Executive Summary: This agenda item provides an update on the progress of Commission staff in their work with WestED and staff from the California Department of Education to develop a plan for a work group to explore solutions surrounding Career Technical Education.

Recommended Action: For Information only

Presenters: Jake Shuler and Bob Loux, Consultants, Professional Services Division

II. Program Quality and Accountability
   a) Develop and maintain rigorous, meaningful, and relevant standards that drive program quality and effectiveness for the preparation of the education workforce and are responsive to the needs of California’s diverse student population.
Introduction
This agenda item is the first update to the Commission’s request at the June 2018 Commission meeting that staff work with other agencies to address issues related to Career Technical Education (CTE).

Background
With the growing shortage of CTE teachers, along with the desired expansion of more CTE programs, the field has experienced challenges with trying to appropriately staff and expand access to high quality CTE programs. In recent years, stakeholders have expressed to the California Department of Education (CDE), and the Commission on Teacher Credentialing (Commission) the desire to work collaboratively to find creative and effective solutions that would address some of the chronic and persistent challenges in a robust menu of CTE options for California’s student population and the 21st century economy. These challenges include not only the need for more fully prepared educators, but also the number and type of courses offered, funding and pathways, and ensuring that CTE is integrated into the larger school environment. At the June 2018 Commission meeting (Item 4E) staff suggested a collaborative effort with the California Comprehensive Center at WestED (Center) and CDE to create a CTE work group for the purpose of identifying solutions that will help ensure that CTE programs are stronger and more viable and to assist the Commission and CDE to work in unison toward these efforts. Also at the June 2018 Commission meeting, staff presented a list of questions that the Center identified to help organize this work. The Commission supported this approach and the Center agreed to assist with efforts going forward.

Work Completed
Since the June Commission meeting staff has met with CDE and Center staff to plan for this effort. From these meetings, a Theory of Action (Appendix A) has been developed to help focus the efforts of the work group, as well as a timeline (Appendix B) to keep all parties apprised of next steps. Staff is aware of the need to involve a broad range of stakeholders on the work group and have begun to develop an application for prospective members.

The Theory of Action focuses on what is needed to create and operate a successful work group that will explore solutions surrounding CTE issues. The identified inputs required for this work group to work productively include experienced staff to oversee the process with knowledge of federal and state programs and initiatives, expertise from industry, and an understanding of best practices.

The core functions of the work group would be to address the major questions, analyze data and current policies, create draft recommendations and gather feedback. The outputs will
include consistent guidance from the Commission and CDE, and recommendations for policy revisions and employer initiatives. The desired outcomes from this effort include a reduction of CTE teacher shortages, continued collaboration and alignment between CDE and the Commission, and expansion of high quality CTE programs throughout the state.

The timeline for this endeavor anticipates the work group convening at the beginning of 2019 and completing its draft recommendations by May. Stakeholder input on the draft recommendations would be sought at various times throughout the process. A report outlining the challenges, recommendations, and the rationale for the recommendations would be drafted in the summer 2019, with the final report presented to the Commission and the corresponding leadership within the CDE in fall 2019.

Next Steps
An application to serve on the work group will be available to the public in October 2018. The application will be distributed through the PSD E-news and sent directly to interested stakeholder groups, including state agencies, education associations and organizations, county offices of education, trade schools, colleges and universities, industry sector representatives, regional occupational programs, school districts, and CTE professionals. The announcement will explain the purpose of the work group and ask those that feel they have something to contribute to apply.

The work group efforts will be supported by the combined resources of CDE, the Commission, and the California Comprehensive Center at WestEd as part of their federally funded mission to assist states in finding solutions to educational issues.

Staff is also developing a set of categories that the selected work group will use as a guide for their work on recommended solutions to address current CTE challenges. The efforts of the CTE work group will be informed by the current standards and regulations that govern CTE, and members will be asked to be open to any possible changes that will increase access to, and ensure quality in, these programs. Staff will present updates on this work as it progresses.
Appendix A
Theory of Action

The California Department of Education (CDE) and the California Commission on Teacher Credentialing (Commission) will work in partnership to address the critical need for increasing and improving the Career Technical Education (CTE) Workforce. The two agencies will also work together to enhance Career Technical Education to make available high quality CTE programs to all students in California. The California Comprehensive Center at WestEd (Center) will also partner with the two state agencies, providing technical assistance.

NEEDS
Persistent shortages of CTE teachers
Inconsistent credential guidelines
Inadequate system of support
Inadequate professional development
Inadequate industry competency assessments

INPUTS
CTC and CDE staff time and experience
Federal and State programs and initiatives
Relevant student data
Expertise and concerns of statewide interest groups, postsecondary institutions, apprentice and trade schools

CORE FUNCTIONS
Address key questions
Analyze current policies
Create work group
Gather input
Create draft
Gather feedback
Make revisions

OUTPUTS
Consistent statewide guidance
Recommendations for:
Policy Revisions
Legislation
Ed Code amendments and/or revisions
Employer initiatives

OUTCOMES
Reduced shortages of CTE teachers
Consistency across CTC and CDE
Ongoing partnership with industry partners
High quality CTE program

EPC 3D-3
September 2018
Appendix B
Timeline of Action

Aug - Sept 2018
West Ed, CDE & CTC staff meet to prepare for work group

Oct - Dec 2018
Work group applications and selection. Draft Focus Areas

Jan - Mar 2019
Group Meetings in Sacramento. Virtual Meetings as Needed

April - June 2019
Finalize recommendations. Brief CTC & CDE Leadership

July - Aug 2019
Preliminary Report to CTC & CDE. Final Review

Sept 2019
Final Report to CTC

EPC 3D-4
September 2018
Appendix C

Potential Areas of Exploration to Inform the Commission’s Approach to Career and Technical Education (CTE) Credentialing

The California Comprehensive Center (Center) at WestEd has reviewed background about the CTE credential and identified the following as dimensions to the issue of the CTE teaching workforce in CA:

- Projections about the CTE teaching workforce
- Credentialing
- Recruitment and Retention of CTE teachers
- On-going training and professional development
- Salaries
- STEM
- Collaboration between the Commission, CDE and County Offices of Education (COEs)

Following are potential questions that may inform the Commission’s work to identify options for approaching the CTE credential. The Center is available to support further exploration. Once specific questions are selected the Center can work with the Commission to develop a project prospectus, which captures key project outcomes and activities to support the Commission’s capacity development.

**Projections about the CTE teaching workforce**
1. What are current projections about the supply and demand for CTE teachers in CA?
2. Are there specific fields in which the demand is not currently being met?
3. Are there specific fields in which the demand is projected to not be met in the next five years?
4. Are there reasonable and documented explanations for what contributes to anticipated shortages?
5. Are there any fields in which there is an abundance of CTE teachers? What is happening with those teachers? (Difficulties in finding placements, serving as substitutes, etc.) *This is probably not an issue, but we can’t presume.*
6. Given projected shortages, what plans, policies, legislation exist to address the issue of shortages?

**Credentialing: Context and Status**
7. What has been done in the past eight years to improve CTE teacher credentialing?
8. Are the requirements for CTE credentials prohibitive, do they deter aspiring CTE teachers?
9. Are the costs of credentialing prohibitive, do they deter aspiring CTE teachers?
10. Are the requirements and costs for CTE credentials prohibitive, do they deter business and industry professionals from transitioning into teaching?
11. Are the costs of credentialing prohibitive, do they deter business and industry professionals from transitioning into teaching?
12. Are there specific fields in which the requirements need to be upgraded (e.g., science, technology, and engineering)?
13. Are there specific fields in which there is a significant decrease in applicants for the credential? What are those and why (e.g., field in which the “trade” has changed significantly)?
14. How do CA credentialing requirements compare to those of other states?

**Recruitment and Retention of CTE Teachers**

15. What are the most pressing issues related to recruiting CTE teachers in CA?
16. What efforts have been launched in the last 10 years to improve recruitment of CTE teachers in CA?
17. What has been the result of those efforts?
18. Research has shown that students of color and girls are more likely to pursue a field of study if they have teachers from their same background. What efforts have been launched in the last 10 years to improve recruitment of teachers of color, bilingual teachers and women as CTE teachers in CA?
19. What has been the result of those efforts for each of those groups?
20. What are the most pressing issues related to retaining CTE teachers in CA?
21. What efforts have been launched in the last 10 years to improve retention of CTE teachers in CA?
22. What has been the result of those efforts?
23. What efforts have been launched in the last 10 years to improve retention of teachers of color, bilingual teachers and women as CTE teachers in CA?
24. What has been the result of those efforts for each of these groups?

**On-going Training and Professional Development**

There are significant issues in on-going training for CTE teachers and their non-CTE peers: milieu of the typical high school vs. business and industry; providing on-going professional development (PD) for CTE teachers to keep up with industry standards; industry standard hours and education hours.

25. For industry and business partners, what guidance is given to districts and schools to provide two-way PD so that both teachers/administrators and industry personnel understand each other’s contexts?

**Providing on-going PD for CTE teachers to keep up with industry standards**

26. What are the most pressing issues related to training and PD for CTE teachers in CA?
27. What efforts have been launched in the last 10 years to improve training and PD for CTE teachers in CA?
28. What has been the result of those efforts?
29. What has been done to improve PD for non-CTE teachers to effectively team teach with CTE teachers?

**Industry standard hours and education hours**

30. What, if any, efforts may be needed to combine industry standard hours for training with education hours for CTE teachers?
31. In what fields is this need most pressing?
Salaries
32. Low teacher salaries compared to business and industry salaries has been argued as a disincentive for mid-career professionals to move into teaching. What, if any, efforts have been made to address this issue?
33. What has been the result of those efforts?
34. The high costs associated with obtaining a CA credential, combined with the comparatively low teacher salaries is often cited as a deterrent to potential CTE teachers. Is this true? What evidence addresses this issue?

STEM
35. What are current projections about the supply and demand in CA for STEM/CTE teachers, especially those in Engineering and Technology?
36. Are there specific fields in which the demand is not currently being met?
37. Are there specific fields in which the demand is projected to not be met in the next five years?
38. Are there reasonable and documented explanations for what contributes to anticipated shortages?
39. Given projected shortages, what is plans, policies, legislation exists to address the issue of shortages?
40. What are the most pressing issues related to recruiting STEM/CTE teachers in CA?
41. What efforts have been launched in the last 10 years to improve recruitment of STEM/CTE teachers in CA?
42. What has been the result of those efforts?
43. Research has shown that students of color and girls are more likely to pursue a field of study if they have teachers from their same background. What efforts have been launched in the last 10 years to improve recruitment of teachers of color, bilingual teachers and women as STEM/CTE teachers in CA?
44. What has been the result of those efforts for each of those groups?
45. What are the most pressing issues related to training and PD for CTE teachers in CA?
46. What efforts have been launched in the last 10 years to improve training and PD for STEM/CTE teachers in CA, particularly in the areas of Engineering and Technology?
47. What has been the result of those efforts?
48. What has been done to improve PD for non-CTE teachers to effectively team teach with STEM/teachers?

Collaboration between the Commission, CDE and Local Education Agencies (LEAs)
49. What collaborative efforts between the Commission, CDE and LEAs have addressed the following:
   • Projections about the CTE teaching workforce
   • Credentialing
   • Recruitment and Retention of CTE teachers
   • On-going training and professional development
   • Salaries
   • STEM