CTE for the 21st Century

Integrated programs, added rigor, and new grant support create a framework for the future

A few years ago, the national goal for K-12 education moved away from the idea of “preparing students for college or career” and adopted the goal of **college and career readiness for all students**. This critical shift in wording is bringing about significant change as schools redesign and retool the system so that both college and career preparation are effectively addressed for all students.

But what does “college and career ready” actually mean? We look to the University of California’s “a-g” subject requirements to define what a college-ready student needs, but identifying the knowledge and skills for career readiness is less clear. We know that career-ready students need a strong academic foundation, and that proficiency in the 21st century skillset is essential, but is there more to it?

At the high school level, Career Technical Education (CTE) programs have been the go-to resource for preparing students for their eventual entry into the world of work. This is still the core purpose of CTE, but these programs have taken on new responsibilities and undergone significant shifts in recent years.

“Today’s CTE is not your father’s vocational education,” says Stephen Jackson, SCOE’s director of CTE Support Services. “It has become an important component of the high school experience for all students, no matter what direction they’re headed in.”

SCOE’s role in the CTE landscape has also changed. “For almost 50 years, our office hired teachers, designed courses, and offered ‘vocational’ classes at area high schools,” explains Jackson, “but with California’s new funding model for education, SCOE no longer receives designated funding from the state for this purpose. Instead of delivering student programs at local school sites, SCOE now assists districts as they provide CTE programs for their students. We help local districts develop, enhance, and sustain high-quality Career Technical Education for Sonoma County students.”

*Windsor High School’s Pre-Med Core teachers—Stephanie Keeble, Geoff Vinson, and Katie Green—are working with SCOE career pathway coach Natasha Deakins to design an in-depth, multi-phase project that will help their students master CTE and Common Core standards.*
MOVING TO AN INTEGRATED MODEL

Combining core academics and career-focused CTE instruction in an integrated program model is proving to be an effective approach for helping students become career ready. Some high schools are using career-themed academies to prepare students for college and career, while others have built smaller learning communities or broadened the reach of existing career pathway programs.

Whatever the structure, the key idea is to combine academic classroom-based activities, hands-on project-based learning, and work-based learning experiences. The curriculum for these integrated programs aligns with the Common Core Standards, CTE Model Curriculum Standards, and current industry practices—with 21st century skills development included throughout.

This intermingling of CTE and core academics has come with some challenges as teachers who were once focused on very different goals must now find ways of working together with a shared purpose. Helping teachers meet this challenge is a priority for SCOE. County-level resources have been allocated to bring traditional CTE educators and content area teachers together to create integrated projects and programs.

One example of how this is working can be seen at Windsor High School. Teachers in the school’s Pre-Med Core were planning an integrated project that would result in a student-developed emergency preparedness plan for their school. They wanted the students to first collect information by interviewing firefighters, police officers, medical professionals, parents, students, and teachers to understand their concerns, then use the creative problem-solving approach known as Design Thinking to bring those needs together and develop an effective preparedness plan. The teachers envisioned the project as one that would engage students in applying learning from across content areas and build on instruction from their English, government/economics, and CTE health and public safety classes.

The Windsor High teachers sought support from Natasha Deakins, an experienced high school educator now serving as an integrated career pathway coach at SCOE. Deakins was asked to help the teachers define and develop project elements that would address both CTE and Common Core standards.

“My role is to coach teachers as they develop integrated projects that offer authentic learning opportunities and develop the skills that North Bay employers are looking for in future employees,” says Deakins. “Sometimes this work involves connecting teachers to professional development on instructional strategies. At other times, I link them to a work-based learning coordinator who can find industry professionals to help develop and teach integrated projects.”
In this case, Deakins enlisted the assistance of SCOE’s instructional services staff to custom-design a program of professional development tailored to the needs of the teacher team. Their project idea allowed them to take advantage of new student engagement and problem-solving strategies, and to use a project-based learning model that expands on the idea behind Smarter Balanced Assessment performance tasks.

“In this model,” explains CTE program coordinator Chuck Wade, “students wrestle with genuine industry documents and scenarios, then use what they’re learning in their classes to solve authentic community problems. In this way, CTE coursework becomes both a vehicle for practicing the application of learning and an organizing framework for curriculum integration and Common Core implementation.”

Wade cites this year’s CTE and Common Core Connection (C^3) Institute as an example of how teachers are coming together to develop integrated instruction. Based on the goal of engaging all students in learning through curriculum that is rigorous, relevant, and meaningful to their lives, the annual Institute is an opportunity for teams of CTE and content area teachers to meld their ideas and expertise.

Institute speaker Paul Curtis, New Tech Network’s curriculum and instruction director, explained his view of what’s needed to make integrated project-based learning a success. He maintains that projects must have high student interest, provide opportunities for students to learn the standards through the project, and be feasible for teachers to implement—that is, teachers must have the tools and collaborative planning time to pull them off.

“This is where many schools face challenges when they look to adopt project-based learning,” says Chuck Wade. “Most schools don’t have integrated team-taught courses, cohort scheduling, or much in the way of common planning time. That’s why professional...
development activities like the C^3 Institute are important. Through coaching and facilitated release time, the Institute gives teachers the support they need to get started on high-quality integrated instruction. This leads to better teaching practices and better learning experiences for all students.”

INCREASING COMMUNITY SUPPORT FOR CTE

SCOE is part of a new collaborative project involving Santa Rosa Junior College, Keysight Technologies, and a selection of other local companies. These agencies are developing a training pathway to help meet the growing local demand for skilled workers in tech-oriented companies. The pathway would begin in high school, then articulate to the Junior College and on to locally available employment.

Aligning education with economic and workforce development efforts through initiatives like this is critical. These connections ensure that schools are preparing students for entry into career fields with local job opportunities, which is important not only for the students themselves but also for the economic strength of the county.

CTE’s role in successful economic and workforce development is widely recognized here in our county—and that recognition has led to new funding streams. The Sonoma County CTE Foundation was established in 2012 and has secured over $1.2 million from public and private donors. The Foundation has dispersed grants to schools to help underwrite new courses aligned with key economic industries, provide teacher training, and support career exploration activities at the middle school level. The Sonoma County Board of Supervisors provided the Foundation with three years of funding to develop and strengthen STEM-focused CTE programs in local high schools.

Last summer, a $15 million regional CTE grant was secured to further the connections between high schools, community colleges, and workforce investment boards in Sonoma County and five neighboring counties. Through this grant, 23 career pathways in 12 Sonoma County schools are being enhanced with an emphasis on integrated instruction and expanded work-based learning experiences for students. SCOE is the lead agency for this grant and the home base of the regional office, which is headed by grant director Katie Barr. Known as the Northern California Career Pathways Alliance, this comprehensive project is benefiting students, schools, employers, and the community.

“It’s an exciting time for those of us who are strongly committed to CTE,” says Stephen Jackson. “CTE is an important part of the movement to ensure that all students are prepared for their 21st century futures.”

WHAT SCOE CAN DO for you

**Administrators**
- Identify industry themes or focus areas for programs that are aligned to Sonoma County economic and workforce needs
- Advise on program models, equipment needs, and facility requirements
- Help define qualifications for teaching staff and provide support to teachers implementing integrated pathways
- Assist with efforts to secure funding, equipment donations, and other resources

**Teachers**
- Provide professional development and one-on-one coaching for teacher teams in curriculum integration, instructional strategies, innovative lesson design, and assessment strategies
- Help with course outlines, curriculum development, a-g approval, and post-secondary articulation
- Help engage industry partners and secure relevant work-based learning opportunities for students

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