# Guidance for Reopening Career Technical Education Programs in California

August 31, 2020

Dear Career Technical Education Educators:

As school districts begin a staggered process for reopening across California, career technical education (CTE) requires special attention over and above the general guidelines established by the California Department of Education (CDE) and other state, regional, and local agencies. It is important, first and foremost, that school districts follow very closely the public health guidelines set up by local authorities in which the school district is located. Second and equally important, the CTE programs within a particular school district must follow the general guidelines established for all students and school district personnel.

The Career and College Transition Division (CCTD) has produced this guidance document focusing exclusively on CTE. It is intended to be an additional, but critical resource for local boards of education and administrators as they consider offering and teaching CTE programs. The guidance is particularly important for CTE teachers to make sure that the curriculum offered and taught remains high-quality even as they take into consideration all the necessary measures for a safe classroom environment.

CTE programs have unique elements within a school district that include classroom instruction, experiential learning, and leadership development. Given that all CTE programs require a hands-on component, making them high-quality, it is vital that strong consideration be given to how the hands-on CTE learning is conducted safely in and outside the classroom. This document provides how this can be done safely and still deliver high-quality CTE programs in all school districts in California.

CTE will be in the forefront in preparing the essential workers necessary as the California economy and society begins to reopen more robustly. School districts will need to play an increasingly important part in preparing students to pursue higher education in career fields that will be leading the economy towards a fuller recovery. By following this guidance document, school districts, along with their partners in higher education, should be able to create a more resilient highly skilled workforce in California creating a more flourishing post-pandemic economy and society.

Sincerely,

Pradeep Kotamraju

Director, Career and College Transition Division
California Department of Education

# Guidance for Reopening Career Technical Education Programs in California

*This guidance document is being provided to assist local educational agencies as they reopen schools. The intent is not to "tell" local educational agencies what to do, but to share helpful suggestions that may assist career technical education (CTE) programs.*

We acknowledge that CTE classrooms will need to look different as schools move to reopen to ensure the safety of all students and instructors. CTE has always been challenged to be a leader in providing high-quality curriculum, workplace experiences, and leadership development to all students in California. It is the goal of the California Department of Education (CDE) to deliver coordinated, relevant learning opportunities that engage each student in high-quality, rigorous education in CTE. These opportunities will be enhanced by partnerships with business and industry, workforce, and economic development leaders, allowing learners to turn their passion, talents, and strengths into successful careers and fulfilling lives.

We have all been faced with unprecedented teaching challenges and many relate to CTE programs. To ensure we are preparing career and college ready students, this guidance document has been prepared by the Career and College Transition Division for use by local educational agencies. The goal of this document is to provide guidance in the variety of settings where CTE takes place. The purpose of this document is to outline protocols schools should consider given their particular level of risk as determined by their Local Health Department and/or the Department of Health and Human Services. This document complements the CDE's guidance for reopening schools which can be found on the CDE's Coronavirus Response and School Reopening Guidance web page at, https://www.cde.ca.gov/ls/he/hn/coronavirus.asp.

California CTE programs have demonstrated the ability to be innovative and creative by taking a bold approach to the challenges that have been presented. Educators must continue to be innovative to ensure students are developing career readiness skills. Each student must have access to high-quality CTE programs regardless of circumstance. Considerations for delivering instruction must meet the needs of all students, including those who are members of a special population.

Understanding different workforce demands during the pandemic is essential. Now more than ever, students should be utilizing and practicing their career readiness skills to be best prepared for an ever-changing workforce.

California CTE programs have demonstrated the ability to be innovative and creative by taking a bold approach to the challenges that have been presented. Educators must continue to be innovative to ensure students are developing career readiness skills.

CTE should be coordinated across programs so that students have a clear understanding of expectations and opportunities no matter the classroom setting. All teachers should work together to ensure the career readiness skills are being embedded and students are achieving.

# General Recommendations

The following general recommendations establish basic parameters in reopening CTE programs.

1. Develop a communication plan to share updates with parents, administrators, and students.

2. Conduct temperature/health checks when teachers, students, etc. enter campus.

3. All staff and students should stay home if they are sick.

4. Provide training for all staff and students on the basic requirements to maintaining a safe and healthy school environment.

5. Maintain a daily record of all students and staff on campus.

6. Identify an isolation room for students/staff who become ill.

7. Prohibit access to water fountains.

8. Bathroom use must be limited to the number of people that would allow proper social distancing requirements.

9. Biosecurity must be in place for classroom and facilities that includes at minimum hand sanitation upon arrival and exit, along with biosecurity measures in many lab facilities for shoes upon arrival and exit.

10. High-touch surfaces must be cleaned on a recurring basis. Designate who will be responsible for each area (i.e., teachers in classrooms; custodian in bathrooms; others for areas such as handrails in hallways, door handles, etc.).

11. Use visual markings on the floor for spacing students to adhere to national social distancing requirements in classrooms that require movement. Reduce numbers for in-person classes so that social distancing can be maintained.

12. To the greatest extent possible, keep the same groups of students together as much as feasible in order to minimize contacts and support contact tracing efforts, should a positive case occur within the school.

13. Provide students with basic safety equipment (i.e., gloves, safety glasses, coveralls, etc.).

14. Require masks for staff and students in accordance with health department guidelines as part of the dress code and enforce their proper use the same way schools enforce any part of the dress code. (*Tinker v. Des Moines Independent Community School District*). Follow Centers for Disease Control and Prevention (CDC) Guidelines on how to appropriately wear face coverings.

15. Provide masks. Provide face shields for those who profess impaired breathing from a mask.

16. When possible, consider the option of conducting meetings/activities outside in an open space.

## Digital Learning Considerations for Remote CTE Instruction

1. Provide online CTE simulations.

2. Utilize Career and Technical Student Organization (CTSO) Leadership and Competitive Event Resources.

3. Provide Online Certification Opportunities.

4. Become familiar with resources available to assist teachers. Visit the CTE Online web page at, www.CTEOnline.com.

## CTE Classrooms and Workspaces

The following guidelines are generalized for CTE classrooms. As schools begin the complicated transition to in-person instruction, it is critical to address many human capital considerations.

1. Encourage individual work.

2. If partner pairing is not an option, consider rotation stations, more stations with tools/lab equipment/etc.

3. Remove/rearrange furniture to meet social distancing standards.

4. Create student cohorts within each class that only work together when students need peer help or are working on a project.

5. Post limited occupancy expectations for smaller spaces (i.e. storage areas, back rooms of school store, tool rooms, finishing rooms, locker areas, etc.).

6. To reduce the number of students in a CTE laboratory and maintain physical distancing, consider having half of the students remain in the classroom while the other half participates in the laboratory instruction.

7. If workstations are unable to be spaced six feet apart to ensure proper social distancing between students, collaborate with school administration to see if plexiglass walls can be added between workstations.

8. If working with a business or industry partner, limit in person contact and implement virtual meetings or phone calls.

9. Limit outside visitors into the classroom (guest speakers) and try to connect in a virtual setting such as Zoom. When virtual experiences are not practical, social distancing guidelines must be followed.

10. Follow district guidelines on disinfecting CTE areas.

11. Develop a process workflow for students to work at stations that maintain social distancing and sanitation in between use.

12. Keep groups the same. Use smaller lab groups with clearly defined responsibilities for cleaning, gathering supplies, etc.

13. A plan should be developed for transitioning in-person project sales to an alternative method of online ordering and pick-up.

14. Increase signage in the classroom with reminders to wash hands, gloves, masks, etc.

15. Provide sanitizer in each workstation area.

## Disinfecting CTE Tools and Equipment

Guidance is shared below specifically for the unique classrooms that are commonly found in CTE programs.

1. It is recommended that a process and schedule be implemented to disinfect all CTE equipment. Sanitation of equipment and computers should happen before and after each use. Drying time would be needed for disinfecting equipment.

2. Create folders or packets for each student to have, or get digital copies of materials instead of using textbooks when possible. Textbooks cannot be disinfected, but can be reused after a 72 hour period.

3. Cleaning and sanitizing surfaces should only be done according to the school's policy for other high frequency use areas. Overuse and improper use of disinfectants does not provide any additional protection and can expose students and staff to harmful chemicals.

4. Sanitize equipment, workstations, and computers before and after each use, following the correct procedure and manufacturer recommendations.

5. If tools and equipment must be shared, properly disinfect (before and after) each use.  Most tools and equipment, depending on the surface material, can be reused after a 72 hour period

6. If sharing tools, use assigned numbered tools to individuals or contact pods as much as possible. (Examples: Student number one uses hand tool number one, or students' numbers one through four use hand tool number one).

7. Use individual safety glasses.

## CTSOs

1. CTSO's are an integral part of CTE programs. CTSO activities, programs, and resources should be incorporated into class curriculum and learning activities.

2. Consult with respective State and national organizations for each CTSO to determine what their policies and procedures are for a COVID-19 impacted school year.

3. Focus on providing as many opportunities for students as possible, anticipating disruptions.

4. Consider if conferences, meetings, service projects, programs of work, and events can be conducted remotely if face to face meetings cannot take place.

5. Follow local health department guidelines regarding social distancing, equipment, and events planning.

6. Allow for members to meet during the school day within the school building, while practicing appropriate social distancing protocols, to participate in State or nationally sponsored virtual activities, hold chapter meetings, etc.

7. Allow the adviser(s) and members to meet in appropriately sized groups during the school day to prepare for competitive events, conduct chapter business, deliver programming, etc.

8. Provide chapter advisers the opportunity to participate in CTSO-related professional development during the school day.

9. Provide virtual opportunities for member involvement, conducting chapter business, etc.

10. Utilize state and national organization resources for engaging members in a virtual setting.

## School-Based Enterprises/School Stores

1. Create an online alternative such as a website (turn it into a project for students) to sell products online in case of, or in preparation of, the physical school store becoming more limited or shut down. Consider how you would fill, ship, drop-off, and offer curbside pick-up for orders if students and or teachers are not allowed back into the building.

2. Determine an order and pick-up system for outside visitors/customers, as most will not be allowed in the building.

3. Order smaller quantities of perishable items or items with expiration dates.

4. Plan for alternative assessments if the school store is part of a class or grade for students and if the schools would move to limited or a complete shut down again.

5. Include new safety procedures as a part of the training program for new "employees" (students) working in the enterprise.

6. Use of shared objects such as writing utensils (for employees and customers) and equipment to make products and merchandise, should be limited when possible, or cleaned between uses.

7. Consider having clearly defined pathways for outside customers to travel when in the school building, implementing contactless payment systems, and establishing a process to disinfect work areas before and after services are administered. Depending on school rules, there may be a need to limit or not allow outside visitors.

8. Move to electronic payment and electronic payment reader away from the cashier.

9. Provide remote shopping alternatives (e.g., delivery, pick-up).

10. Provide students/employees with disposable disinfectant wipes, cleaners, or sprays that are effective against COVID-19.

11. Limit the number of people (customers) allowed into the store area to ensure proper social distancing.

12. Specialize responsibilities to students to limit contact with other areas of the store. For example, certain students are only assigned to the checkout, others are only assigned to restocking merchandise, etc.

13. Limit the number of students working within the store, especially if students cannot practice proper social distancing.

14. Decide on policies dealing with customers touching and returning merchandise.

15. Encourage customers to use hand sanitizer/wipes before trying on items and to keep protective face coverings on during fitting.

16. Determine procedure for disinfecting items that have been touched by customers.

17. Keep work groups of students that always work together, do not change schedules or students frequently.

18. Post signage in the store for customers regarding new procedures.

## Workplace Experiences

1. Workplace experience opportunities will be dependent on employer and business restrictions based on local health department guidelines.

2. Work with local businesses to ensure safe experiences can be carried out or see what experiences can be completed virtually.

3. When virtual experiences are not practical, social distancing guidelines must be followed.

4. Look at alternative opportunities at the local school.

5. Work with the local business to limit the number of monitoring visits required.

6. Use Zoom and phone to connect with the mentors to hold monitoring visits when possible.

7. When transporting students, follow the local district transportation policy.

8. Connect with special education and vocational rehabilitation team members to coordinate opportunities for students.

9. Provide virtual work-based learning (WBL) opportunities for students.

10. Workplace experiences in agriculture or other businesses deemed essential, and where in-person work may be expected, must follow all local health guidelines.

11. Ensure virtual WBL experiences are just as robust and authentic as in-person WBL.

   - How are students intentionally engaged in opportunities for self-reflection and supported to work independently?

   - What is the guidance for employers to communicate safely and provide intentional mentoring to students?

   - How are expectations for work products and outcomes being communicated to students?

   - How are competencies able to be met and verified?

   - Are virtual platforms being utilized to maintain as much interactivity and targeted engagement as possible? (Use of polls, working in small break-out groups, etc.)

# Certification

Ensure students have the equipment and tools they need to obtain certification tied to courses or programs of study. Contact the appropriate CDE Education Programs Consultant for guidance.

# Industry Specific Recommendations

## Animal Science Labs/Classrooms/Facilities

1. There is no evidence of animal-to-person spread of Covid-19. It is considered safe for students to handle and work with animals by following recommendations and guidelines.

2.  Encourage frequent hand washing when working with animals.

3.  The agricultural education instructor(s) or designee should always have access to the animal science facility if there are animals present.

4.  Avoid introductions of new or "outside" animals to existing populations. If new animals must be introduced, separate (quarantine) them from the others for at least two weeks.

5.  Keep animals (especially those more susceptible to SARS-CoV-2, cats, dogs, small mammals like ferrets and rabbits) separated by six feet.

6.  Prevent unnecessary contact between animals housed at the school or lab area (i.e. spacing between pens, staggering animals with an empty pen or space in between etc.).

7.  Avoid unnecessary handling of all animals housed at the school or used in a lab.

8.  Limit individuals into the animal laboratory to essential people (i.e. students in the class and teachers). Post signs to indicate public and other visitors not allowed.

9.  Monitor animals for signs of illness.

10. Clean and disinfect animal areas frequently, including between uses for different animal species as well as equipment, tools, and other items.

11. Ensure facilities and lab space has adequate ventilation for animals and people.

12. Do not use common feed dispensers and other shared surfaces that cannot be cleaned and disinfected between uses.

13. Limit items allowed in the animal area.

14. The livestock in the facility are on a strict nutritional diet, being fed twice a day. This schedule should be maintained for optimum health, performance, and growth of that animal, as well as the cleaning of the facility/housing area.

15. The agricultural education teacher(s) need to have access to the facility for vaccination, tagging, and weighing of livestock. The teacher(s) need to conduct other important supervision responsibilities to include the ability to do preventative medicine and weight management of the Supervised Agricultural Experiences (SAE) for the county fair(s).

16. Many students house their livestock project(s) at the school facility because they do not have resources to keep an animal at their home. There are not options for these SAE livestock projects to be relocated with the student. A plan/schedule that includes time limits for students based on necessity must be developed with the agricultural education teacher(s).

17. Many school farms have a large number of animals that the agricultural

education instructor(s) assist the students in taking care of, to include routine management practices.

18. A limit should be placed on the number of students accessing the lab facility at one time. All individuals should have no close contact while adhering to the recommended space/distance from each individual. All individuals should leave the area as soon as the work is done.

## Arts, Media, and Entertainment Classrooms

1. Ensure students have access to needed pathway-specific equipment, hardware, and software to maintain quality CTE instruction and certifications.

2. Create individual arts production kits for students to use for remote or in-person instruction, when possible (i.e. drawing supplies, painting supplies, sculpture, and 3D arts supplies, etc.).

3. Create individual media production kits for students to use for remote or in-person instruction, when possible (i.e. laptops, tablet, cameras, headphones, mouse, etc.).

4. Give special consideration to sanitation of facilities between use, including, but not limited to, locker rooms, dressing rooms, green rooms, risers, stages, backstage, studio areas, floors, barres, workstations, and mirrors.

5. Develop alternative live and/or recorded exhibition and performance opportunities that meet pathway standards, following State and national guidelines.

6. Refer to guidance from the Event Safety Alliance Reopening Guide for specific guidance on performing arts events for professional music, theatre, and dance programs.

7. Ensure professional performing arts programs, particularly instrumental music and choir, are taught in well-ventilated spaces or outdoors, with appropriate mitigation techniques. Refer to the International Coalition Performing Arts Aerosol Study preliminary findings for detailed guidance including distancing and ventilation.

## Computer, Computer-Aided Design, and Media Labs

1. If possible, students should be assigned to a device/hardware (headphones, mouse, etc.).

2. Ensure students have access to needed industry-standard hardware and software to meet standards.

## Education, Child Development, and Family Services Classrooms/Labs

1. RealCare Babies used in child development courses should be cleaned using

the following guidance: To disinfect the baby, remove and wash all clothing. Then, use rubbing alcohol or disinfectant wipes containing an alcohol concentration of 60 percent or greater. This is an antimicrobial solution which kills 99.99 percent of germs within 10–30 seconds. Gently wipe down the baby and accessories then let them air dry for 30 minutes. (We do not recommend using bleach to disinfect).

2. Early childhood education programs that provide preschool/childcare should be closely monitored following industry standards for childcare.

## Fashion and Interior Design Classrooms

1. Sewing machines and tools should be made available per student. If that is not available or feasible, sewing machines (irons, ironing boards, cutting mats, etc.) should be disinfected between student use. Small sewing tools (shears, pins, pincushions, etc.) should be checked out to individual students if possible.

2. Hand sewing kits including needles, pins, pincushions, and thread could be made available for each student.

3. Interior Design tools should be made available per/student. Small hand tools (rulers, pencils, etc.) should be checked out to individual students if possible.

## Greenhouse/Plant Science Labs/Facilities

1. Post person capacity limit.

2. Only students and teachers can enter the greenhouse. Post signs on the greenhouse door indicating it is not open to the public.

3. The agriculture education instructor(s) should have access to the greenhouse and other plant science facilities if there are live plants/crops present.

4. Given the time of year, there is a considerable amount of labor required to transplant plants that have already been started, potting plants for continued optimal growth, and maintaining optimal nutritional needs for the plants. Much of this labor requirement has a very short window of time to complete for optimum plant growth.

5. Given the time of year, agricultural education programs may be in the middle of plant sales or peak production in greenhouse facilities. While all greenhouse facilities are climate controlled electronically, there are always issues that can arise that demand someone to be present to address. We recommend instructors utilizing the electronic monitoring and controls available through smart technology at this time to operate the basic functions of the greenhouse, if possible/available to the instructor(s).

6. In some situations, the agriculture instructor manages the plant science facility. This could include vineyards, orchards, row crops, etc. In these instances, it is important that cultural practices continue to minimize the harmful effects on the

plants, as well as to maximize the production of the crop.

7. A plan should be developed to allow access by essential students or designee if needed.

8. A limit should be placed on the number of students accessing the greenhouse at one time based on the size and structure of the greenhouse. All individuals should leave the area as soon as the work is done.

## Health and Medical Labs

1. Provide adequate, usable, and appropriate training, education, and informational material about classroom/lab functions, student health and safety, including proper hygiene practices and the use of any workplace controls (appropriate safety attire, such as face coverings).

2. Students will practice proper gloving, including removal and disposal.

3. All disposable equipment (e.g. gloves, face shields, lung bags, gauze, bandages) must be single use only per student and per instructor.

4. Student-to-manikin ratio should be one-to-one.

5. Require each student to have their own pocket mask with one-way valves when instructing Cardiopulmonary Resuscitation.

6. Automated external defibrillator (AED)-to-student ratio should be one-to-one. AED trainers must be cleaned and disinfected immediately after use.

## Life Management, Food Science, Foods and Nutrition, Culinary Arts, and Food Service and Hospitality Classrooms

1. ServSafe has free COVID-19 training and resources available.

2. Practice food safety (i.e. wash food, wear gloves, use correct cutting boards, and prevent cross contamination) as normally expected.

3. Direct teaching of how to remove gloves in a safe and sanitary manner.

4. Disposable (one use) tasting spoons, plates, etc. should be used in all lab settings. Remove flatware from the individual kitchens to avoid the chance of using them for tasting by students. If disposable items are not feasible or desirable, ensure that all non-disposable food service items are handled with gloves and washed with dish soap and hot water or in a dishwasher and sanitize.

5. Remove flour, sugar, spices, etc. from individual kitchens and locate in a centralized space so use can be monitored.

6. Implement a hand washing policy to require two hand washes during lab.

Students should stay in the lab area and not return to the desk or classroom area without changing gloves and washing hands.

7. Establish a work zone with equipment and/or workspace assignments (minimum two linear feet per student of counter space).

8. Provide checklist for equipment sanitation: work surfaces, sinks including faucet and levers, stove dials, doors, and refrigerator door handles. Sanitation to be completed prior to getting equipment and food/supplies.

9. Use dishwasher or wash, rinse, and sanitize all equipment prior to the end of class (follow ServSafe or Health Department Guidelines). Air dry equipment. If hand mixers or blenders are used, the handles and controls should be sanitized before storage.

10. When possible, set up lab stations with only necessary equipment and premeasure ingredients. Limit student access to bulk ingredients such as flour and sugar.

11. While not ideal, labs could be demonstrations by student teams or teacher-led demonstrations to limit the number of students in labs.

12. Separate sampling into individual portions before eating. Assign each student individual food portions to sample away from others.

13. Countertops, stovetops, and sinks should be sanitized after use and/or between classes.

14. Students actively preparing food in a Culinary Arts or Foods Lab should always wear the appropriate safety attire (i.e. foodservice disposable gloves, face covering, apron or chef's coat). Aprons, skull caps, and chef coats should be assigned to individuals and laundered after individual student use. These items should not be re-worn by multiple students. Towels should be laundered after each lab. Ensure clean towels/aprons/potholders are handled with clean hands and wearing of a mask. At a minimum, provide plastic disposable aprons for students.

15. Reduce the amount of paper handling. Laminate recipes or lab directions. If they need to be reused, sanitize them after use. Lab reports should be turned in electronically to reduce paper/writing utensil contact.

16. Reduce recipes so less of a product is made.

17. If food is offered at any event, have pre-packaged boxes or bags for each attendee instead of a buffet or family-style meal. Avoid sharing food and utensils and ensure the safety of children or guests with food allergies.

18. If remote learning is occurring, students may be preparing food lab experiences at home and should practice food safety (i.e. wash food, wear gloves, use correct cutting boards, and prevent cross contamination) as normally expected.

Clean and sanitize before and after all labs. If possible, provide pre-measured ingredients for students to take home to complete lab experiences with asynchronous learning experiences.

## Workshops for Automotive, Construction, Manufacturing, Welding, Metals, and/or Small Engine programs

1. Use gloves when available and follow state and national shop safety guidelines.

2. Provide adequate, usable, and appropriate training, education, and informational material about classroom/shop functions and student health and safety, including proper hygiene practices and the use of any workplace controls (including personal protective equipment [PPE]).

3. Redesign workflow to decrease cohort interactions that meet the close contact criteria (contact within six feet for several minutes or more).

4. Post limited occupancy expectations for smaller spaces (i.e. finish/stain rooms, storage areas, etc.).

5. The instructor(s) should have access to facilities where students have manufacturing, construction, automotive, and/or engineering projects.

6. A plan should be developed to allow access by essential students to complete supervised work on projects.

7. A limit should be placed on the number of students accessing the shop at one time based on the size and structure of the shop. All individuals should leave the area as soon as the work is done.

## Additional Resources

### Industry Sectors, Industry Sector Lead, and Pathways:

| Industry Sector Logo | Industry Sectors and Pathways | Lead Consultant and Contact Information |
|---|---|---|
| | **Agriculture and Natural Resources**<br>• Agricultural Business<br>• Agricultural Mechanics<br>• Agriscience<br>• Animal Science<br>• Forestry and Natural Resources<br>• Ornamental Horticulture<br>• Plant and Soil Science | Hugh Mooney<br>916-319-0488<br>hmooney@cde.ca.gov |
| | **Arts, Media, and Entertainment**<br>• Design, Visual, and Media Arts<br>• Game Design and Integration<br>• Performing Arts<br>• Production and Managerial Arts | Allison Frenzel<br>916-324-5634<br>afrenzel@cde.ca.gov |
| | **Building and Construction Trades**<br>• Cabinetry, Millwork, and Woodworking<br>• Engineering and Heavy Construction<br>• Mechanical Systems Installation and Repair<br>• Residential and Commercial Construction | Robert Wilson<br>916-319-0675<br>rwilson@cde.ca.gov |
| | **Business and Finance**<br>• Business Management<br>• Financial Services<br>• International Business | Molly Anderson<br>916-445-6217<br>moanderson@cde.ca.gov |

| Industry Sector Logo | Industry Sectors and Pathways | Lead Consultant and Contact Information |
|---|---|---|
| | **Education, Child Development, and Family Services**<br><br>• Child Development<br>• Consumer Services<br>• Education<br>• Family and Human Services | Melissa Webb<br>916-319-0773<br>mwebb@cde.ca.gov |
| | **Energy, Environment, and Utilities**<br><br>• Energy and Power Technology<br>• Environmental Resources<br>• Telecommunications | Bryan Baker<br>916-319-9224<br>bbaker@cde.ca.gov |
| | **Engineering and Architecture**<br><br>• Architectural Design<br>• Engineering Technology<br>• Engineering Design<br>• Environmental Engineering | Robert Wilson<br>916-319-0675<br>rwilson@cde.ca.gov |
| | **Fashion and Interior Design**<br><br>• Fashion Design and Merchandising<br>• Interior Design<br>• Personal Services | Melissa Webb<br>916-319-0773<br>mwebb@cde.ca.gov |
| | **Health Science and Medical Technology**<br><br>• Biotechnology<br>• Health Care Administrative Services<br>• Health Care Operational Support Services<br>• Mental and Behavioral Health<br>• Patient Care<br>• Public and Community Health | Cindy Beck<br>916-319-0470<br>cbeck@cde.ca.gov |

| Industry Sector Logo | Industry Sectors and Pathways | Lead Consultant and Contact Information |
|---|---|---|
| | **Hospitality, Tourism, and Recreation** <br>• Food Science, Dietetics, and Nutrition <br>• Food Services and Hospitality <br>• Hospitality, Tourism, and Recreation | Melissa Webb <br>916-319-0773 <br>mwebb@cde.ca.gov |
| | **Information and Communication Technologies** <br>• Games and Simulation <br>• Information Support and Services <br>• Networking <br>• Software and Systems Development | Erle Hall <br>916-323-2564 <br>ehall@cde.ca.gov |
| | **Manufacturing and Product Development** <br>• Graphic Production Technologies <br>• Machining and Forming Technologies <br>• Product Innovation and Design <br>• Welding and Materials Joining | Robert Wilson <br>916-319-0675 <br>rwilson@cde.ca.gov |
| | **Marketing, Sales, and Service** <br>• Entrepreneurship/Self-Employment <br>• Marketing <br>• Professional Sales | Molly Anderson <br>916-445-6217 <br>moanderson@cde.ca.gov |
| | **Public Services** <br>• Emergency Response <br>• Legal Practices <br>• Public Safety | Cindy Beck <br>916-319-0470 <br>cbeck@cde.ca.gov <br><br>David Kinst <br>916-708-2782 <br>dkinst@cde.ca.gov |
| | **Transportation** <br>• Operations <br>• Structural Repair and Refinishing <br>• Systems Diagnostics and Service | Robert Wilson <br>916-319-0675 <br>rwilson@cde.ca.gov |

## Internet Resources

Advance CTE Prioritizing Through and Beyond COVID-19:
https://cte.careertech.org/sites/default/files/Prioritizing_CTE_During_COVID_July2020.pdf

Association for Career and Technical Education (ACTE) Distance Learning Resources:
https://www.acteonline.org/professional-development/opportunities/distance-learning-resources/

ACTE High Quality CTE: Planning for a COVID Impacted School Year:
https://www.acteonline.org/professional-development/high-quality-cte-covid-19-planning-guide/

California Career Resources Network (CalCRN):
https://www.cde.ca.gov/ci/ct/cc

CTE Online and Sector Leads of Community Practice:
https://www.cteonline.org/communities

Distance Learning Adaptation Lesson Planning Template:
https://docs.google.com/document/d/1y8pepp6acSjciFFgEzda8RZLUT-eLjaiIk_uo39C0rM/edit?usp=sharing

Educational Theatre Association, Recommendations for Reopening School Theatre Programs:
https://www.schooltheatre.org/blogs/edta-news/2020/06/24/edta-releases-guide-for-reopening-school-theatre-p

Event Safety Alliance, Reopening Guide:
https://www.eventsafetyalliance.org/

Family and Consumer Sciences Educators, Guide to Safe and Effective Family and Consumer Sciences Programs:
https://www.fcsed.net/fcsed/support/support-resources/support-resources-elearning

Flipped Classroom Model: Why, How, and Overview:
https://www.youtube.com/watch?v=BCIxikOq73Q

Guidance for Supervising Groups of Kids Safely:
https://covid19.ca.gov/industry-guidance/#cohort-guidance

International Coalition Performing Arts Aerosol Study for detailed guidance including distancing and ventilation:
https://www.nfhs.org/articles/unprecedented-international-coalition-led-by-performing-arts-organizations-to-commission-covid-19-study/

National Art Education Association, Remote Learning Toolkit:
https://www.arteducators.org/learn-tools/remote-learning-toolkit

Guidance for Reopening CTE Programs in California

National Association for Music Education, Fall 2020 guidance for Music Education:
https://nafme.org/my-classroom/fall-2020-guidance-music-education-from-nfhs-nafme/

National Dance Education Association, Teaching Dance in Fall 2020:
https://drive.google.com/file/d/1pYpik7k0hc87CZ25hWKfSh3IP2q0Cwmz/view

National Restaurant Association, Coronavirus Information and Resources:
https://restaurant.org/covid19

Project-Based Learning: How It Works and Why It's So Effective:
https://www.youtube.com/watch?v=geeoy3BMmE0

Stanford Webinar – Design Thinking = Method, Not Magic:
https://www.youtube.com/watch?v=vSuK2C89yjA

The Design Thinking Process:
https://www.youtube.com/watch?v=_r0VX-aU_T8

The Flipped Classroom Model:
https://www.youtube.com/watch?v=qdKzSq_t8k8

Special acknowledgement to the Kentucky Department of Education and Nebraska Department of Education for the work they completed in developing their resources for reopening CTE programs.