



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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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 follow 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 Linked Learning certification would adhere to the objective and guiding principles and would incorporate the core components (listed below).*

Linked Learning Objective

Pathways are intended to increase student engagement, reduce high school dropout rates, improve student achievement, increase high school completion and postsecondary transition rates, and boost students' earning power after high school—in short, 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 lead to a full range of postsecondary opportunities.
3. Pathways connect academics to real-world applications.
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 and transportation as well as 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 provides all students with opportunities for both postsecondary and career success.

1.1 Design Structure

1.1.1 **Pathway theme:** The pathway represents a broad theme that reflects high expectations for all students and teachers and appeals to and engages students, regardless of their prior academic achievement. The pathway theme expands, rather than narrows, postsecondary options for all students leading to a full range of postsecondary and career opportunities. The theme has been thoughtfully selected based on students' interests as well as other criteria.

1.1.2 **Student learning outcomes:** The pathway community of practice has established a pathway-specific set of student learning outcomes that describes what students should know and be able to do when they complete the pathway program of study. Pathway student learning outcomes align with student outcomes articulated by the district (e.g., graduate profile) and by the school (e.g., ESLRs).

1.1.3. **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 based on pathway student learning outcomes and aligned with district graduation requirements. By design, the program of study embeds the UC/CSU a-g subject area requirements and ensures that all students, regardless of their prior academic achievement, have access to them. The program of study establishes conditions for linking core academics with technical content at each grade level. Courses are sequenced and coordinated.

1.1.4. **Student recruitment, selection, and placement:** The pathway's student recruitment and selection process is formalized, ensures that students are aware of all their available options, and guarantees open access to students who make informed decisions based on their current interests and aspirations after high school. Through the recruitment process, counselors, advisors, and other pathway staff communicate that they have high expectations for all students, regardless of their prior academic achievement. Pathway demographics reflect those of the school and district.

1.1.5. **Cohort scheduling:** Pathway students, regardless of their prior academic achievement, participate as a cohort in the academic and technical courses that are part of the program of study. Cohort scheduling enables flexible use of class time and instructional methodologies that promote multidisciplinary projects.

1.1.6.	Staff collaboration: School and pathway leadership nurtures the development of a pathway community of practice among staff that encourages ongoing teacher development as well as frequent and effective collaboration for program coordination, curricular integration, and specialized attention to individual student needs.
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1.1.7.	Pathway preparation and orientation: The pathway provides an orientation and other transition services for incoming students and their families, preferably beginning in middle school.
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1.1.8.	Postsecondary articulation: The pathway ensures opportunities for students to make a seamless transition into postsecondary education and training opportunities through dual enrollment, articulation agreements, and other formal and informal activities.
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1.2 Governance	1.2.1. Advisory board with broad representation: A demographically diverse advisory board meets regularly to set policies, develop resources, and provide advice on pathway student learning outcomes and the pathway’s program of study.
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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 rigorous, aligned to state and Common Core Standards, and designed to lead to student proficiency on standardized tests as well as on more authentic assessment measures. All pathway students—regardless of their background, special education or English Language Learner designation/s, or prior academic achievement—have access to UC/CSU approved a-g curriculum.
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2.1.2.	Technical core: The pathway includes a 3- or 4-year sequence or cluster of rigorous technical coursework that is aligned to state and/or national CTE and industry standards. All pathway students, regardless of their prior achievement, have access to all offered UC/CSU a-g–approved technical core curriculum in the pathway.
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2.2 College and Career Readiness	2.2.1. College readiness: The pathway prepares students for success—without remediation—in California’s community colleges, universities, apprenticeships, and other postsecondary programs.
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	<p>2.2.2. Career readiness: Technical courses deliver basic and advanced industry-related knowledge and transferable skills. They focus on preparing youth for high-skill, high-wage employment by using authentic applications that bring learning to life.</p>
2.3 Real-World Relevance	<p>2.3.1. Real-world relevance: Academic and technical courses deliver rigorous standards-based content through authentic, career-related applications. Pathways alter how core academic and technical subjects are taught, but they do not lower expectations about what is taught.</p>
2.4 Integrated Curriculum	<p>2.4.1. Multidisciplinary integrated curriculum: Pathway students participate in multidisciplinary projects that integrate rigorous academic and technical course content.</p> <p>2.4.2. Curricular alignment: Teachers collaborate within and across disciplines and grade levels to provide students with an outcomes-driven, coordinated, coherent, and relevant curriculum.</p>
2.5 Instruction and Assessment	<p>2.5.1. Project-/Problem-based approach: Pathway teachers use inquiry-based instruction to engage students in authentic theme-based experiences that require them to integrate knowledge and apply skills from several disciplines. Research-based instructional practice is evident in pathway classrooms.</p>
	<p>2.5.2. Authentic assessment: Pathway teachers individually and collaboratively design and use a variety of formative and summative assessments to gain an accurate understanding of student learning. Assessments include opportunities for students to demonstrate deep content learning and the application of skills through authentic products and performances.</p>
2.6 Work-Based Learning (WBL)	<p>2.6.1. Coordinated, sequenced, and scaled: All pathway students participate in and have access to a continuum of high-quality, real-world learning experiences. The sequence culminates in an extended, intensive work-related experience that may occur in a workplace, in the community, at school, and/or when using virtual technology.</p>
	<p>2.6.2. Connected to coursework: Each WBL experience is aligned to pathway student learning outcomes; helps students develop transferable, applied workplace skills; and provides opportunities for them to apply academic and technical knowledge and skills learned in the classroom.</p>

2.7 Personalization and Support Services

2.7.1. **Culture of high expectations and support:** All pathway staff individually hold and collectively maintain a culture of high expectations and support for all students. Pathway staff develop and sustain personalized relationships with all students and foster strong connections between students and their peers. The pathway has processes in place for teachers, counselors, advisors, other pathway staff, and partners to quickly identify and address students' academic, personal, and social support needs.

2.7.2. **Student motivation and engagement:** Individually and collectively, pathway teachers consciously and consistently work to connect learning (both in and out of the school setting) with students' interests in order to increase their motivation and engagement. All pathway students have regular opportunities to set goals, make decisions, and reflect on learning.

2.7.3. **Differentiated instruction:** All pathway teachers routinely design instruction that reflects the diversity of student interests, strengths, and ways of learning. They design learning activities to challenge all pathway students and use a variety of methods to teach and assess learning.

2.7.4. **Academic interventions:** The pathway community of practice works together to quickly identify students who are in need of additional support and/or remediation and uses a variety of timely interventions to ensure that all pathway students achieve pathway learning outcomes. These can include a variety of proactive interventions and acceleration strategies to meet individual student needs.

2.7.5. **Guidance and counseling:** The pathway has a designated counselor and/or a system of guidance and advisement. The counselor and/or advisors know pathway students well and are familiar with the unique characteristics of the pathway program, thus enabling them to support the success of all pathway students.

2.7.6. **College and career planning:** Each pathway student has a multi-year college and career success 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.

3. SYSTEM SUPPORT

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

<p>3.1 District Policies</p>	<p>3.1.1. Pathway equity, access, and choice: District, school, and pathway policies and procedures support pathway development, implementation, and sustainability. Policies and procedures allow students to select pathway options based on their current interests and future aspirations; ensure equity in the placement of students in pathways; and ensure that lack of transportation does not exclude students from participating in the pathway of their choice.</p> <hr/> <p>3.1.2. Recruitment and hiring practices: District, school, and pathway policies and practices support the recruitment, selection, and retention of pathway teachers who possess the unique skills to support the pathway approach and reflect the demographics of the pathway, school, and district. District policies recognize the need for stability among pathway staff in order to support ongoing pathway improvement, fidelity, and sustainability.</p> <hr/> <p>3.1.3. Accountability and autonomy: The district has achieved a healthy balance between pathway autonomy and accountability that values both as necessary to improve student learning outcomes. District policies and practices hold the pathway accountable for improving student outcomes and give the school and pathway the autonomy to determine how best to attain these outcomes.</p>
<p>3.2 Leadership</p>	<p>3.2.1. Support from school board and superintendent: The district board of education and superintendent are strong proponents of the pathway approach, publicly endorse it, offer active support, and align resources and procedures to promote the quality and sustainability of pathways.</p> <hr/> <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, partner recruitment, and other forms of support. Site leaders demonstrate a firm understanding of, vision for, and commitment to pathways and their potential to improve student learning outcomes.</p>
<p>3.3 Professional Development</p>	<p>3.3.1. Teacher professional development: Site and district administrators and/or the pathway community of practice provide or coordinate ongoing training for pathway teachers.</p>

3.4 Qualified Staff	<p>3.4.1. Skilled teachers: A pathway’s success rests on high-quality teaching and collaboration among an interdisciplinary team of academic and technical teachers. Site principals and district leaders hire, assign, and provide ongoing professional growth opportunities for pathway teachers who are willing, skilled, and highly qualified.</p> <hr/> <p>3.4.2. Pathway leadership: District and site administrators support the selection and further development of pathway leaders who inspire and guide the pathway community of practice in improving pathway quality and student success. Release time is provided for this role.</p> <hr/>
3.5 Partnerships	<p>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.</p> <hr/>

4. DATA AND IMPACT

A systemic and systematic evaluation process documents the pathway’s impact on high school achievement and postsecondary success and drives the pathway’s continuous improvement plans.

4.1 Student Data	<p>4.1.1. Data collection: The pathway and/or district regularly collect and accurately report pathway students’ demographic and performance data.</p> <hr/> <p>4.1.2. Use of data: The pathway community of practice regularly analyzes individual student as well as disaggregated and aggregate pathway data and compares data on student performance across the school, district, and state. Pathway staff use data regularly to inform instructional practice and curricular decisions, improve pathway student learning outcomes, make programmatic decisions, and support students’ academic success.</p> <hr/>
4.2 Pathway Evaluation	<p>4.2.1. Evidence of impact: Data analysis shows that the pathway retains participating students, demonstrates improvement in student performance, and eliminates opportunity and achievement gaps.</p> <hr/>

4.2.2. **Periodic review and improvement plan:** Pathway staff and the advisory board regularly review data and other indicators to assess students' progress toward achieving the pathway's learning outcomes. These periodic reviews result in the development of an improvement plan and action items that are based on the pathway's data and the recommendations contained in its certification Final Report (if one already exists) and reflect the pathway's underlying mission and goals.

4.2.3. **Postsecondary tracking:** Pathway staff conduct a formal follow-up of students for multiple years after high school graduation and use these data to develop a plan for continuous improvement of the pathway and student learning outcomes. There is some mechanism in place to track a significant and representative sample of pathway students in order to determine their enrollment and success in postsecondary education and careers.

Glossary

While the terms in this Glossary could have different or 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 primarily comprised of representatives from industry, postsecondary education, and where appropriate, parents, students, and other community representatives who meet 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 students to make a seamless transition among 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 multi-year sequence of CTE courses emphasizing technical skills and work-based knowledge, while integrating the academic skills and knowledge necessary for the industry sector, to prepare students 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—Curricular integration is an instructional methodology that breaks down traditional barriers between subjects to make learning more meaningful and engaging to students. Ideally, curricular integration 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.

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.

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.”

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 its actions and decision-making 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 disciplines.

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, or 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 titled *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, reduced 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, California High School Exit Exam (CAHSEE) support, supplemental instruction, counseling, advisory programs, Advancement Via Individual Determination (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.