics (integrated 5-year program)	B.S./M.A.; B.S./M.S.	1
Middle Eastern Studies	B.A.	1
Nano Engineering	B.S.	1
Public Culture Program (previously Visual Arts, spec. in Public Culture)	B.A.	1
Graduate programs		
Bioengineering, Electrical & Computer Engineering, & Structural Engineering (Jt. w/SDSU)	Ph.D.	4
Computational Science, Mathematics & Engineering	M.S.	4
Geophysics w/an emphasis in Earthquake Science & Applied Geophysics (Jt. w/Scripps & SDSU)	Ph.D.	4
Human Development	Ph.D.	4
Anthropogeny*	Ph.D.	3
Applied Social Science, with an Emphasis in Substance Abuse (Jt. w/SDSU)*	Ph.D.	3
Architecture-Based Enterprise Systems Engineering (AESE)	M.A.S.	3

Campus and Program	Degree	Status
Biostatistics	Ph.D.	3
Climate Science	M.S.	1
Critical Gender Studies concentration	Ph.D.	1
Global Health - UC Systemwide Degree	Ph.D.	1
Imaging & Radiation Sciences*	Ph.D.	1
Information Technology Innovation	M.Eng./Ph.D.	1
Leadership & Learning (formerly Distributed Learning & Leadership)	Ph.D.	1
Medical Informatics*	Ph.D.	1
PharmD/Ph.D. Program	Ph.D.	1
Prevention & Treatment of Addictive Disorders*	M.A.S.	1
Projection/Multimedia/Animation/Film	M.F.A.	1
Schools and colleges		1
School of Law*		1

San Francisco

Campus and Program	Degree	Status
Graduate programs		
Dental Hygiene	M.S.	4
Science & Technology Studies in Medicine	M.S.	4
Audiology (w/UCLA)	AuD.	3
Epidemiology & Translational Science*	Ph.D.	3
Global Health Sciences	Ph.D.	2
Health Policy Research	M.S./Ph.D.	2
Molecular Medicine*	M.M.G.P.T.	2
Global Health Sciences	Exec. Cert. & M.A.	1
Physical Therapy (Jt. w/CSU Northridge) — on hold	D.P.T.	1
Institutes		1
Newborn Brain Research Institute		3
Schools and colleges		3
School of Global Health — on hold		3

Santa Barbara

Campus and Program	Degree	Status
Undergraduate programs		
Electrical and Computer Engineering (College of Creative Studies)	B.S.	4
Language, Culture and Society	B.A.	4
Biotechnology and Pharmacology	B.S./M.S.	3
Cultural Studies (College of Creative Studies)	B.A.	2
Childhood Studies (Graduate School of Education)	B.A.	1
Conservation Biology	B.S.	1
Probability and Statistics (College of Creative Studies)	B.S.	1
Religious Studies	B.A./M.A.	1

Status: 1 – Suggested for list   3 – Campus administration review
2 – Department review 4 – CCGA CPEC review

Campus and Program	Degree	Status
Graduate programs		1
Applied Linguistics	M.A.	2
Art	M.A.	2
Earth Surface Sciences	Ph.D.	2
Financial Mathematics and Statistics	M.S.	2
Geophysics	Ph.D.	2
Materials, Joint doctoral program with Ecole Polytechnique	Ph.D.	2
Technology Management and Commercialization	M.S.	2
Asian American Studies	M.A./Ph.D.	1
Black Studies	M.A./Ph.D.	1
Bioengineering/Bio-Physical Sciences	M.S./Ph.D.	1
Dance	M.F.A.	1
Educational Sciences (Gevirtz Graduate School of Education)*	Ph.D., M.A.	1
Writing for Performance	M.F.A.	1
Asian American Studies	M.A./Ph.D.	1

Santa Cruz

Campus and Program	Degree	Status
Undergraduate programs		
Applied Mathematics & Statistics*	B.S.	3
Cognitive Science*	B.S.	3
Physics Education*	B.S.	3
Jewish Studies	B.A.	2
Robotics Engineering (previously Mechatronics)	B.S.	2
Studies in Performance*	M.A.	2
Graduate programs		2
Art Practice with a Global Reach*	Ph.D.	2
Coastal Policy	M.A.	2
Comparative U.S. Studies	Ph.D.	2
Computer Game Design	M.S.	2
Electrical Engineering	M.Eng.	2
Feminist Studies	Ph.D.	2
Global Health (UC School of Global Health)*	M.S.	2
Latin American & Latino Studies	Ph.D.	2
Planetary Sciences	M.S./Ph.D.	2
Public Health*	M.P.H.	2
Software Engineering	M.S./Ph.D.	2
Studies in Performance*	M.A.	2

Status: 1 – Suggested for list   3 – Campus administration review
2 – Department review   4 – CCGA CPEC review

This list and the table on page 8 will be updated to include UC Merced program plans when the Commission receives the information.

Appendix D New Community College Programs

These programs were authorized by the Chancellor's Office. They were not subject to review by CPEC because of the revised review agreements, as outlined on page 3.

College	Approved	Discipline	Degree or Certificate
Allan Hancock	May 2007	Culinology	Degree
	March 2007	Electronics Technology: Mechatronics	Both
		Engineering Technology: Mechatronics	Both
American River	December 2006	Accounting Clerk	Certificate
		LVN 30-Unit	Certificate
	March 2007	Apprenticeship: Electrical Residential	Certificate
	June 2007	Telecommunications Specialist Certificate	Certificate
Antelope Valley	April 2007	Firefighter I Academy	Certificate
Bakersfield	September 2006	Wildland Fire Technology	Degree
Barstow		Residential Electrical	Both
Canyons	August 2006	Automotive Technology	Both
		Culinary Arts	Degree
		Recreation Management	Degree
	October 2006	Construction Management Technology	Both
		Land Surveying	Both
	April 2007	Building Inspection	Certificate
Cerritos		Arts-Dance	Degree
Chabot	September 2006	Apprenticeship: Drywall Finishing	Certificate
		Apprenticeship: Painters	Certificate
Citrus	February 2007	Emerging Theatre Technologies	Certificate
	March 2007	Registered Nursing	Degree
Crafton Hills	November 2006	Environmental Science (AS)	Degree
		Multiple Sciences (AS)	Degree
		Social Science (AS)	Degree
	August 2006	Early Learning	Certificate
		3D Computer Animation	Certificate
		Business Administration (AA)	Degree
		Computer Assisted Graphic Design	Certificate
		Webmaster I	Certificate
Cuyamaca	December 2006	Social Work	Degree
		Early Childhood Intervention	Both
De Anza	March 2007	Enterprise Security Professional	Both
Diablo Valley	July 2006	Technical Theatre	Degree
	June 2007	Business – Transfer	Both

College	Approved	Discipline	Degree or Certificate
Evergreen Valley		Retail Management (WAFC)	Both
Feather River	September 2006	Health, Physical Education & Exercise Studies	Both
Foothill	July 2006	Informatics	Both
		Business Technology: Help Desk/Tech Support	Both
		Enterprise Networking	Both
	April 2007	Oracle Database Administration Career Certificate	Certificate
	June 2007	Apprenticeship: General Electrician	Both
		General Electrician	Both
Fresno City	February 2007	Logistics & Distribution Management	Certificate
Fullerton	January 2007	Physical Education	Degree
Glendale	August 2006	Insurance Specialist	Both
Grossmont		American Sign Language (AA)	Both
Imperial Valley		History	Degree
	June 2007	Liberal Studies-SDSU Teacher Preparation Option	Degree
LA Valley	August 2006	Hebrew Studies	Degree
Las Positas	March 2007	Apprenticeship: Bridgestone/Firestone	Certificate
Los Medanos	July 2006	Environmental Science	Degree
	August 2006	Process Technology	Both
Merritt		Dietary Manager (Diabetic Service Supervisor)	Certificate
Mira Costa	March 2007	LVN - RN Career Ladder	Both
Mission		University Transfer Studies	Degree
Moorpark	December 2006	Anthropology	Degree
Mt. San Antonio	May 2007	Hospitality: Hospitality Management - Level I & II	Certificate
		Hospitality: Restaurant Management - Level I & II	Certificate
	June 2007	Licensed Welder	Certificate
		Licensed Welder: Automotive Welding, Cutting & Modification	Certificate
		Licensed Welder: Gas Tungsten Arc Welding	Certificate
		Licensed Welder: Semiautomatic Arc Welding	Certificate
Orange Coast	November 2006	Community Nutrition Assistant	Certificate
	October 2006	Electronics Technology: Automation & Motor Control	Both
		Electronics Technology: Electronic Communications Technician	Both
		Electronics Technology: Electronics Assembler Technician	Both
		Electronics Technology: Computer Hardware Technician	Both
	November 2006	Medical Assisting: Clinical	Certificate
Oxnard		Dental Assisting	Certificate

College	Approved	Discipline	Degree or Certificate
Palomar	August 2006	Apprenticeship: Inside Wireman	Both
	June 2007	Apprenticeship: Plasterer	Both
		Apprenticeship: Residential Wireman	Both
		Public Works Management - Level II	Both
		Alcohol and Other Drug Studies	Both
		Entertainment Technology	Certificate
		French - AA	Both
Pasadena City	September 2006	Biological Technology Computational Biology	Certificate
		Biological Technology Stem Cell Culture	Certificate
Redwoods		Culinary Arts	Degree
		Restaurant Management	Degree
Reedley	May 2007	Airframe	Certificate
		Powerplant	Certificate
Rio Hondo		Chicano Studies	Degree
Riverside	September 2006	Business Administration: Human Resources	Both
	April 2007	Insurance: Casualty and Life	Both
Sacramento City	March 2007	Engineering, Civil Engineering	Degree
		Engineering, Electrical/Computer Engineering	Degree
		Engineering, General	Degree
		Engineering, Mechanical/Aeronautical	Degree
		Web Developer	Both
		Webmaster, Level 2	Certificate
San Bernardino Valley	August 2006	Machine Technology	Certificate
	November 2006	Family Child Care Provider	Certificate
	January 2007	Pharmacy Technician	Both
San Diego City	August 2006	Manufacturing Engineering Technology	Degree
		Apprenticeship: Machining Trades	Both
		Apprenticeship: San Diego Transit Electronic Technician	Both
San Diego Miramar	November 2006	Fitness Specialist	Certificate
		Apprenticeship: San Diego Transit General Mechanic	Both
San Francisco City	September 2006	Chinese	Degree
		French	Degree
	June 2006	General Business	Degree
	September 2006	Italian	Degree
		Japanese	Degree
		Spanish	Degree
	November 2006	Motorcycle Maintenance Technician	Both
	February 2007	English	Degree
		Computer Networking and Information Technology	Degree
San Joaquin Delta	March 2007	American Sign Language	Certificate
Santa Monica	January 2007	Web Programmer	Both

College	Approved	Discipline	Degree or Certificate
Santa Rosa	August 2006	Automotive Technology	Degree
		Medical Assisting: Administrative	Degree
		Medical Assisting: Clinical	Degree
	September 2006	State Correctional Peace Officer	Certificate
		Psychology	Degree
		Agriculture Science, Education and Communication	Degree
		Interactive Media Design	Both
		Veterinary Technician	Certificate
Santiago Canyon		Apprenticeship: Operating Engineers, Heavy Duty Repairman	Both
		Apprenticeship: Operating Engineers, Heavy Equipment Operator	Both
		Apprenticeship: Operating Engineers, Inspection Option	Both
		Apprenticeship: Operating Engineers, Rock Products Industry	Both
Sequoias		Administration of Justice	
Shasta	March 2007	Forest Science and Technology	Degree
Sierra	December 2006	Psychology	Degree
		Recreation Management	Degree
	January 2007	Art History	Degree
Siskiyous	June 2007	Nursing (LVN-RN Step-Up) Program	Both
Southwestern	March 2007	Business Management	Both
		CIS: Computer Programming with Emphasis on Applications	Both
		CIS: Microcomputer Office and Technical Supports Skills	Both
		Insurance	Both
		Medical Assistant-Administrative	Both
		Medical Assistant-Clinical	Both
		Medical Insurance and Coding	
		Medical Interpretation (Spanish-English)	
		Medical Office Management	
Victor Valley	May 2007	Aviation Maintenance Technology	Degree
		Aviation Maintenance Technology: Aviation Airframe	Certificate
		Aviation Maintenance Technology: Aviation Powerplant	Certificate
West Hills-Coalinga	December 2006	Precision Agriculture	Both
West LA	December 2006	Computer Network & Security Management	Both
	January 2007	Hospitality	Both

Appendix E Commission Assignment of Degree Programs to Discipline Area

Biological Sciences

Animal Science	Biology	Biochemistry	Bioinformatics
Biostatistics	Bioengineering	Ecology/Plant Science	Marine Biology
Molecular Biology	Physiology	Physical Education/Kinesiology	

Education

Cognition	Child Development/Studies	Education/Administration	Educational Leadership
Special Education	Recreation Administration		

Health Sciences

Audiology	Epidemiology	Medicine	Nutrition
Nursing	Physical Therapy	Pharmacy	Public Health

Humanities

Art & Art History	Cultural Studies	Communication	Dance
Ethnic Studies	Foreign Language	English	Feminist Studies
Film	Linguistics	Philosophy	Rhetoric
Religious Studies	Music	Theatre	Visual Arts

Physical Sciences

Chemistry	Chemical Engineering	Computer Science	Earth Science
Engineering	Geophysics	Environmental Science	Mathematics
Materials Science	Physics	Statistics	

Professional Studies

Accountancy	Business Administration	Global Logistics	Law
Public Policy/Admin.	Risk Management	Social Work/Welfare	Taxation
Urban Studies/Planning			

Social Sciences

Anthropology	Community Development	Economics	Human Development
Geography	History	Liberal Studies	Legal Studies
Political Science	Psychology	Social Justice	Sociology