



Certification Criteria for Linked Learning Pathways

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These criteria were developed in collaboration with the following organizations, who agree they are comprehensive, thoughtful, and useful as a guide when certifying, assessing, and/or recognizing pathways and academies in California.



Pathway Certification Criteria Design Team

These certification criteria were created collaboratively by a team of representatives from lead organizations in the Linked Learning field. The team developed the criteria using the National Standards of Practice for Career Academies and other guiding documents by partner organizations. Special thanks to representatives from schools and districts who contributed to the process.

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Certification Criteria For Linked Learning Pathways

Purpose

Pathways offer a promising strategy for transforming high schools and improving student outcomes. However, to achieve these desired results, pathways must be of high quality. To guide sites in planning and implementing such pathways, a design team of experts developed the criteria outlined in this document. Sites can choose to go through a certification process that uses these criteria as a guide.

The Criteria themselves are intended to serve multiple purposes. *For pathway team members*

seeking certification, they serve as a guide to build, improve, and sustain high-quality pathways. *For others—educational leaders, industry and postsecondary partners, policymakers, and community members—they serve to deepen understanding by describing the elements of a high-quality pathway. Although pathways may vary in their structure and delivery, it is expected that any pathway seeking certification would adhere to the objectives and guiding principles and incorporate the core components (listed below).*

Linked Learning Objective

Pathways are intended to increase student engagement, reduce high school dropout rates, raise student achievement, increase high school completion and postsecondary transition rates, and boost students' earning power after high school – in short, to transform the high school experience and prepare students for *both* college *and* career, not just one or the other.

Guiding Principles

1. Pathways prepare students for both postsecondary education and careers.
2. Pathways connect academics to real-world applications.
3. Pathways lead to a full range of postsecondary opportunities.
4. Pathways improve student achievement.

Core Components

1. **A challenging academic component** prepares students for success—without remediation—in California's community colleges and universities, as well as in apprenticeships and other postsecondary programs.
2. **A demanding technical component** delivers concrete knowledge and skills through a cluster of four or more technical courses.
3. **A work-based learning component** offers opportunities for students to learn through real-world experiences.
4. **Support services** include counseling; supplemental instruction in reading, writing, and mathematics; and other services to help students succeed with a challenging program of study.

Criteria

1. PATHWAY DESIGN

The pathway is designed with a structure, governance, and program of study that provide all students with opportunities for both postsecondary and career success.

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| 1.1 Design Structure | <p>1.1.1. Pathway theme: The pathway represents a broad theme that can appeal to and engage a student, regardless of his or her prior academic achievement and postsecondary aspirations. The theme has been thoughtfully selected based on the student's interest and several other criteria, which may include teacher expertise, regional workforce needs, existence of related career and technical education (CTE) course sequences, articulation opportunities with nearby postsecondary institutions, and the interest of industry partners.</p> <hr/> <p>1.1.2. Program of study: A 3- or 4-year industry-themed pathway serves as the organizational structure for a 4-year high school program of study. By design, it links core academics with technical content at each grade level. The curriculum is sequenced and coordinated.</p> <hr/> <p>1.1.3. Student recruitment and selection: The pathway's student recruitment and selection process is formalized and ensures open access to students who volunteer for the pathway based on their interests. Pathway demographics reflect those of the school and district.</p> <hr/> <p>1.1.4. Cohort scheduling: Pathway students participate as a cohort in the academic and technical courses that are part of the program of study to enable flexible use of class time and instructional methodologies that promote multidisciplinary projects.</p> <hr/> <p>1.1.5. Staff collaboration: School and pathway leadership nurtures a professional learning community among staff that encourages frequent and effective collaboration for program coordination, curricular integration, and resolution of student issues and concerns.</p> <hr/> <p>1.1.6. Pathway preparation and orientation: The pathway provides an orientation and other transition services for incoming students preferably beginning in middle school and involving parents.</p> <hr/> <p>1.1.7. Postsecondary articulation: The pathway promotes a seamless transition to postsecondary education and training opportunities through articulation agreements, dual-enrollment, and other formal and informal activities.</p> |
| 1.2 Governance | <p>1.2.1. Advisory board with broad representation: An active advisory board meets regularly to set policies, develop resources, and advise the program of study. It includes representation from involved employers, students, parents, higher education and community partners, pathway staff, and district and site administrators.</p> |
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2. ENGAGED LEARNING

In supportive learning communities, students meet technical and academic standards and college entrance requirements through real-world applications, integrated project-/problem-based instruction, authentic assessments, and work-based learning.

2.1 Standards-Aligned Curriculum	2.1.1. Academic core: The academic curriculum is aligned to state standards and designed to lead to student mastery on standardized tests as well as on more authentic assessment measures.
	2.1.2. Technical core: The pathway includes a 3- to 4-year sequence or cluster of technical coursework aligned to state CTE and/or industry standards.
2.2 Preparation for Postsecondary Options	2.2.1. Postsecondary preparatory curriculum: A pathway prepares students for success—without remediation—in California’s community colleges, universities, apprenticeships, and other postsecondary programs.
	2.2.2. Technical component: A sequence or cluster of at least three or four technical courses delivers basic and advanced industry knowledge and skills. Its focus is on preparing youth for high-skill, high-wage employment by emphasizing industry-related knowledge and skills, using authentic applications that bring learning to life.
2.3 Real-World Relevance	2.3.1. Real-world relevance: Academic core courses deliver standards-based content through authentic, career-related applications. Pathways alter how core academic subjects are taught; they do not lower expectations about what is taught.
2.4 Integrated Curriculum	2.4.1. Multidisciplinary integrated curriculum: Pathway students participate in multidisciplinary projects that integrate academic and technical course content.
	2.4.2. Curricular alignment: Teachers collaborate within and across disciplines and grade levels to provide students with a coordinated, coherent curriculum.
2.5 Instruction and Assessment	2.5.1. Project-/Problem-based approach: Inquiry-based instruction enables students to experience authentic theme-based situations that require integrating knowledge and skills from several disciplines. This approach fosters the development of skills identified in Habits of Mind, Secretary’s Commission on Achieving Necessary Skills (SCANS), and 21st-Century Skills.
	2.5.2. Authentic assessment: To complement traditional or standardized student assessments, pathway teachers design and use a variety of assessments to gain an accurate understanding of student learning. Assessments include opportunities for students to demonstrate skills through authentic applications.

2.6 Work-Based Learning (WBL)	<p>2.6.1. Coordinated, sequenced, and scaled: The pathway offers real-world learning opportunities through a 4-year coordinated and structured sequence of work-based learning (WBL) experiences that progresses in duration, intensity, and student expectations and independence. The sequence leads to an extended, intensive work-related experience such as an internship or school-based enterprise.</p> <hr/> <p>2.6.2. Connected to academic and technical coursework: WBL experiences do not occur in a vacuum; they are connected to and reinforce classroom learning.</p>
2.7 Support Services and Personalization	<p>2.7.1. Supportive atmosphere: The pathway maintains personalization through limited size, teacher teamwork, and strong teacher-student relationships.</p> <hr/> <p>2.7.2. Student engagement: Pathway staff consciously and consistently work to create a culture where students are actively engaged in their learning, both in and out of the school setting.</p> <hr/> <p>2.7.3. Differentiated instruction: Daily instruction is designed with the knowledge that students vary in their preferred method of gaining information and understanding ideas. Teachers use multiple methods of presenting course content to address each student's learning needs.</p> <hr/> <p>2.7.4. Academic intervention: Pathway students performing below grade level are supported by a range of services, which may include supplemental instruction, tutoring, credit recovery, before- and/or after-school programs, and academic support programs.</p> <hr/> <p>2.7.5. Guidance and counseling: The pathway has a designated counselor who knows pathway students and is familiar with the unique characteristics and needs of the pathway.</p> <hr/> <p>2.7.6. College and career planning: Each pathway student has a multi-year college and career plan that is informed by a range of college and career planning activities, extends through high school, and guides decisions about postsecondary education, training, and career pursuits.</p>

3. SYSTEM SUPPORT

District policies and practices provide leadership, support, and resources to establish and sustain quality pathways.

3.1 District Policies	<p>3.1.1. Pathway choice, equity, and access: District, school, and pathway policies and procedures support pathway development, implementation, and sustainability, including allowing students to select pathway options; ensure equity in placement of students in pathways; and ensure that transportation issues do not preclude students from participating in the pathway of their choice.</p> <p>3.1.2. Recruitment and hiring practices: District policies and practices value the recruitment, hiring, retention, and evaluation of pathway team members, as well as the need for pathway staff stability that supports ongoing pathway maturation and sustainability.</p> <p>3.1.3. Accountability and autonomy: District policies hold school sites and pathways accountable for improving student outcomes and allow for site and pathway autonomy in determining the curriculum, instructional methodologies, pacing, and scheduling that will result in reaching those outcomes.</p>
3.2 Leadership	<p>3.2.1. Support from school board and superintendent: The district Board of Education and superintendent are strong proponents of a pathways approach, publicly endorse it, offer active support, and align resources and procedures to promote pathway quality and sustainability.</p> <p>3.2.2. Support from site leadership: The high school principal and other administrators publicly advocate for the pathway and are actively involved in its funding, facilities, staffing, scheduling, and support. Site leaders have a common understanding of, vision for, and commitment to pathways and their potential to reduce high school dropout rates, raise student achievement, increase high school completion and postsecondary transition, and boost students' earning power.</p>
3.3 Professional Development	<p>3.3.1. Teacher professional development: Site and district administrators provide or help arrange training for pathway teachers in curricular integration, project-/problem-based teaching strategies, student support, and employer involvement, among other areas.</p>
3.4 Qualified Staff	<p>3.4.1. Skilled teachers: Because a pathway's success rests on good teaching and teamwork among a cross-disciplinary group of teachers, site principals must hire and/or assign qualified and willing teachers to fulfill this role.</p> <p>3.4.2. Teacher leader/pathway coordinator: A pathway teacher has agreed to serve as the pathway leader/coordinator who is responsible for all pathway administrative and facilitative functions. Release time is provided for this role.</p>

3.5 Partnerships	3.5.1. Active employer and community partnerships: The pathway has strong partnerships with local employers, community groups, and individuals. Both through the advisory board and other interactions, there is evidence of a healthy partnership between the pathway/high school and its host community.
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4. EVALUATION AND ACCOUNTABILITY

A systemic evaluation process documents the pathway's impact on high school achievement and post-secondary success and drives the pathway's continuous improvement plans.

4.1 Student Data	4.1.1. Data collection and reporting: The pathway regularly collects, analyzes, and accurately reports student assessment data, including those necessary to describe pathway participants (e.g., grade level, gender, race/ethnicity), to make comparisons to the demographic data of the school and district and to report students' performance on various outcome measures.
	4.1.2. College and career readiness data: The pathway collects, analyzes, and reports on available indicators of both college and career readiness, which may include a-g completion rates, college enrollment data, SAT data, GPAs, CST scores, CAHSEE pass rates, graduation and dropout rates, pathway completion, occupational certification, proficiency through demonstration, completion of and grades in capstone technical courses, and end-of-course exams.
4.2 Pathway Evaluation	4.2.1. Evidence of impact: Ongoing, regular analysis of pathway data is used to make programmatic decisions and inform instructional practice. Such analysis shows whether pathways retain their students and whether, and by how much, the pathway improves student performance.
	4.2.2. Periodic review and improvement plan: Pathway staff and the advisory board regularly assess the pathway's functioning. These periodic reviews result in the development of an improvement plan, whose action items refer back to the pathway's underlying mission and goals.
	4.2.3. Postsecondary tracking: Pathway staff conduct a formal follow-up of students for several years after high school graduation and use data collected for continuous improvement of the pathway.

Glossary

While terms in this Glossary may have additional meanings in other contexts, these definitions are intended to clarify each term's particular use in the Certification Criteria.

21st-century skills—The skills necessary for success in the 21st century are different from those needed previously. As our nation transitions from an “information age” to a “conceptual age,” students must have critical-thinking, problem-solving, communication, and teamwork skills and creativity and awareness of the global economy to compete in today’s work force.

Advisory board—An advisory board is a group of volunteers made up primarily of industry, postsecondary, education, and where appropriate, parent, student, and other community representatives that meets regularly to provide advice and support to the pathway. The advisory board builds the foundation for lasting partnerships.

Articulation—Articulation is the practice of aligning curriculum from one educational segment to another to encourage a seamless transition between courses, grades, and/or education institutions. Most commonly, high school courses articulate to community college courses that may allow high school students to earn college credit.

Capstone technical course—A capstone technical course is an 11th- or 12th-grade career and technical education (CTE) course(s) that allows students to “put it all together.” Capstone courses provide students with an opportunity to use their knowledge and skills by integrating the material learned in beginning and intermediate CTE courses. Coursework generally includes advanced, industry-based skills and knowledge, internships, building a portfolio, and problem-/project-based learning.

Career technical education (CTE) course sequence—A multiyear sequence of CTE courses emphasizes technical skills and work-based knowledge while integrating the academic skills and knowledge necessary for the industry sector to provide students with preparation for the workplace and postsecondary education. The sequence typically includes beginning, intermediate, and capstone courses, as well as work-based learning (WBL) experiences.

Cohort scheduling—In cohort scheduling, a group of students with a defined educational need or focus are scheduled together in some or all of their classes.

Curricular integration—Integrated curriculum is an instructional methodology that breaks down traditional barriers between subjects to make learning more meaningful and engaging to students. Ideally, integrated curriculum includes a combination of various academic and CTE subjects and goes beyond textbook instruction by requiring students to use their skills and knowledge or acquire new learning in order to solve complex, real problems that are often industry-based.

Differentiated instruction—Differentiated instruction is an instructional approach in which the teacher adapts the content, process, and product of lessons to match each student’s readiness, learning style, and interests. In differentiated instruction, the learning goals for all students are the same, but the required tasks, instructional approach, and materials used vary according to the needs of the individual students.

Dual enrollment—In dual enrollment, high school students enroll in college courses, which may be offered either on the high school or college campus, for which they may earn college credit.

Habits of Mind¹—The Habits of Mind are a collection of 16 attributes people display when they behave intelligently. They were developed by Arthur Costa and Bena Kallick to help people develop their critical- and creative-thinking skills to become continuous learners and prepare for school, work, and life in the 21st century.

Inquiry-based instruction—Inquiry-based instruction is a student-centered, active learning approach driven more by learners’ questions and critical-thinking and problem-solving skills than by teachers’ lessons. It is associated with the idea “Tell me and I forget, show me and I remember, involve me and I understand.”

Integrated curriculum—Integrated curriculum is a series of conscious and informed strategies used to connect the content of one or more academic and CTE courses so that what is learned in one discipline is combined with and reinforced in the other disciplines over an extended period of time.

¹ Arthur Costa and Bena Kallick; *Discovering and Exploring Habits of Mind*; ASCD, 2000.

Mission—A mission is a formal short written statement of the purpose and goals of an organization. It should guide the actions and decision making of the organization while providing a sense of direction. (See also “Vision” below.)

Multidisciplinary projects—When working on multidisciplinary projects, students are charged with finding viable solutions to real problems, or with achieving specific individual or group outcomes, through units of instruction that are horizontally aligned in several discipline.

Open access—All students, without regard to their past educational success, special education designation, socioeconomic status, English Language Learner designation, and race/ethnicity, etc., are provided equal access to educational opportunities including honors courses, Advanced Placement, and/or programs such as Small Learning Communities/academies/pathways. Open access supports increased participation of students in high quality, rigorous education by eliminating barriers and/or other restrictions.

Pathway—Pathways connect strong academics with CTE and real-world experiences in a wide range of career fields, using various program models, and prepare students for careers and postsecondary education.

Pathway theme—Pathway themes are generally based on one or more of California’s 15 industry sectors. The theme is used to engage students and focus their learning on career and postsecondary goals.

Personalization—Personalization means that each student is known well by at least one adult in the pathway so that his or her learning needs are known and addressed. It also allows a student to choose a pathway theme and make curricular choices that match his or her career interests.

Postsecondary articulation—See “Articulation” above.

Professional learning community—A professional learning community consists of a collegial group of educators who are united in their commitment to student learning, share a vision, work and learn collaboratively, visit and review each other’s classrooms, and participate in decision making together. Such a community has several possible benefits: it may reduce the isolation of teachers, lead to better informed and committed teachers, and result in academic gains for students. A professional learning community is seen as a powerful staff development approach and a strategy for school change and improvement.

Program of Study—A Program of Study is a prescribed curriculum sequence in which students are enrolled in a series of courses that ensures that they complete graduation requirements and an identified curriculum. Programs of Study can be designed for three or four years.

Project-based approach/teaching and learning—Project-based learning is a systematic teaching methodology that engages students by focusing on a complex question or problem and having them investigate answers to that problem over an extended period of time, often resulting in presentations and products.

SCANS (Secretary’s Commission on Achieving Necessary Skills)—In 1990, the U.S. Secretary of Labor appointed a commission (the Secretary’s Commission on Achieving Necessary Skills) to examine the demands of the workplace and determine the specific skills young people need to succeed there. The commission completed its work in 1992 and issued a report, *What Work Requires of School: A SCANS Report for America 2000*, now known as the “SCANS Report.”

Supplemental instruction—Supplemental instruction provides an avenue for both students who are struggling and students who are excelling so that they can either catch up or expand their knowledge. Strategies may include modified curriculum such as shortened or lengthened assignments, targeted reading assignments, after-school instruction, tutoring, mentoring, reduction of class size, extended school year, summer school, etc.

Support services/systems—Support services/systems include various strategies and programs intended to assist students in reaching learning and performance goals and outcomes. These services/systems might include tutoring, academic intervention classes, CAHSEE support, supplemental instruction, counseling, advisory programs, AVID, credit recovery programs, health services, etc.

Technical content/component—Technical content or a technical component delivers industry-based knowledge and skills through a sequence or cluster of three or more CTE courses connected to the pathway’s theme.

Vision—A vision describes how the future will look if an organization achieves its mission. A mission statement explains what the organization does, for whom, and the benefit(s). (See also “Mission” above.)

Work-based learning (WBL)—WBL is an educational approach that, by design, links learning in the workplace to learning in the classroom to engage students more fully and to intentionally promote their exposure and access to future educational and career opportunities. WBL includes all interactions with employers from career exploration discussions in the classroom to field trips, mentoring, job shadowing, internships, and actual work experiences.