

Background Paper:

COLLEGE-TO-CAREER PATHWAYS: GETTING FROM HERE TO THERE ON THE ROADMAP FOR A STRONGER CALIFORNIA ECONOMY

Authored by:

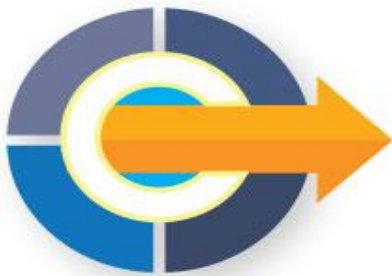


CAREER LADDERS PROJECT



JOBS FOR THE FUTURE

Prepared for:



CALIFORNIA COMMUNITY COLLEGES

Task Force on WORKFORCE

JOB CREATION AND A STRONG ECONOMY

Discussion Category:

- ☐ 1. Workforce Data & Outcomes
- ☐ 2. Curriculum & Instructors
- ☒ 3. Structured Career Pathways & Student Support
- ☐ 4. Funding
- ☐ 5. Regional Coordination

College-to-Career Pathways: Getting from Here to There on the Roadmap for a Stronger California Economy

INTRODUCTION

The Board of Governors Task Force on Workforce, Job Creation and a Strong Economy is charged with establishing a roadmap for California Community Colleges to strengthen the state's economy by closing the middle-skill gap. Stakeholder meetings around the state identified **career pathways** as a framework for systemic change. Career pathways provide the structures, systems, and guidance for transitions from high school through college, propelling more youth and adults toward well paying, skilled careers.

Specifically, the 14 Regional College Conversations advanced these ideas:

- Develop strategies and structured industry-informed pathways that are regionally aligned so that high school students can more seamlessly transition to community college career technical education (CTE) certificates and/or transfer degrees.
- Develop and extend CTE model curricula (e.g., SB1440) into high schools to enable dual enrollment and create CTE pathways between high schools and community colleges.
 - Generate support for interdisciplinary collaborations (not just CTE) to create specific pathways between and among all disciplines.
 - Align the basic skills curriculum, including ESL, with workplace skill requirements.
- Expand the definition of pathways and create structured pathways for non-traditional students such as displaced workers, veterans, and adults.
- Create, fund, and support campus hubs that foster CTE student success by providing a variety of services including career exploration, CTE pathways and education planning, work-based opportunities, and foundational workplace/career skills. Provide tools in support of these campus hubs.

Further reinforcing the need for campus hubs, the five Strong Workforce Town Halls voted the following as a top priority: **Develop more work-based learning opportunities offered in partnership with career technical education in order to improve day-one readiness of student hires.**

This paper draws on research and promising local practices to provide a context, rationale, and strategies for advancing career pathways. In it, we discuss:

- How career pathways can increase postsecondary and economic success.
- Key elements of career pathways that promote this success.
- Examples of California practice and policy that are consistent with career pathways.
- The crucial role community colleges can play as catalysts for change.
- Barriers to expanding career pathways in California and recommendations for removing them.

WHY CAREER PATHWAYS?

Career pathways offer an important framework for increasing student completion of educational goals. Improving student outcomes in community colleges is essential if California is to address projected shortfalls in postsecondary diplomas and meet employer needs for a skilled workforce. However, according to the California Community College's Student Success Task Force (2012) "only about half of degree-seeking students achieve their educational goal—for Latinos and African-Americans the rate is even lower."¹

Career pathways address many of the barriers to goal completion. They structure education, training, and career advancement in a seamless continuum across K-12, postsecondary, workforce, and employer systems to enable youth and adults to build academic and technical skills, attain credentials, and successfully enter and advance within a field or career. They provide a framework of evidence-based practices that deliver students access to relevant coursework and work-based learning, enhance student engagement, and ensure that students earn postsecondary credentials and degrees that prepare them for skilled jobs and further education.²

Nationally and in California career pathways have begun to gain traction. To continue its momentum, California must cultivate and expand a regional approach with collaboration between K-12 school districts, postsecondary institutions, the workforce system, and employers. This multi-system approach is a key element of career pathways success, as evidenced by thriving initiatives such as Linked Learning, California Partnership Academies, the Career Advancement Academies (CAA), the Career Technical Education Pathways Program, regional career pathways consortia supported by the California Career Pathways Trust investments, and Deputy Sector Navigators, which, with recent Doing What Matters for Jobs and the Economy investments, work to align high-school-to-community-college career pathways with priority and emerging industries in every region.

KEY ELEMENTS OF EFFECTIVE CAREER PATHWAYS

Well designed career pathways can help people of all ages pursue and attain the education, training, and credentials necessary for skilled jobs in today's high-growth industries and occupations. Career pathways are especially effective for individuals with low skills or other barriers to postsecondary education and employment. Each key element of career pathways addresses prevalent problems that impede student success. Following is an outline of these elements:

1. RIGOROUS, SEQUENTIAL, AND CLEARLY ARTICULATED COURSEWORK

An average community college student accumulates substantially more credits than required and takes more time to earn credentials because course-taking lacks coherence, structure, and prescription. Many students are surprised to learn that some of their courses do not count toward their major due to a dearth of clearly defined course sequences and numerous course options within a given discipline that don't correspond to final certificate or degree requirements.^{3, 4}

Pathways coursework should integrate student-centered training in academic and technical skills and backward mapping to ensure that courses are aligned and sequenced at all levels of the pathway, enabling students to seamlessly transition from one level to the next. In addition, pathways should include foundational workplace skills learning, discussed in more detail below.

Curricula should be rigorous and contextualized in real-world applications. Community colleges can apply several strategies to balance flexibility in student course-taking with greater structure: clarifying course requirements for each credential and making required first-year courses more prescriptive; embedding proactive advising and education planning support in each program of study; incentivizing students to choose a program early on; allowing prescribed first-year courses to count toward credentials within a field of study; and making credentials stackable, so credits from a shorter-length certificate program count toward longer-term certificates and associate's degrees.

2. MULTIPLE ENTRY AND EXIT POINTS

Students often face obstacles when taking a break or deviating from their educational plans due to life circumstances. This strongly deters students from continuing their educations after a hiatus.

Career pathways include clearly marked on-ramps and off-ramps that enable students to enter, re-enter and exit at multiple points. Flexible strategies and services such as a modularized curriculum and/or prior learning assessments permit interruptions without derailing an education or career path, and result in increased access to family-sustaining careers and career advancement over a longer trajectory.

3. TRANSITION SUPPORT BETWEEN LEVELS OF THE PATHWAY

Transitions between different levels within a pathway (e.g., high school to college) represent critical junctures and potential loss points for students. The lack of bridge programs to help guide students from one level to the next makes it difficult for many students to earn postsecondary or industry-recognized credentials and successfully enter the labor market.

Support for students transitioning across systems can increase access to college and encourage completion, especially among low-income and underserved students transitioning to community colleges. Bridge programs, like those in the CAA initiative funded by the California Community Colleges Chancellor's Office (CCCCO), engage students in an accelerated learning experience and provide them with extra support services and contextualized instruction to foster progress along a career pathway.⁴ Bridge programs can also focus on day-one readiness and workplace foundational skills to ease transition to the workplace.

4. CAREER COUNSELING/NAVIGATION SERVICES THAT ARE PROACTIVE AND INTEGRATED WITHIN PATHWAYS

Students—particularly those most needing academic and career guidance—cannot always access the information necessary to make informed choices about their futures. Recent studies examining the labor-market value of credentials found great variation depending on specific credential length and program of study.⁵ This fact coupled with feedback from the Strong Workforce Town Halls affirms a need to increase student and family awareness of middle-skill occupations and industry sectors (e.g., advanced manufacturing, health care, global trade) by high school and as early as middle school.

Career navigation structures and routines that engage students are core components of career pathways. They provide up-to-date information, identify in-demand occupations

and essential job skills, offer information about the quality and cost of education and training programs, and identify the most efficient routes to valuable credentials and good jobs.

Current career navigation systems must move beyond traditional academic counseling to bring together the knowledge and expertise of career counselors, industry mentors, faculty advisors, and other professionals. For example, on several campuses, college counselors are working closely with program faculty to better understand pathways options on campus and at nearby colleges and to help students develop educational plans for credential attainment and pathways advancement. In many regions, high school counselors have collectively sought in-service training from Deputy Sector Navigators to better understand the industry sectors and occupational pathways that drive their regional economies.

In addition, improved data tools for students and families, community colleges, local workforce investment boards, employers, and other partners could facilitate outreach for early career exploration and awareness.

5. ORGANIZED AND COMPREHENSIVE SUPPORT SERVICES

Students in community colleges may need remediation, transportation and childcare, textbooks and supplies and additional supports. Underdeveloped and overwhelmed on-campus student support services often leave the most needy students without recourse.

Academic support services and wraparound services can prevent these obstacles from derailing a student's movement along a career pathway. Services may also include counseling to help learners manage work-life balance, stress, and other personal challenges; access to role models and mentors through peer cohorts or in academic and workplace settings; flexible schedules to accommodate individual needs; and access to financial aid and other public benefits that could support their credential attainment.

Funding and financial aid policies should account for these student needs. In addition, continued investment in Board of Governors (BOG) fee waivers, FAFSA completion, and long-term financial literacy is crucial. These services should be readily accessible to all students and proactively introduced to them at typical loss points.

Where possible, community colleges should coordinate other agencies and community-based organizations that specialize in these services and work to better connect the CalWORKS infrastructure with pathways.

6. EMPLOYER ENGAGEMENT

Educators and employers sometime seem to speak different languages, making it challenging to find shared goals and limiting employer engagement in education. Additionally, heavy course loads may inhibit faculty members from keeping up with current industry changes, trends, and technology. As a result, high schools and postsecondary institutions often lack the industry knowledge needed to provide various work-based learning opportunities and state-of-the-art technical courses.

Dialogue between colleges and employers can help ensure that career pathways incorporate skills and certifications that align with industry needs and provide employment in high-value fields. Employers have numerous opportunities to engage in

pathways development, including serving on advisory boards, developing curricula, providing work-based learning opportunities, and leading sector and regional partnerships.⁶ Career pathways offer a clear model for deeper relationships and increased goal alignment between colleges and industry. This model requires support for faculty engagement with industry partners and a cross-institutional infrastructure to reinforce this relationship, as exemplified by the Deputy Sector Navigators initiative.

7. WORK-BASED LEARNING AND CONTEXTUALIZED INSTRUCTIONAL STRATEGIES

Students who complete pathways without gaining day-one readiness skills and experience in their chosen fields will likely have difficulty finding jobs, because employers most often seek candidates with prior hands-on experience. Colleges must dedicate resources to help more students secure work-based learning and apprenticeship opportunities paired with CTE, just as they currently support transfer centers. Additionally, feedback from the Strong Workforce Town Halls reported widespread concern that students need better preparation on how to interact with employers to secure a job (e.g. interviewing and resume preparation skills) and day-one readiness and foundational workplace skills.

Work-based learning, such as internships and project-based learning opportunities, can help students apply their knowledge, gain valuable hands-on experience, and develop the day-one readiness and foundational skills necessary to secure and succeed in the labor market. Paid work-based learning and apprenticeship programs allow students to develop relevant skills while earning money to cover living expenses. Without access to these opportunities, many students will seek paid employment unrelated to their pathways and likely slow their pathways completion and career advancement.

Making instruction relevant to students' career interests can also improve outcomes such as course completion and persistence in college.⁷ Contextualizing math and English, English language learning, and general education will engage and retain students. In California, as part of the CAAs, more than 140 new contextualized courses have been delivered, many of them co-designed and co-taught by CTE and basic skills instructors. Washington's I-BEST program integrates adult basic skills training with career and technical education through a team-teaching model, rewarded through the state's funding formula, that leads to improved educational outcomes.⁸

8. STRATEGIES THAT ACCELERATE EDUCATIONAL AND CAREER ADVANCEMENT

Students may have difficulty maintaining momentum in college for reasons that range from challenging life circumstances to an inability to afford tuition to a lack of understanding of the relevance of their educational content. Issues that prolong completion raise the risk of non-completion.

Strategies that allow learners to simultaneously pursue multiple steps in a pathway can accelerate their progress while maintaining the quality and integrity of required learning. These may include program redesign, apprenticeships, credit for prior learning, and dual enrollment.

Dual enrollment has proven successful in supporting overall academic outcomes and improving the probability that students will graduate from high school, transition to a four-year college, persist in postsecondary education, and be less likely to require basic skills

courses in college.⁹ Prior learning assessment strategies that honor the learning and experience students have acquired through previous coursework and work experience can reduce the cost and time required to achieve meaningful outcomes within a pathway.

These strategies are especially helpful to returning, dislocated workers who need career transitions, and first-generation college students, who benefit from exposure to college culture and access to campus resources.

Leaders of K-12, community college, and state systems have made strides in these eight areas. But to provide stronger school-to-career routes **system wide**, but they must accelerate the pace of these changes.

RECENT HISTORY, CURRENT LEGISLATION, AND PROMISING PRACTICES

A multitude of reform efforts, partnerships, and initiatives are currently underway within the K-12, California Community Colleges, and workforce development systems to improve the pipeline from middle and high school to college and career and raise educational and economic outcomes for Californians. While this is a positive development, these efforts are, for the most part, discrete and not yet well integrated, and their sheer number can overwhelm local stakeholders. Fortunately, recent years have brought about growth in cross-systems efforts to create pathways in key regional sectors, increasing attention and funding. Recent federal legislation and funding streams have also moved in this direction.

California's movement toward aligning career pathways to regional economies provides momentum, resources, and infrastructure upon which to build a more systemic approach. This progress is evident in the following developments:

The California Workforce Investment Board (CWIB) State Plan (2013-2017) outlines a five-year strategy to scale up existing regional networks and industry sector partnerships and spread this model to new regions. It also funds innovations to better meet regional workforce needs. The CWIB has begun developing a four-year state strategic plan, due March 2016 for July 2016 implementation, to meet the new requirements of the recently enacted Workforce Innovation and Opportunity Act (WIOA). This new federal law provides additional impetus and funding for career pathways.¹⁰

The Chancellor's Office Doing What Matters for Jobs and the Economy (DWM) framework aims to close California's skills gap by supplying workers with in-demand skills for employers, creating relevant career pathways and stackable credentials, promoting student success, and helping Californians move into open jobs. DWM encourages regional coordination and planning of CTE and investments in priority and emergent sectors that drive regional economies.

The CTE Transitions Fund was established by the CCCCCO in 2011 to help CTE students transition from secondary to postsecondary education and into the workforce. Using local assistance funds from the federal Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV), the CTE Transitions Fund helps designated colleges address five objectives: outreach/career exploration, articulation, concurrent enrollment, credit by exam, and work-based learning.¹¹

The California Career Pathways Trust (CCPT), led by the California Department of Education (CDE) in collaboration with CCCCCO and CWIB, has offered competitive funds to regional consortia across the state. CCPT supports K-14 programs that provide sequenced pathways of integrated academic and career-based CTE, align to current or emerging regional needs, and lead students to a postsecondary degree or certification in a skilled, well paying, high-growth field.

The Governor's proposed budget 2015-2016 supports current state-level efforts to invest in CTE and improve coordination between CTE programs offered through the K-12, community college, and adult education systems. The Governor's budget message notes multiple overlapping regional workforce entities and initiatives and calls for a broader strategy to align them into a coherent state plan.¹²

The proposed budget also provides funds to expand the California Community College Apprenticeship Programs and create innovative apprenticeship demonstration projects that focus on new and emerging California industries with unmet labor-market needs. This proposed investment complements U.S. Department of Labor grants to expand in-demand job training and innovative apprenticeship models.

The Statewide Career Pathways Project, led by the Academic Senate of the California Community Colleges (ASCCC), is developing stronger school-to-college articulation, creating articulation templates, and supporting faculty in expanding articulation agreements across the state.

Recent legislation also increases a focus on creating streamlined transitions:

Career Technical Education Pathways Program SB-1070 (2012) requires the CCCCCO and the Superintendent of Public Instruction to improve linkages and CTE pathways between high schools and community colleges through contracts and competitive grants. Program objectives include focusing on regional priority/emergent industry sectors, taking effective practices to scale, integrating and leveraging programming between funding streams, promoting common metrics for student success, and removing structural barriers to implementation.

Transfer Model Curriculum SB-1440 (2010) requires California Community Colleges to grant an associate degree for transfer (ADT) once a student has met specified general education and major requirements for the degree. Upon completion of the degree, the student is guaranteed a place at junior status in the California State University (CSU) system. These AA-T and AS-T degrees are designed to increase transfer rates and educational advancement.

The Student Success Act SB-1456 (2012) aims to improve degree completion and transfer rates. The resulting Student Success and Support Program (SSSP) mandates that community colleges fully implement and track core matriculation services including orientation, assessment, counseling, advising, and Student Education Plan (SEP) development. To receive SSSP funding, districts and colleges must agree to implement the accountability scorecard and common assessment system adopted by the Board of Governors.

Student Equity Plan SB-860 (2014) requires community colleges to prepare equity plans in alignment with the colleges' annual SSSP plans. Each college must identify

strategies to monitor and address student equity issues, as well as to mitigate any disproportionate impact on student access and achievement. Equity plans now address a variety of at-risk students, such as foster youth, veterans and low-income individuals, as well as students from diverse and historically underserved demographic groups.

The CCCCCO Bachelor Degree Program Pilot SB-850 (2014) at 15 community colleges will offer B.A. or B.S. degrees in technical fields such as airframe manufacturing, automotive technology, dental hygiene, and respiratory therapy. These technical degree programs, not currently offered within the CSU system, provide important and accessible opportunities for students to continue their education and advance in their careers in these high-demand sectors.

PROMISING PRACTICES

California plays a leading role nationally in shaping the future of workforce development, with extensive leading-edge pathways work being done throughout the state. While no one initiative illustrates all the key practices, many provide visions for the future.

The following examples span a range of efforts—from single colleges working with their feeder high schools, to multiple colleges aligning within a community college district, to regional efforts across multiple counties and community college districts. These pathways redesign efforts demonstrate well coordinated regional approaches. All stakeholders, including WIBS, K-12 school districts, employers, and community partners, have been involved in the process, helping the colleges explore redesign questions, identify gaps in pathways, and create more coherent extended pathways and programs of study.

Partners have created visual pathway schematics that illustrate how students and job seekers can enter, exit, and re-enter college at key stages. Samples are attached as appendices to this paper.

The brief profiles below showcase innovative approaches being tested at various colleges:

CONTRA COSTA COUNTY: EXPLORING LINKED LEARNING AND STACKABLE CERTIFICATES

Working collaboratively with regional employers and the West Contra Costa Unified School District (WCCUSD), Contra Costa College (CCC) has redesigned its public service and law pathways offerings—including administration of justice and emergency medical services programs—to connect with nearby Linked Learning high school law and justice academies.¹³ CCC and high school faculty have engaged with employers to craft stackable certificate designs offering entry-level, intermediate, and advanced certificates on the way to A.S. degrees and transfer to four-year universities. Students can earn several industry certifications related to protective services, including Work Keys for police officer/security. To build out the pathway, the faculty has connected high-demand entry certifications in corrections, homeland security, and loss prevention for continued opportunities to earn longer-term certificates and degrees in Corrections, Law Enforcement and Administration of Justice. The newly designed pathways align with Linked Learning academies at De Anza, Pinole Valley, and Richmond high schools.

CCC and the WCCUSD have established two new dual enrollment courses that are integrated into the high school law academies, supporting high school students in earning college credits along the pathway. CCC and its partners also are crafting a two-year transfer pathway to pre-law baccalaureate programs at four-year universities, enabling students to build on their public

service and law certificates. With investments from the California Community College Linked Learning Initiative, the CCPT grant program, and the Community Colleges Pathways to Law School Initiative, CCC and WCCUSD have conducted meaningful pathways development in this sector. Connecting these diverse initiatives and grant-funding streams over time has enabled the partners to reassess and refine the pathway with employer input and to identify transition barriers across the entire pathway.

The partners continue to expand acceleration strategies—such as dual enrollment options, work-based learning, career exploration, youth summer bridge, and innovative assessment and course placement—that can strengthen the transitions between the Linked Learning high school law academies and the community college public service and law pathway. Early data from the Richmond High School law academy illustrate the work's value: among its 2012 cohort of students who transitioned into CCC's public services pathway, 88 percent completed a full state certification in the sector, 42 percent are working in the sector at least part-time, and 70 percent are continuing their college education.

SAN MATEO COUNTY: CREATING REGIONAL HEALTH CAREER PATHWAYS

The San Mateo County Community College District (SMCCCD), which includes Cañada College, San Mateo College and Skyline College, is a standout in pathways regionalization. SMCCCD has crafted a regional pathway to health occupations that articulates certificate and degree progressions and provides a bridge from basic skills to continuing education options at any of the three district colleges. Regional faculty and employers have collaborated to align allied health curricula, create more stackable certificate and degree options, and streamline health program prerequisites, ensuring that credits and courses are portable across the district. Students can now start at one college and move to either of the other two, building skills and employability over time.

As part of this process, the colleges have expanded CAAs, working with the Local Workforce Investment Board (LWIB) to help more students with low basic skills acquire the core competencies necessary to successfully enter an array of in-district healthcare programs.¹⁴ SMCCCD has forged strong partnerships with regional healthcare employers to better align program design with regional labor-market data, develop contextualized curriculum and clinical site training agreements, and support job placements for graduates, with a 90 percent job placement rate among allied health students.

At SMCCCD this initiative has sparked interest in CTE redesign in other departments. At Skyline College, the CAAs are now sustainable across multiple programs and serve as the key bridge to stackable programs that allow for college and career advancement in key sectors. To expand career pathways, college and district leaders are inviting new faculty and partners into the process and sharing lessons learned districtwide and across the state.

EAST BAY REGIONAL BIOSCIENCES PATHWAYS

As part of the Design It, Build It, Ship It (DBS) U.S. Department of Labor-funded initiative, focused on adults seeking new career skills, five East Bay community colleges—Berkeley City, Contra Costa, Laney, Ohlone, and Solano—have restructured local biosciences pathways across the region. To expand and clarify the regional educational biosciences infrastructure, faculty collaborated across four community college districts to design stackable certificate options at entry, middle, and advanced levels. The participating colleges used CCCCO's Center of Excellence data in biotech clusters to carefully assess their curricula and worked with regional employers to validate jobs and wages at each pathway exit point.

Responding to regional labor-market demand and bioscience student needs, the colleges are teaming up to ensure that each college recognizes the others' key courses. Using the Course Identifying Number system (C-ID) approach, five colleges have cross-referenced competencies and employer-validated skills to student learning outcomes in four courses, with the initial course meeting the University of California and CSU transfer requirements for life sciences. The regional design also integrates instructional bridges to engage young and re-entry adults in career opportunities. Faculty at Laney College and Contra Costa College are developing a jointly recognized course to meet certificate requirements at both.

PASADENA: BUILDING GRADE 9-14 PATHWAYS AT SCALE

Pasadena City College (PCC) aims to create a seamless and supported experience for grades 9-14 by focusing on students' transition from feeder Pasadena Unified School District (PUSD) high schools to college. Students with positive transition experiences are more likely to complete their program of study, transition to California State University in Los Angeles (CSULA), and improve their chances for career success.

PCC has developed First Year Experience Pathways programs in Design Technology and in Media Arts—with plans to develop more—to provide high school students with greater structure and transform their community college entry experience. Program components include priority registration, a summer bridge program focused on honing math skills, elevated support from a team of specially trained counselors, coaches, and tutors, and a first-year seminar aimed at providing rigorous academic instruction, career exploration opportunities, and college-success skills. Articulated transfer pathways ensure that PCC courses will count toward the major requirements at CSULA. PCC plans to designate a transfer liaison to help students in each pathway who wish to transfer to CSULA.

To increase high-school-to-college transition success, PUSD high school campuses host outreach, matriculation, and college courses. Dedicated PCC outreach specialists raise the visibility of design tech and media arts pathways among Linked Learning high school students, and help high school students complete the PCC matriculation process. Working closely with PUSD, PCC has developed pathway-aligned dual enrollment courses, which arm students with college credit while increasing their confidence.

COMMUNITY COLLEGES AS CATALYSTS FOR CHANGE

Stakeholders from Strong Work Force Town Halls recognized that community college campuses should be seen and organized as hubs to advance the vision of high-quality career pathways. Indeed, given their role serving diverse and often underserved populations, community colleges have a unique opportunity to be catalysts for change in the area of student support. To do so, community colleges must capitalize on their position as a nexus for career exploration and

preparation, reaching back to the high schools to smooth transitions to college and looking forward to align with four-year college expectations, regional labor-market needs, and industry-specific skills.

To best support all students, including CTE students, community colleges must create an on-campus student success nexus that provides career exploration, integrated academic and career pathways planning, and coordination of work-based learning opportunities. College faculty and staff would work with schools, business and industry to facilitate regional implementation and expansion of career pathways.

The new Student Success and Support Program provides colleges with an excellent opportunity to rethink student support services delivery, integrate more student supports specifically for CTE students, and establish long-term plans for occupational/career exploration, job-search preparation, work-based learning, and acquisition of day-one readiness and foundational skills.

Colleges should look to develop a student services model that includes cooperative education, work-based learning, and apprenticeships, preferably aligned with CTE programs/coursework. Embedding these underused services in a career pathway and connecting them to other support services could increase their effectiveness.

As colleges move to a more integrated model, some have begun to explore creative approaches to cross-systems services by co-locating services on their campuses:

- The Los Angeles Trade-Technical College (LATTC) Bridges to Success Center is a one-stop resource center that connects students with existing campus programs and community agencies. The LATTC center offers enrollment and academic support services, K-12 concurrent enrollment services, on-site GED classes, cooperative education options, job fairs, career training information, job leads, work-based internships, and community services.
- Skyline College in San Bruno has partnered with United Way of the Bay Area to open a SparkPoint Center on its campus—one of 10 SparkPoint Centers in the Bay Area and the only one housed at a community college. Inspired by the Annie E. Casey Foundation's Center for Working Families, which bundles core services to populations in need, Skyline College's SparkPoint Center blends community and campus support services, including employment and career pathways services, financial services, such as financial coaching and education, asset building, credit repair and debt reduction, Individual Development Accounts (IDA), a food pantry, legal assistance, help with tax preparation and access to the Earned Income Tax Credit, and application assistance for public benefits and financial aid. Partners include financial services institutions, non-profit and community organizations, regional and national philanthropic organizations, and the county Human Services Agency. The Employment Development Department has also co-located an office on site.

The Skyline College and LATTC centers are just two examples of how community colleges effectively leverage greater resources for students by connecting services across systems.

Virtual tools and services provide additional opportunities to support colleges and students systemwide. The Regional College Conversations suggested an expanded role for the

Chancellor's Office in centrally developing career exploration and planning, self-guidance, and other tools for use by campuses and students, based on the following rationale:

- The Chancellor's Office is prototyping a mobile app for early career exploration that incorporates the rich data found in the Salary Surfer with video vignettes of every certificate and degree offered across the community colleges. This work is supported by the Kellogg Foundation in partnership with the Foundation for California Community Colleges and the Young Invincibles.
- Chancellor's Office investments in ICanAffordCollege.org and CACareerCafe.com (including its downloadable app) can be expanded to offer more tools for career exploration.
- The Chancellors Office can revisit the SSSP's SEPs to address long-term career planning, including work-based learning and job search, day-one readiness, and foundational skills.
- The Foundation for California Community Colleges has developed Launchpath to scale up internships and industry engagement.¹⁵ It provides a matching service to connect employers and students for potential internships, and a "back office" service handling human resources and administrative tasks for employers. Work is underway to embed Launchpath functionality into CACareerCafe.

PERSISTENT BARRIERS TO DEVELOPING A CAREER PATHWAYS SYSTEM IN CALIFORNIA AND OPTIONS FOR MOVING FORWARD

The work currently being done to advance career pathways at the local, state, and regional levels is laudable, but it is not yet sufficient to develop career pathways in California without additional systems-level changes. The innovative local partnerships cited in this paper that have developed career pathways are exceptions rather than the rule. They are designed to solve larger systemic disconnects between different parts of the education-to-career pipeline and they do so in spite of, rather than because of, many inhibitive policies and prevailing practices.

To create an effective system of career pathways, policies and practices must align multiple systems, including secondary, postsecondary, and adult education, workforce development, economic development, and human services. Policymakers and systems leaders should heed the lessons of career pathways implementation to systemically eliminate barriers to student success and streamline transitions from education to career. The following recommendations provide a starting point to address some of the most urgent policy and practice changes needed to institutionalize pathways:

1. ESTABLISH A STATEWIDE SYSTEM, CTE — IDENTIFIERS (C-ID), FOR CAREER AND TECHNICAL EDUCATION COURSE NUMBERING AND TITLES THAT CREATE MECHANISMS TO ESTABLISH EQUIVALENCY.

The individualized nature of course development requires individual evaluation of each course when students attempt to transfer units between community colleges. Compounded by the varying efficiency among institutional review processes, the lack of course equivalency curtails the transfer of units within the community college system. The results:

delays in certificate or degree completion and possible duplication of coursework for students; for faculty and counselors, burdensome manual reviews of course curriculum.

A statewide C-ID system would create a shared language for course description and categorization, giving students more mobility within the system, expediting the determination of content and skill equivalencies across colleges, and helping ensure pathways integrity.

2. STREAMLINE THE TRANSFER AND USE OF STUDENT EDUCATION RECORDS ACROSS SEGMENTS.

Predominant methods for assessing student readiness may hinder student advancement within pathways. Colleges generally assess student readiness through placement tests, but research suggests that assessing multiple indicators of readiness is more effective than relying on a single test score, because placement test performance does not necessarily accurately reflect students' knowledge and skills.¹⁶ Students who enter into developmental courses as a result of placement tests face multiple risk factors for failure to complete pathways.

Using high school grades and GPA, for example, as measures to place students transitioning from high schools into community colleges has been shown to improve placement accuracy and reduce unnecessary remediation.¹⁷ To effectively address this issue, educational institutions, both secondary and postsecondary, need systemic mechanisms for accessing previous student performance data. The adult education system, local workforce investment system, and community colleges should also collect data against the same suite of common assessments and have a mechanism for data exchange.

A number of inefficiencies and friction points exist as students move from the K-12 to postsecondary system. These include timely transfer of transcripts, the manual assessment of these records to ensure credit and equivalency for completed coursework, and proper placement of students at receiving institutions.

The K-12 and postsecondary systems should integrate education planning tools to ensure a smooth and timely transition to an appropriate pathway that reduces redundancy for students and institutions. These tools include expansion of the existing electronic transcript systems, integration of courses into the common C-ID format to reduce manual interpretation of course equivalencies, and refinement of the use of multiple measures placement activities that incorporate transcript data for improved course placement and reduced remediation.

3. CREATE A COHORT FUNDING MODEL THAT INCENTIVIZES COLLEGES TO COMMIT TO A SET OF COURSES ALIGNED TO A SPECIFIC DEGREE OR CERTIFICATE.

Existing finance structures may limit student access to courses in their programs of study because funding is based on initial course enrollment without accounting for factors such as course placement or demand. As a result, colleges have little incentive to adjust course schedules to reflect current demand, and students enroll in non-required courses in order to maintain enrollment priorities and access to financial aid.

A cohort (local or regional) funding model that increases access by allowing colleges to expand in-demand course offerings aligned to a specific degree or certificate would support student completion. In addition it would also help expand access to coursework required by a student's certificate or degree program.

4. EMBED INDUSTRY CERTIFICATIONS, INCLUDING RELATED EXAMS AND ASSESSMENT OPPORTUNITIES, IN COURSEWORK.

While some existing pathways and programs of study incorporate industry credentials, others do not, and still others may incorporate credentials that are not aligned with employer needs in high-growth fields. Students who complete programs of study without earning industry-validated credentials may be at a disadvantage in the labor market. However, few incentives exist for aligning programs of study with labor market needs and embedding industry credentials. Florida is but one example of a state that ties funding to a vetted listed of industry-valued credentials.

Compounding the situation, most students are not well positioned to exploit existing opportunities to earn industry credentials, and often encounter a range of access issues such as fees and difficulties getting to a testing site.

Embedding industry credentials in pathways on college campuses would address the issue of persistence by creating a supported, structured way for students to complete coursework while attaining these credentials. Colleges should explore creative ways to defray student fees and dismantle other barriers to certification.

5. SCALE UP WORK-BASED LEARNING OPPORTUNITIES THAT ENABLE STUDENTS TO ACQUIRE SKILLS NEEDED FOR SUCCESS IN THE LABOR MARKET.

Stakeholders who participated in the Strong Workforce Town Halls identified a need for more robust strategies to embed work-based learning opportunities within pathways. Clarifying the range and length of effective work-based learning activities along a continuum can inform the level of infrastructure needed to support such opportunities systemically.

Recommendations include designing relevant curriculum models, developing tools to assist the field, tapping SSSP funds, and using funding from the Chancellor's Office via the student support hubs. These efforts must focus on day-one readiness, foundational workplaces and job-search skills to ensure relevancy and utility.

6. DEVELOP PROCESSES AND VEHICLES FOR EMPLOYER ENGAGEMENT THAT CAN BUILD SUPPORT FOR CAREER PATHWAYS ACROSS MULTIPLE STAKEHOLDER GROUPS.

A lack of coordinated efforts has contributed to low employer engagement. Employer feedback collected via Strong Workforce Town Halls indicated that sector strategies for organizing employers, as opposed to one-on-one outreach, hold promise for engaging employers.

Increased employer engagement would help college faculty anticipate labor-market trends, determine specializations, and validate skills and competencies. Clear statewide and regional sector strategies, aligned with other workforce development efforts, will reduce

confusion for employer partners and support sustainable collaboration. Effectual use of the Deputy Sector Navigators can assist faculty in pinpointing a region's priority and emergent sectors.

7. SUPPORT THE DEVELOPMENT OF COURSES AND PROGRAMS THAT INTEGRATE ACADEMIC AND TECHNICAL CONTENT.

Greater integration of math and English with technical coursework will help students contextualize what they are learning and promote student success across the curriculum. In California, the Chancellor's Office-funded CAAs have seeded this effort. Building on and scaling such work is an important next step.

Faculty need professional development and financing to: collaborate and integrate coursework; embed foundational skills within technical coursework; offer linked English/math and technical courses to cohorts of students; and/or team-teach career technical and basic skills.

Contextualizing and integrating general education coursework with programs of study also can improve student engagement and progress along the entire pathway. The opportunity to contextualize their learning will help prepare all students, no matter their educational and career goals, transition to the workforce.

8. BUILD STRUCTURES THAT ENABLE ACCELERATED AND SUPPORTED TRANSITIONS ACROSS COLLEGE AND CAREER PATHWAYS IN ORDER TO ENSURE CONTINUED STUDENT PROGRESS.

Students would benefit from greater integration of counseling and support services in their academic and technical programs. However little synergy exists between career pathways efforts and the SSSP. When advising occurs in isolation, rather than through a team approach, students may have difficulty navigating the often decentralized college campuses and programs.

Identifying points to integrate career pathways and the SSSP would help ensure that pathways successfully guide students through degree and credential programs. Where possible, regions should seek out opportunities to bring together college and non-college resources, such as in SparkPoint, to serve students systemically.

Additionally, educational institutions need a clear course sequence and streamlined dual enrollment and matriculation mechanisms. Dual enrollment helps mitigate the effects of developmental education on degree completion and lessens the time students need to attain certification. Matriculation offers additional opportunities for career pathways advancement by removing barriers to enrollment.

9. ESTABLISH SHARED DATA SYSTEMS THAT PROMOTE COLLABORATION AND CREATE A STANDARD LANGUAGE FOR STATEWIDE AND DISTRICT INITIATIVES ACROSS STATE AGENCIES, INCLUDING THE WORKFORCE INVESTMENT BOARD, CALIFORNIA DEPARTMENT OF EDUCATION, AND K-12 DISTRICTS AND COLLEGES.

This formalization will vastly reduce role confusion and increase accountability statewide. With a shared data system, stakeholders can easily access career pathways data to assess student outcomes and knowledge gaps.

CONCLUSION

The development of robust pathways systems is an opportunity for California Community Colleges to better serve students while simultaneously strengthening the state's economy. While California boasts some emerging examples of successful career pathways, an effective career pathways **system** cannot exist until all stakeholder systems align.

This alignment will require systemic changes in the culture, organization, and delivery of education, workforce development, and social support programs. In addition, key leaders will need to establish critical policy infrastructure to remove barriers and encourage pathways development. Statewide collaboration will be critical to guarantee that all stakeholders share an understanding of career pathways models and the elements necessary to promote student success and economic growth: statewide vision for career pathways systems, best practices, and technical assistance.

The work led by the Board of Governors Task Force on Workforce, Job Creation and a Strong Economy presents an opportunity for California Community Colleges to take a lead in designing and implementing educational innovations that benefit students, their communities, and the state as a whole. By aligning systems and removing barriers, the seminal work being done can improve and flourish to serve students and enhance workforce outcomes across the state.

¹ See California Community Colleges Chancellor's Office. (2012). *Executive Summary, California Community Colleges Student Success Task Force*, 1. Sacramento, CA: California Community Colleges Chancellor's Office. Retrieved from http://californiacommunitycolleges.cccco.edu/Portals/0/Executive/StudentSuccessTaskForce/SSTFSummary_FINAL_012412.pdf

² There are many definitions of career pathways, and much recent work to better refine the key elements of high quality pathways. In 2012, the Center for Law and Social Policy worked with 10 states—Arkansas, California, Illinois, Kentucky, Massachusetts, Minnesota, Oregon, Virginia, Washington, and Wisconsin—to develop the Alliance for Quality Career Pathways Framework to establish a common understanding of quality career pathways and systems. Information on the framework can be found at: <http://www.clasp.org/issues/postsecondary/pages/aqcp-framework-version-1-0#sthash.Ihck89SD.dpuf>. In 2012, the U.S. Departments of Labor, Education, and Health and Human Services issued a joint letter of commitment to promote the use of career pathways and to use a common definition. The letter can be found at http://s3.amazonaws.com/PCRN/docs/RPOS_2012/Joint_Letter_Career_Pathways.pdf.

³ For example, students earning a community college certificate earn on average twice as many credits as needed for a certificate. See Complete College America. (2012). *Guided pathways to success: Boosting college completion*. Washington, DC: Complete College America. Also see Zeidenberg, M. (2012). *Valuable learning or "spinning their wheels"? Understanding excess credits earned by community college associate degree completers* (CCRC Working Paper No. 44). New York, NY: Community College Research Center, Teachers College, Columbia University.

⁴ Funded by the CCC Chancellor's Office (via SB70 and SB1070) and matched with public and private dollars, the CAAs build bridges to college for underprepared, unemployed youth and young adults in CCC. They integrate work readiness, career guidance, support services, contextualized basic skills, and professional-technical training in pathways in key regional demand sectors. CAAs leverage support from local Workforce Investment Board and community partners to provide wraparound supports for participants in this cohort-based approach. CAAs are operating in several regions of California.

⁵ See the following: Dadgar, M. & Timble, M. J. (2014). *Labor market returns to sub-baccalaureate credentials: How much does a community college degree or certificate pay?* Washington, DC: American Educational Research

Association; Belfield, C., Liu, Y. T., & Trimble, M. J. (2014). *Labor market returns to community college: Evidence from North Carolina*. New York, NY: Center for Analysis of Postsecondary Education and Employment; Xu, D. & Trimble, M. J. (2014). *What about certificates? Evidence on the labor market returns to non-degree community college awards in two states* (CAPSEE Working Paper). New York, NY: Community College Research Center, Teachers College, Columbia University.

⁶ See Bragg, D. D., Hamm, R. E., & Trinkle, K. A. (1995). *Work-based learning in two-year colleges in the United States*. Berkeley, CA: National Center for Research in Vocational Education.

⁷ See for example: W.C. Wiseley, *Effectiveness of Contextual Approaches to Developmental Math in California Community Colleges* (Doctoral Dissertation, University of the Pacific, 2009); D. Jenkins, M. Zeidenberg, & G. Kienzl, *Educational Outcomes of I-BEST Washington State Community and Technical College System's Integrated Basic Education and Skills Training Program: Findings from a multivariate analysis* (Community College Research Center, May 2009).

⁸ <http://ccrc.tc.columbia.edu/publications/how-i-best-works.html>

⁹ The Community College Research Center, working with the James Irvine Foundation and the Career Ladders Project, tracked outcomes for dual enrollment for 3,000 students across California, participating in eight dual enrollment programs across the state. The initiative was designed to demonstrate the efficacy of career-focused dual enrollment for low-income and academically-at-risk youth in California. See Hughes, Rodriguez, Edwards and Belfield (2012). *Broadening the Benefits of Dual Enrollment: Reaching Underachieving and Underrepresented Students with Career-Focused Programs*. New York, NY: Community College Research Center (CCRC) at Teachers College, Columbia University.

¹⁰ The California Workforce Investment Board (CWIB) has formed the WIOA Implementation Workgroup (Workgroup) to develop the state's implementation strategy. WIOA will enact standardized requirements and common measures for sector partnerships and career pathways strategies, accompanied by new performance accountability provisions. WIOA has a particular focus on getting vulnerable populations, such as dislocated workers, low-skill adults, and out-of-school youth, ready to work with marketable skills. WIOA also reauthorizes the Adult Education and Family Literacy Act (AEFLA), with revisions aimed at strengthening the connections among adult education, postsecondary education, and the workforce; and at improving services to English language learners. See concise summary of WIOA at California Workforce Association website: <http://www.calworkforce.org/wioa.html>

¹¹ When Tech Prep was omitted from the 2011-2012 federal budget as a part of Perkins IV, the CCCCO chose to invoke the 10 percent reserve option from the Title I-C funding. The intent of this funding is to preserve Tech Prep's primary mission to facilitate the transition of CTE students from secondary to postsecondary to high skill, high wage, and high demand occupations by funding statewide CTE Transitions consortia. CTE Transitions funding is expected to continue until the current Carl D. Perkins Act of 2006 is reauthorized. For more information, go to:

<http://extranet.cccco.edu/Divisions/WorkforceandEconDev/CareerEducationPractices/PerkinsIV/CTETransitions.aspx>

¹² The Governor notes: "These investments serve as the first step toward a broader strategy of aligning 49 workforce investment boards, 72 community college districts, more than 1,000 other local educational agencies, and the employment programs of 58 human services agencies. They will also provide a framework for workforce investment in California that coordinates local, state, and federal resources within 15 economic development regions defined by regional and industry workforce needs." (See <http://www.ebudget.ca.gov/fullbudgetsummary.pdf>, p. 50)

¹³ Linked Learning, supported by the James Irvine Foundation, is a high school transformation strategy that integrates rigorous academics with real-world experiences to ensure that graduates are both college- and career-ready. The California legislature recently expanded Linked Learning pilots based on promising results emerging from Irvine's California Linked Learning District Initiative. In concert with these efforts, the Career Ladders Project launched the California Community College Linked Learning Initiative to align high school and community college pathways and to advance policies and practices that ease the transition from high school to college.

¹⁴ The allied health CAA at Skyline and Cañada Colleges offers an accelerated cohort experience for students that incorporates contextualized basic math, English and ESL curricula, an orientation to healthcare pathways with clinical and worksite experiences, and support services integrated with LWIBs.

¹⁵ For more information on Launchpath, go to <http://www.launchpath.com/>

¹⁶ See Scott-Clayton, J. (2014). "Ready or not: How multiple measures of college readiness can help reduce unnecessary remediation." *Teachers College Record*. New York, NY: Community College Research Center, Teachers College, Columbia University.

¹⁷ Research shows that cumulative GPA and course grades are much stronger predictors of gatekeeper course success in math and English compared with the standardized assessment scores. For example, a CCRC study in North Carolina showed that the use of GPA would reduce the error in placement in half. See Belfield, C. R. & Crosta, P. M. (2012). *Predicting success in college: The importance of placement tests and high school transcripts* (CCRC Working Paper No. 42). New York, NY: Community College Research Center, Teachers College, Columbia University. Another study using data from 12 colleges in California found that both cumulative GPA and subject specific course grades were strong predictors of success in college gatekeeper courses. See Willett, T. (2013). *Student transcript-enhanced placement study (STEPS) technical report*. Sacramento, CA: The Research & Planning Group for California Community Colleges.

APPENDICES

PATHWAYS TO PUBLIC SERVICE & LAW - Contra Costa College and WCCUSD



B.A/B.S. Pre-Law Major options

B.S. Criminal Justice Administration CSU East Bay

Police Academy, min age 21, A.S. plus B.A.

INDUSTRY CERTIFICATION

National Security Associate

POST (Peace Officer Standards and Training) Commission

AA/J.A.S Degree/Transfer

A.A. Political Science

Pre-Law Pathway

A.S. Administration of Justice: Corrections

A.S. Administration of Justice: Law Enforcement

A.S. and A.S.T. Administration of Justice

General Education

JOBS & WAGES

Probation Officer, Correctional Treatment Specialist: requires B.A. Degree, \$27-\$50/hr
Corrections Officer: \$24-\$38/hr
Police Patrol Officer: \$25-\$53/hr
Juvenile Counselor: Degree in Corrections \$14-\$40/hr

Mid-Level Certificate

Fire Arms Certificate

Law Enforcement Certificate of Achievement

Corrections Certificate of Achievement

Homeland Security Certificate of Achievement

Loss Prevention Certificate of Achievement

Loss Prevention: \$10-\$28/hr Retail/Grocery
Transportation/Logistics
Armed Patrol Officer: \$9-\$20/hr
Security Operator: \$14-\$19/hr

ADJUS, required courses

Security Academy, ADJUS 164 Coop Ed

Entry Level Certificate

Work Keys (Police Officer/Security)

Baton License

Powers to Arrest

OC Spray Certification (Pepper Spray)

Security Specialist, 12 units

Summer Bridge

Security Officer: \$9-\$19/hr
Police Aide: \$10-\$12/hr
Transportation Security Screener: \$16-\$22/hr

Transition Supports and Activities for West Contra Costa Unified School District Students (includes Summer Bridge Prep)

DE ANZA H.S. LAW ACADEMY

Instruction	WBL	Matriculation
Capstone	Summer Internship Center YD	CCC Application & Early Assessment CCC Faculty visits
Law and Justice (Criminal Law)		CCC Faculty visits
Intro to Law	Criminal Justice Guest Speakers Police St. Visit	CCC Faculty visits
		CCC Faculty visits

PINOLE VALLEY H.S. LAW & JUSTICE ACADEMY

Instruction	WBL	Matriculation
Dual Enrollment: ADJUS 135 Law and Democracy	Summer Internship Center YD	CCC Application & Early Assessment CCC Faculty visits
Dual Enrollment: ADJUS 121 Concepts of Criminal Law ADJUS 122 Criminal Procedure		CCC Faculty visits
	Criminal Justice Guest Speakers Police St. Visit	CCC Faculty visits
		CCC Faculty visits

RICHMOND H.S. LAW & JUSTICE ACADEMY

Instruction	WBL	Matriculation
Dual Enrollment: ADJUS 135 Law and Democracy	Summer Internship Center YD	CCC Application & Early Assessment Student Success Workshops w/CCC
ROP Classes		CCC Faculty visits
Dual Enrollment: ADJUS 121 Concepts of Criminal Law ADJUS 122 Criminal Procedure		CCC Faculty visits
ROP Classes	Criminal Justice Guest Speakers Police St. Visit	CCC Faculty visits
ROP Classes		CCC Faculty visits

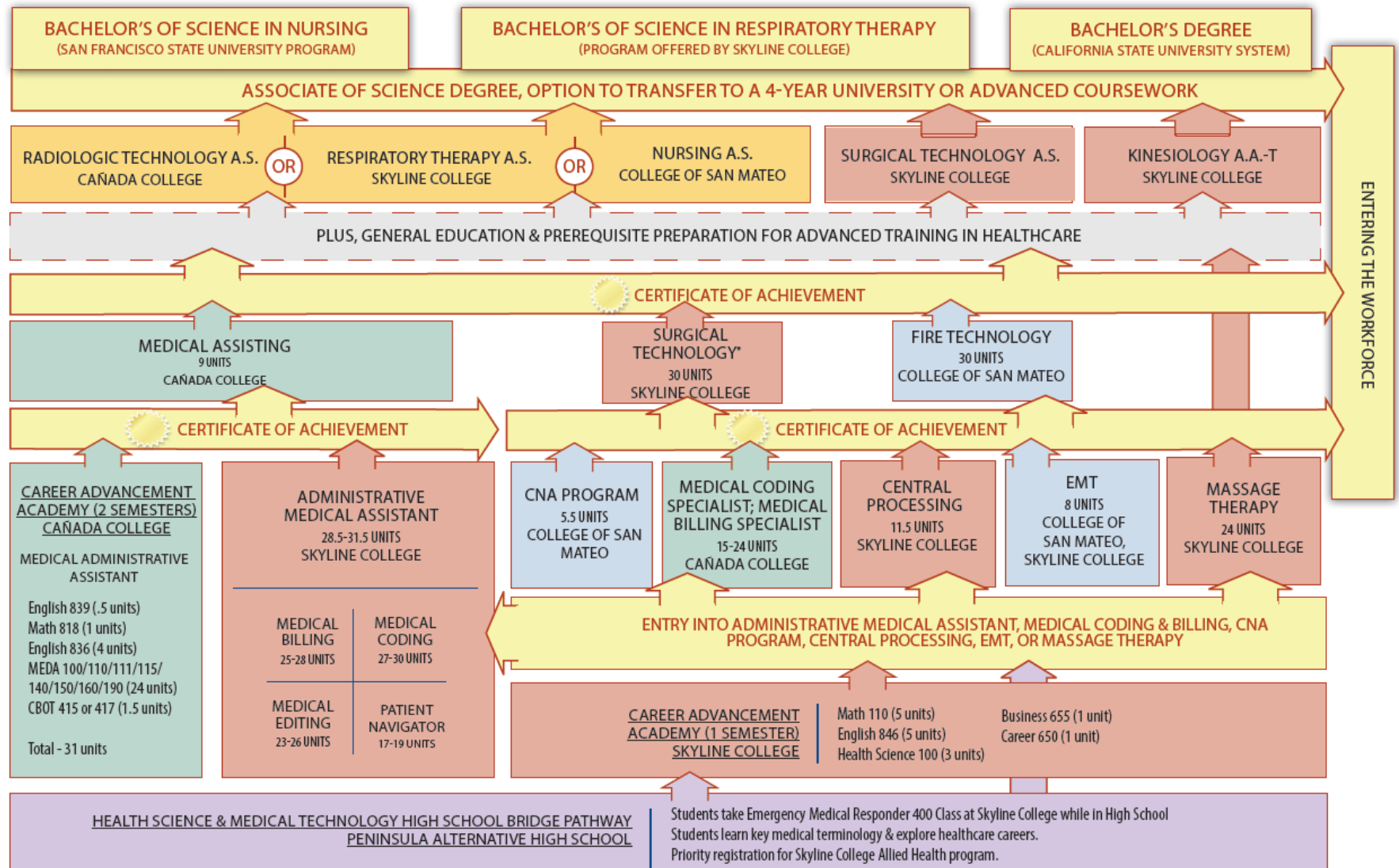
DRAFT March 2015

The Career Ladder Project 2015



Career Advancement Academies - Allied Health

San Mateo County Community College District: Skyline College, Cañada College, College of San Mateo



www.gointohealthcare.org

*Surgical Technology program requires prerequisites.

