

APPENDIX B

STATE CENTER COMMUNITY COLLEGE DISTRICT Career Technical Education Charrette Worksheet Summary of Key Findings, Gaps and Recommendations

1. CAREER PATHWAYS: GENERAL

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| A. Employees lack “soft skills” including collaboration, work ethic, working in teams, effective communications, critical thinking and problem solving, and attitude towards work. | Lack of soft skills continues to be a high priority with employers throughout business and industry. | <ul style="list-style-type: none"> • Include more soft skills training within the CTE curriculum and evaluate students on soft skills. | <p>Table 5 – Business</p> <ul style="list-style-type: none"> • Ongoing concern – soft skills • Customer services • Essential business skills video • Very board-soft skills • Need both soft skills and technical skills • Teach entrepreneurial mind set • Teach soft skills <p>Table 11 – CTE General Skills</p> <ul style="list-style-type: none"> • Encourage the development of soft skills through cross discipline entrepreneurship. • Develop industry-wide academies. |
| B. Technology continues to impact businesses and industry in a large way. | Colleges must avoid a “technology gap” between industry standards and what is being taught in the programs. | <ul style="list-style-type: none"> • Facilities must be able to support technology platforms that are constantly changing. • Curriculum needs to reflect the most state-of-the-art skills and knowledge of computer literacy through input from local advisory committees. | <p>Table 5 – Business</p> <ul style="list-style-type: none"> • Given – do agree with this one • Curriculum review process too long • Business needs to know how to use technology <p>Table 11 – CTE General Skills</p> <ul style="list-style-type: none"> • Develop partnerships with industry and manufacturers to make available recent generation equipment for instruction. • Utilize training using equipment within industry/business, manufacturers, and government |

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| C. Facilities must be flexible so that industry/business partners can co-exist with college programs. | New facilities need to be designed to include industry presence in conjunction with CTE programs. | <ul style="list-style-type: none"> Consult with local industries and businesses when designing new facilities. | <p>Table 11 – CTE General Skills</p> <ul style="list-style-type: none"> Consult with business/industry, manufacturers, and government. |
| D. Employers continue to cite the lack of “basic skills” – reading, writing and mathematics – with many employees not academically prepared to enter the workforce. | CTE students need a broader range of support services than most traditional, four-year post-secondary students. | <ul style="list-style-type: none"> A focus on support services for CTE students is needed. Students need to declare a program of study through a formal and well-defined process. CTE programs need to be accessible to students and responsive to regional industry needs. Associate Degrees for students who are not intending to transfer need to be examined. | <p>Table 5 – Business</p> <ul style="list-style-type: none"> Should be bigger than this. Students need to understand what is available. Know it is relevant, see end results. <p>Table 11 – CTE General Skills</p> <ul style="list-style-type: none"> Infuse basis skills into the CTE curriculum and make it specific to the career need. Stackable certificates leading to degrees appropriate to an industry. |
| E. An increasing number of students (and their parents) are not aware of career choices within the CTE pathways. | Many middle schools and high schools have reduced career awareness services that expose students to careers at an early age. | <ul style="list-style-type: none"> Work closely with the K-12 districts to support increased activities that will give students and parents a better understanding of CTE careers (i.e., career expos, manufacturing cluster activities, college night, guest speakers, site tours, Career Skills Challenge events, etc.). | <p>Table 5 – Business</p> <ul style="list-style-type: none"> Agree with this one. Counselors don't know where jobs are. Job developers for divisions <p>Table 11 – CTE General Skills</p> <ul style="list-style-type: none"> Work with the business community with regard to the goal stated. |
| F. Few student teachers are being recruited and prepared to teach CTE at the high school and community college levels. | There is high need to increase the number of credentialed teachers (traditional and non-traditional) for CTE programs. | <ul style="list-style-type: none"> Increase marketing and promotion of teaching as a viable career for CTE students attending community colleges. Continue to connect with Fresno State Teacher Credential Program. Recruit currently-employed industry representatives who would be interested in teaching | <p>Table 11 – CTE General Skills</p> <ul style="list-style-type: none"> Develop an equivalency program specific to CTE instruction. Develop professional development for instructors with practical but no teaching experience. |

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| <p>G. Collaboration between high school and community college faculty and leadership will result in better alignment of programs and services.</p> | <p>There is high need to increase emphasis placed on ongoing collaboration with CTE programs at the high school and community college levels.</p> | <p>CTE courses.</p> <ul style="list-style-type: none"> • CTE faculty and administrative leaders meet a minimum of twice a year to align high school and community college curriculum and programs at all sites. • Joint high school and community college advisory committees should meet at least twice a year to review current and future industry needs. • Joint funding opportunities should be a high priority to maintain state-of-the-art facilities and equipment and share facilities and equipment where appropriate. • Instructor staff development and training is necessary to reflect the most current skills and knowledge of the industry/business. • California Common Core Standards need to be aligned with community college CTE program curriculum. | <p>Table 11 – CTE General Skills</p> <ul style="list-style-type: none"> • Encourage collaboration as well with industry/business and government. |
| <p>H. Collaboration between business/industry and instructors and counselors can provide increased opportunities to keep current with trends and career opportunities.</p> | <p>Instructors find it difficult to keep current with constantly changing industry and business applications involving technology and operations.</p> | <ul style="list-style-type: none"> • Emphasize job internship opportunities for instructors through sabbatical leaves, industry-supported internships and grants. • Provide job shadowing opportunities and training on career pathway products for counselors who provide career awareness services to students. | <p>Table 11 – CTE General Skills</p> <ul style="list-style-type: none"> • The job internships need to be developed in order for the opportunity to exist. • “Industry” should be an active participant in CTE curriculum development. |

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| I. Colleges need metrics and outcome data to continuously improve pathways and align with local and regional labor market needs. | It is difficult to obtain workforce metrics due to students leaving CTE programs early and not maintaining contact with the colleges after obtaining certificate and/or degree. | <ul style="list-style-type: none"> Work with the Chancellor's Office of California Community Colleges to establish a student identifier for high school students and community college students involved in training programs to track workforce progress and outcomes. | |

| CAREER PATHWAYS: GENERAL – Additional Key Findings, Gaps and Recommendations | | | |
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| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
| J. Table 11 – CTE General Skills For success students need embedded academic counseling coupled with industry-specific guidance. | Table 11 – CTE General Skills <ul style="list-style-type: none"> Industry mentoring and guidance are required. | Table 11 – CTE General Skills <ul style="list-style-type: none"> Develop a mentoring program which emphasizes the value of networking within the parameters of a career. | |
| K. Table 11 – CTE General Skills CTE curriculum should be flexible and responsive to industry needs without delay. | Table 11 – CTE General Skills <ul style="list-style-type: none"> The time involved in securing curriculum approval of CTE modifications is counter-productive | Table 11 – CTE General Skills <ul style="list-style-type: none"> The time gap for CTE curriculum approval should be reduced | |
| L. Table 11 – CTE General Skills Students are unfamiliar with the monetary advantages of CTE instruction. | | Table 11 – CTE General Skills M. Instruct students of the income which can result from CTE instruction. | |

2. CAREER PATHWAY: ADVANCED MANUFACTURING

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| <p>A. The high rate of retiring baby boomers has created a need to train individuals to replace the highly skilled and experienced supervisors as they retire in the next few years.</p> | <p>There is need for the community colleges to work with industries in developing programs that will fill the gap for highly skilled supervisors.</p> | <ul style="list-style-type: none"> • Apprenticeship programs can address gaps and need to be replicated (e.g., JBT Food Tech-Madera Center Program). • Continue to work closely with union-supported apprenticeship programs. • Increase work-based training programs for students to be taught by industry supervisors at the work site. | <p>Table 1 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Training programs need to include workforce culture • What are the skill sets that a supervisor needs to have....such as costs, overhead, six sigma • Work with industry to develop the curriculum for training supervisors <p>Table 2 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Work with non-union apprenticeship programs as well as union shops. • Find ways to offset costs associated with reduced FTES funding for apprenticeship programs • Find ways to provide custom training for local manufacturers at their locations in a cost effective manner • Work to equalize FTES funding <p>Table 5 – Business</p> <ul style="list-style-type: none"> • JBT program – replace retirees program is a model |

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| <p>B. Industries use highly sophisticated equipment requiring employees who possess highly logical “systems-based” knowledge and skills.</p> | <p>Colleges cannot always afford to purchase new equipment specific to an industry need in a timely manner.</p> | <ul style="list-style-type: none"> • Industry brings equipment to the college for training, or college students go to the manufacturing location to learn unique or sophisticated machinery. | <p>Table 1 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Develop curriculum for working with highly sophisticated equipment....knowledge above and beyond basic manufacturing equipment • Visit facilities to see what industry has in common and develop a base training on what is similar (transferable skills with a core curriculum) • Develop the Foundation Skills <p>Table 2 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Collaborate with industry to use their facilities through internships and cooperative agreements. • Work with business advisory groups to identify funding and seek their support of grant opportunities. <p>Table 5 – Business</p> <ul style="list-style-type: none"> • Partnerships will play a role. Should be ongoing. Engage long term partnerships, internships. Advisory, paid internships. Apprenticeship. |
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| <p>C. EMSI Gap Analysis Report for all colleges indicates the largest gaps in the programmatic areas of opportunity were for blue collar occupations, including heavy and tractor trailer truck drivers, general maintenance and repair workers, and industrial machinery mechanics.</p> | <p>Additional training in these occupations is needed.</p> | <ul style="list-style-type: none"> • Increase marketing and training opportunities at colleges. • Build state-of-the-art facilities and purchase equipment that will result in highly skilled training. | <p>Table 1 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Incorporate web-based training on the equipment; Virtual training; training on the equipment at the company vs on the college campuses • Develop central training center for a piece of equipment • Model training programs after Germany....getting to students early and young; teach them soft skills early; respect; showing up on time; respect for the industry • Teach someone how to troubleshoot as a foundation skill...critical thinking skills...creating a pathway to the solution...how to imbed these skills into the curriculum to decrease downtime for machines • Curriculum needs to be developed on Troubleshooting to industry standards <p>Table 2 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Market the pathways for these types of jobs down to the secondary level students • Utilize community college entrepreneurship programs to develop the marketing for the CTE programs <p>Table 5 – Business</p> <ul style="list-style-type: none"> • Internships, apprenticeship, |
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| <p>D. EMSI Gap Analysis Report for the colleges found skilled trades among the top areas of opportunity including electricians, pipe fitters and steamfitters, and carpenters.</p> | <p>There may be a need to expand skilled trades training programs and courses.</p> | <ul style="list-style-type: none"> • Work with local apprenticeship agencies to determine the need for additional training. | <p>Table 1 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Work with more projects like the Slingshot project at the WIB....screening and assessment; look at what company is looking for; and refer clients over; if company wants them they are first in to the college classes; expenses are covered by grant; upskilling current workforce and getting right talent on the bus • Need more industry externships where industry comes in to train the trainers (instructors) <p>Table 2 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Provide better skills assessment and screening for local manufacturing to determine skills needed for their employees |
| <p>E. Agricultural mechanics and advanced manufacturing mechanics career areas need to be coordinated in terms of career pathway awareness. (Included in Agriculture Findings)</p> | <p>There is a lack of awareness as to how the two areas are similar with career opportunities overlapping between both agriculture and advanced manufacturing (i.e., welding, maintenance mechanic).</p> | <ul style="list-style-type: none"> • Develop career awareness materials that highlight overlapping careers in both sectors. | <p>Table 1 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Instructors should be AWS certified and can administer AWS testing; doing “prep” but not administering test • Employers want AWS certification but also certificate from the college <p>Table 5 – Business</p> <ul style="list-style-type: none"> • More training, seminars, partnerships to help reduce the gaps, better integration |

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| <p>F. The recently formed Advanced Manufacturing Cluster now includes over 100 local industry partners, along with high school and college partners including SCCCD.</p> | <p>Increase awareness and participation in Manufacturing Cluster planning and activities.</p> | <ul style="list-style-type: none"> • Continue to involve administrators and instructors in Manufacturing Cluster development and research opportunities for funding to support future plans. • Consider using the Reedley College Advanced Manufacturing model involving pre- and post- assessments of students, counseling, linked project-based learning, internships, and job placement in other CTE program areas. | <p>Table 1 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Collaboration...everything we do includes all four segments <p>Table 2 – Advanced Manufacturing</p> <ul style="list-style-type: none"> • Expand the Valley Industrial partnership concept to the Community College campuses. |
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| CAREER PATHWAY: ADVANCED MANUFACTURING – Additional Key Findings, Gaps and Recommendations | | | |
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| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
| <p>Table 1 – Advanced Manufacturing</p> <p>G. Need communication/language skills training in ESL; classes at night for people in the training programs during the day</p> | | | |
| <p>Table 5 – Business</p> <p>H. Promote manufacture jobs to women and non-traditional populations</p> | | | |

3. CAREER PATHWAY: AGRICULTURE

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| <p>A. The ongoing drought in California has changed agricultural practices for the long term.</p> | <p>New crops, more efficient watering practices, new harvesting methods are needed to address the changes occurring in the San Joaquin Valley.</p> | <ul style="list-style-type: none"> • Agriculture programs continue to work closely with advisory committees, CSUF Irrigation and Center for Water Technology, Farm Bureau, and industry-based associations to develop curriculum that reflects the changes in cultural practices. • Facilities include state-of-the-art labs and equipment needed to train workers for current and future agriculture careers. | <p>Table 3 – Agriculture</p> <ul style="list-style-type: none"> • Include working with UC, UCA&NR, UC Coop Ext, USDA • Advocate for &/or assist Center of Excellence refine/define job titles for more accurate LMI (for all ag jobs) <p>Table 4 – Agriculture</p> <ul style="list-style-type: none"> • Add additional agencies to work with such as Bureau of Reclamation • New additional irrigation practices |

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| <p>B. Food contamination issues have resulted in an increased need for highly trained and licensed individuals to work in the food processing and agriculture sanitation areas.</p> | <p>Community college programs need to be established to address needs immediately and in the future. Need exists at both the growing location and processing facilities.</p> | <ul style="list-style-type: none"> Continue to work closely with industry to develop current course curriculum, facilities and opportunities for sanitation training in the farms and food processing plants. | <p>Table 3 – Agriculture</p> <ul style="list-style-type: none"> Environmental sanitation should be included in this track (micro food safety, health, etc) Regulatory & Compliance, QA, food safety, sampling analysis/lab training, auditing training/coursework needed – full certificate program, not just a few classes Bridges ag production and food processing <p>Table 4 – Agriculture</p> <ul style="list-style-type: none"> Look at federal guidelines - FSMA developing curriculum for food safety, funding for training, and developing processing practices Apprenticeship programs – food safety and quality assurance <p>Table 5 – Business</p> <ul style="list-style-type: none"> Agree with this. It is a big deal. Have to do things in the field. Some business are very unethical. More education. Computerized tracking systems, Curriculum on food safety/transportation/packaging, Logistics on ag. –distribution, supply chain for ag. |
| <p>C. More work needs to be done in marketing agriculture as a desired career pathway.</p> | <p>Old stereotypes of agriculture careers being only in production need to be changed to reflect highly technological and modern practices now being implemented.</p> | <ul style="list-style-type: none"> Colleges need to work with industry and local school districts offering agriculture programs to promote agriculture as a highly skilled, high-wage career pathway for educated individuals. | <p>Table 3 – Agriculture</p> <ul style="list-style-type: none"> Affirm <p>Table 4 – Agriculture</p> <ul style="list-style-type: none"> Horticulture and green industry – number two in the state. Most people think of farming first but need to look at horticulture |

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| <p>D. Madera Unified School District offers a comprehensive agricultural program with little opportunity for students to attend a community college agriculture program.</p> | <p>Reedley College is too far away for most Madera Unified School District students to attend after graduation.</p> | <ul style="list-style-type: none"> • Develop an agriculture program (facilities and curriculum) at the Reedley College, Madera Community College Center that provides a community college experience linked to the Madera Unified School District, as well as nearby Kerman, Chawanakee, and Yosemite Unified School Districts. | <p>Table 3 – Agriculture</p> <ul style="list-style-type: none"> • Affirm <p>Table 4 – Agriculture</p> <ul style="list-style-type: none"> • Addition of horticulture program to Madera and an urban horticulture program at Fresno City. • Crops or livestock program; may need to decide one or the other. |
| <p>E. Agricultural mechanics and advanced manufacturing mechanics career areas need to be coordinated in terms of career pathway awareness. (Advanced Manufacturing Task Force Report Finding)</p> | <p>There is a lack of awareness of how the two areas are similar with overlapping career opportunities between both agriculture and advanced manufacturing (i.e., welding, maintenance mechanic).</p> | <ul style="list-style-type: none"> • Develop career awareness materials that highlight overlapping careers in both sectors. | <p>Table 3 – Agriculture</p> <ul style="list-style-type: none"> • Also include pumps, efficiencies, CAD, boiler technologies in coursework • Develop better definitions of pathways and certificates • More stackable certificates <p>Table 4 – Agriculture</p> <ul style="list-style-type: none"> • Recommendation on point. Mechanic pathway focusing on general areas with job specific courses near the end depending on pathway. Include industrial safety. |

| CAREER PATHWAY: AGRICULTURE – Additional Key Findings, Gaps and Recommendations | | | |
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| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
| <p>Table 4 – Agriculture</p> <p>F. With regard to page 20...</p> | <p>Table 4 – Agriculture</p> <p>Lack of alignment of college curriculum with skills standards identified by the industry</p> | <p>Table 4 – Agriculture</p> <p>Align curriculum with skills standards set by industry in agriculture industries to meet industry standards.</p> | <p>Table 3 – Agriculture</p> <ul style="list-style-type: none"> • Look at possible certificate programs related to: <ul style="list-style-type: none"> ○ landscape architecture and design ○ Wildland firefighting program ○ Urban forestry program ○ Ag Ed pathway program ○ PCA |
| <p>Table 5 – Business</p> <p>G. Educate young generations about agriculture/computerized ag. (more than working on the field)</p> | | | <p>Table 3 – Agriculture</p> <ul style="list-style-type: none"> • Animal Science program evaluated to be geared towards business, production, health....connected to LMI to keep relevant with careers |
| <p>Table 5 – Business</p> <p>H. Tie ag to other disciplines</p> | | | |
| I. | | | |
| J. | | | |

4. CAREER PATHWAY: BUSINESS

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| <p>A. Business programs and departments at high schools have been reduced due to the high cost of maintaining equipment and software.</p> | <p>High school students need to be allowed to take business courses at the community college.</p> | <ul style="list-style-type: none"> Develop “linked” courses with high school business programs to allow students to take advanced classes at the college with state-of-the-art laboratories. | <p>Table 5 – Business</p> <ul style="list-style-type: none"> Dural enrollment They don’t have to focus on business Teach business doesn’t require computers Online classes Some curriculum needs some software Partnership with local community colleges Reach out to business to donate Some businesses don’t use most up to date software Cost analysis/Curriculum analysis Basic accounting class at high school will help students math skills Conflict management class <p>Table 6</p> <ul style="list-style-type: none"> Define state of the art? Are we talking about industry standards? Website design, upkeep, software? At the high school or at the college? Professional development for the educators to keep them up to date? |

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| <p>B. High school business courses previously receiving college articulation credit are no longer viable.</p> | <p>Opportunities to fill gaps so that high school students can receive college credit need to be considered.</p> | <ul style="list-style-type: none"> Establish Dual Enrollment business classes at the high schools. | <p>Table 5 – Business</p> <ul style="list-style-type: none"> What courses? Why not update? Why not viable? Disconnect with statewide work High school should deal with this problem <p>Table 6</p> <ul style="list-style-type: none"> Connecting with community resources – like the IRS trains people how to do taxes called Vita – can they do something like this to apply skills taught by companies to give back to their community and learn while doing. |
| <p>C. Reedley College EMSI Gap Analysis reveals a workforce business gap for certificates in the fields of General Office Occupations and Clerical Services, and Accounting. Clovis Community College includes these occupations and business administration. FCC has the largest certificate gap in Sales and Salesmanship.</p> | <p>Consider additional training for certificate-level programs to fill the workforce gap at the community college level. Wages in some areas may be relatively low so additional research is needed. Projected jobs from 2014-2024 include Management (4% growth) and Business and Financial Operations (11% growth) with median hourly earnings between \$27.50-\$33.44.</p> | <ul style="list-style-type: none"> Increase opportunities for students to receive certificates and Associate of Science degrees in these programs through additional training opportunities and facilities. | <p>Table 5 – Business</p> <ul style="list-style-type: none"> Retitle the classes so more relevant to current job title. Make it more attractive for students to take. Basic computer training What we teach is too low – align our curriculum to industry needs Revise what is entry level skills <ul style="list-style-type: none"> Ongoing matching our ed with industry needs |

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| <p>D. Fresno City College EMSI Gap Analysis Report for associate's level business gaps includes Marketing and Distribution, Human Services, and Real Estate.</p> | <p>There may be a need to expand business programs to address gaps.</p> | <ul style="list-style-type: none"> • Add additional courses if substantiated by research. | <p>Table 5 – Business</p> <ul style="list-style-type: none"> • Social media marketing being re-developed <p>Table 6</p> <ul style="list-style-type: none"> • Should use research from the industry or industry input (industry standards) |
| <p>E. Reedley College EMSI Gap Analysis Report lists the largest Associate Degree business gap as General Office Occupations and Clerical Services.</p> | <p>Consider additional courses in these areas.</p> | <ul style="list-style-type: none"> • Add additional courses if substantiated by research. | <p>Table 5 – Business</p> <ul style="list-style-type: none"> • Change course title with job titles – match the industry |
| <p>F. Clovis Community College EMSI Gap Analysis Report lists Accounting as the business program with the largest need.</p> | <p>Consider additional courses in these areas.</p> | <ul style="list-style-type: none"> • Add additional courses if substantiated by research. | <p>Table 5 – Business</p> <ul style="list-style-type: none"> • Making the accounting to align with the needs of industry |

| CAREER PATHWAY: BUSINESS – Additional Key Findings, Gaps and Recommendations | | | |
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| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
| <p>Table 5 – Business</p> <p>G. Teach globalization/global perspectives in business classes</p> | | | <p>Table 6</p> <ul style="list-style-type: none"> • More online or hybrid options for students but also teach them how to be successful in these classes. |
| <p>Table 5 – Business</p> <p>H. Information manager</p> | | | <p>Table 6</p> <ul style="list-style-type: none"> • Entrepreneurial pathways – so students can learn how to start a business. |
| <p>Table 5 – Business</p> <p>I. Teach people basics to run business: Financial planning Taxing</p> <p>J. Marketing business</p> | | | <p>Table 6</p> <ul style="list-style-type: none"> • Business ethics – • Marketing and information management courses. |
| K. | | | <p>Table 6</p> <ul style="list-style-type: none"> • Flipped classroom • Online lectures from other locations to entice students to want more MOOC (massive open online courses) |
| L. | | | <p>Table 6</p> <ul style="list-style-type: none"> • Assure that all programs are vetted by qualified industry partners. |
| M. | | | <p>Table 6</p> <ul style="list-style-type: none"> • More transportation between campuses • Standardized certificates across the district • Short term training – clerical staff based upon skills assessment |

5. CAREER PATHWAY: HEALTH SCIENCES

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| <p>A. Almost all current training at the high school and community college levels focuses on traditional Patient Care or Therapeutic Services.</p> | <p>A need for more non-traditional occupations training is required to address new employment needs.</p> | <ul style="list-style-type: none"> Consider training for Clinical Laboratory Scientists, Medical Coders, Occupational Therapy Assistants, and Community Health Workers. | <p>Table 7 – Health Sciences</p> <ul style="list-style-type: none"> There is a need for primary care providers or physician assistants. Do we have a pre-med pathway? Is it clear for students? Employers in the valley do not use the Medical Laboratory Technician. There is no need for an AA degree for it. Medical Coder is not an occupational title. Health Information Tech jobs require accredited college programs. An Occupational Therapy Assistant Program is in process. Community Health Workers is entry level. There are not many agencies using them. There are few jobs there and they are part-time and minimum wage. The Federally Qualified health clinics use them. The Agency provides the training. There is no need for community colleges to provide training. Ramp up LVN program. The medical assistance training is unregulated and is problematic. Standardize the medical assistant program. Real Needs: Home Health Care. CNA, etc. are needed. Personal Care Aids are needed. Home Health Aids are needed <p>Table 8 - Health Sciences</p> <ul style="list-style-type: none"> Services are identified in the key findings and the recommendations focus on roles. This is confusing. Intraprofessional clinical |

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| | | | <p>practice as a means of managing patient care over the continuum.</p> <ul style="list-style-type: none"> • Exploration of the skills and knowledge needs to be identified at the High School level to engage students early on in recommended roles. What draws students to occupations or a career awareness of what job role they will want in the future? |
| <p>B. Emerging health care professions demand highly qualified and competent professionals.</p> | <p>There is a need to increase the number of highly qualified candidates for degree programs.</p> | <p>Table 8 - Health Sciences</p> <ul style="list-style-type: none"> • Discussion Action regarding the need to create a more aligned degree articulation system needs to occur among high schools, community colleges and four-year colleges/universities (public and private). | <p>Table 7 – Health Sciences</p> <ul style="list-style-type: none"> • Outreach to high schools at lower levels to help determine the importance of math and science. <p>Table 8 - Health Sciences</p> <ul style="list-style-type: none"> • Link learning pathways and project based learning in health care pathways. Focus on specific information that links with the specific role in the health profession. • Alignment of instructor to be highly qualified, competent in the health care profession and measurable outcomes to distinguish individual instructor performance. |
| <p>C. Industry expectations are constantly changing in response to changes in health care services (e.g., Affordable Care Act, uninsured residents, aging population).</p> | <p>There is a need to better define what expectations will be required of community college graduates by the health care industry.</p> | <ul style="list-style-type: none"> • Common metrics for high school and community college programs need to be established which reflect industry expectations for program completers. • Data sharing agreements need to be established between SCCC and local high school districts to track student persistence, course taking patterns, and completion rates. | <p>Table 8 - Health Sciences</p> <ul style="list-style-type: none"> • Review the programs to deal with the Affordable Care Act requirements to meet all health care positions. |

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| <p>D. EMSI Gap Analysis for all colleges reported areas of opportunity at the associate level to include Medical and Clinical Laboratory Technicians, Diagnostic Medical Sonographers, and Medical Equipment Repairers.</p> | <p>There may be a need for additional training for these occupations as the current and projected jobs for the region include Healthcare Practitioners and Technical as growing 21% in the next ten years with median hourly earnings of \$39.22.</p> | <ul style="list-style-type: none"> • Add additional facilities and courses to address gaps in these health care professional occupations. | <p>Table 8 - Health Sciences</p> <ul style="list-style-type: none"> • A general exposure to various health professional jobs (A full career ladder or spectrum of health professions.) |
| <p>E. EMSI Gap Analysis for the colleges includes certificate and associate degree surplus in the following areas: Licensed Vocational Nursing, Nursing, Dental Assistant, Health Information Coding, Emergency Medical Services and Medical Assisting.</p> | <p>Consider surplus numbers when planning for future programs.</p> | <ul style="list-style-type: none"> • May need to consider reduction in program offerings if surpluses continue to grow. | <p>Table 7 – Health Sciences</p> <ul style="list-style-type: none"> • The data is most likely old. Health care is changing very rapidly. Contact the DSN for information. Ambulatory Care and outpatient centers is where health care is going. MA's LVN's case managers for RN's. <p>Table 8 - Health Sciences</p> <ul style="list-style-type: none"> • Transition of health care to the rural area, ambulatory setting, outside of the Hospital to meet the health care needs of the community. • The need for experienced RN's is the focus of the hospitals. Increase in hiring of RN's at newly graduate level to deal with increase of bed capacity. • Separate each program and the need by each and not lump in one category. • Stop unneeded programs and increase needed programs. |

| CAREER PATHWAY: HEALTH SCIENCES – Additional Key Findings, Gaps and Recommendations | | | |
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| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
| F. Table 5 – Business Medical coding being out sourced. How to fight for it. Some smaller medical offices still do it in house | | Table 7 - Health Sciences Use HWI regional resources from DSN. This will help to determine the gap analysis. | |
| G. | | Table 7 - Health Sciences Outreach to high schools at lower levels to help determine the importance of math and science. | |
| H. A and E contradict each other. | | | |
| I. Table 7 - Health Sciences Emergency Medical Services and Medical Assisting | | Table 7 - Health Sciences Promote Short-term certifications. Maintain ROP workplace opportunities. | |
| J. | | | Table 7 - Health Sciences Faculty recruitment for colleges is difficult. |
| Table 8 - Health Sciences K. Softskills are needed to be included | | Table 8 - Health Sciences Students do not have the basic skills in communicating, work ethic, how to answer phones, courtesy, attendance, timely reporting of issues | Table 8 - Health Sciences Student training on softskills that allows for a well-rounded employee. |
| Table 8 - Health Sciences L. Quality of Instructors | | Table 8 - Health Sciences Bridge the gap in how to learn to teach. What are the qualifications of our instructors and higher those who have the necessary skills to teach. | Table 8 - Health Sciences <ul style="list-style-type: none"> • Student surveys to be used to allow for instructor performance in these industries. Each instructor is different and not a standardization or consistant way to educate our students. • Student Learning outcomes and curriculum mastery assessments. |

6. DUAL ENROLLMENT

| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
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| <p>A. “Jobs for the Future College Credit Report” findings indicate dual enrollment to be an advantage for high school students receiving college credit and a head start on their college degree.</p> | <p>Dual Enrollment has potential to provide college course credit for CTE students and increase their connections to community colleges.</p> | <ul style="list-style-type: none"> Continue to work on establishing Dual Enrollment for California Community Colleges. Assess current Dual Enrollment courses relative to student success, student and instructor feedback, and students’ continuation to community colleges and centers. <p>Table 9 – Dual Enrollment</p> <ul style="list-style-type: none"> This recommendation is not exclusive to dual enrollment; we assess all of our courses and programs. | <p>Table 9 – Dual Enrollment</p> <ul style="list-style-type: none"> Students need college orientation to understand the impact of taking a college course. Outcome of class is part of their high school and college GPA and impacts financial aid. Need for additional student support services at the high schools, such as advising, supplemental instruction, early intervention. College and high school teachers/instructors need to communicate/collaborate around curriculum alignment to meet college course requirements Professional development Why call them CTE students? They are COLLEGE students on CTE pathway. Need for record keeping and data tracking Including HS charter and private schools (being mindful of organizational culture) Building a transition plan that ensures high school graduation, as well as motivation to continue college. Help students navigate through the dual processes (of HS and college), as well as transition. <p>Table 10 – Dual Enrollment</p> <ul style="list-style-type: none"> Registration on line (needs to be a streamlined process) Schedules not known yet at the HS level |

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| <p>B. Dual Enrollment can replace previous 2+2 articulation agreements thus allowing students the opportunity to earn college credit at the high school or community college.</p> | <p>It will be a challenge to find properly credentialed teachers who possess the minimum qualifications to teach community college classes at high schools (e.g., Master's Degree). Presently credentialed community college instructors can help fill the gap.</p> | <ul style="list-style-type: none"> Fresno Business Council Task Force Reports recommended Dual Enrollment as a major component of establishing sequenced and aligned programs among high schools and Community Colleges. | <p>Table 10 – Dual Enrollment</p> <ul style="list-style-type: none"> Expanding online opportunities (DE) Regularly meet on pathways Staffing incentives to get their BS to MS |
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| DUAL ENROLLMENT – Additional Key Findings, Gaps and Recommendations: | | | |
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| Key Findings | Gap Analysis | Recommendations | Charrette Feedback |
| <p>C.</p> | | <p>Table 10 – Dual Enrollment Stackable certificates</p> | <p>Table 10 – Dual Enrollment Motivation to keep going</p> |
| | <p>Table 10 – Dual Enrollment People aren't aware of the program</p> | <p>Table 10 – Dual Enrollment Marketing for dual enrollment</p> | |
| | <p>Table 10 – Dual Enrollment Student support</p> | <p>Table 10 – Dual Enrollment Wrap around services (counseling)</p> | |
| <p>F.</p> | | | |
| <p>G.</p> | | | |