WORKFORCE DEVELOPMENT BOARD OF VENTURA COUNTY

MANUFACTURING COMMITTEE MEETING

Thursday, February 16, 2017
8:00 a.m. - 9:30 a.m.

United Food and Commercial Workers International Union (UFCW)
816 Camarillo Springs Rd. (Suite A), Camarillo, CA

AGENDA

8:00 a.m.	**1.0**	**Call to Order and Agenda Review**	Alex Rivera
8:02 a.m.	**2.0**	**Public Comments** *Procedure: The public is welcome to comment. All comments not related to items on the agenda may be made at the beginning of the meeting only.*	Alex Rivera
8:05 a.m.	**3.0**	**Approval of Minutes:** December 15, 2016	Alex Rivera
8:10 a.m.	**4.0**	**Career Pathways Presentation** Executive Director, Career Education Ventura County Office of Education	Tiffany Morse
8:35 a.m.	**5.0**	**WIOA Workforce Development Planning**	
		• Regional Partnership: AMP SoCal	Jason Miller
		• MRVC: Planning Update – Manufacturing Day Future – Networking Events	Byron Lindros
		• WIOA Sector Planning – 2017-2020 WDBVC Regional & Local Plan – Joint Sector Meeting Outcomes – Industry-Recognized and Valued Credentials – Alignment with 2-Year Plan (Draft)	Patrick Newburn
9:15 a.m.	**6.0**	**Committee Member Comments**	Committee Members
9:30 a.m.	**7.0**	**Adjournment** Next Meeting April 20, 2017 (8:00 a.m.-9:30 a.m.) United Food and Commercial Workers International Union (UFCW) 816 Camarillo Springs Road (Suite A), Camarillo, CA	Alex Rivera

Individuals who require accommodations for their disabilities (including interpreters and alternate formats) are requested to contact the Workforce Development Board of Ventura County staff at (805) 477-5306 at least five days prior to the meeting. TTY line: 1-800-735-2922.

For information about the Workforce Development Board of Ventura County, go to workforceventuracounty.org.

WDB Manufacturing Committee Meeting
December 15, 2016

MINUTES

Meeting Attendees

Committee Members		WDB Staff	Guests
Alex Rivera* (Chair)	Jason Miller	Patrick Newburn	Grant Leichtfuss
Jim Avery	Bill Pratt*		Jim Rose
Mike Bastine	Scot Rabe		
Marybeth Jacobsen	Peter Zierhut*		

**WDB Members*

1.0 Call to Order and Agenda Review

Chair Alex Rivera called the meeting to order at 8:03 a.m.

2.0 Public Comments

No public comments.

3.0 Approval of Minutes: October 20, 2016

Motion to approve: Scott Rabe
Second: Jason Miller
Motion approved

4.0 WIOA Workforce Development Planning

- REGIONAL PARTNERSHIP: AMP SOCAL

  Jason Miller reported that California State University Channel Islands (CSUCI) had received an inquiry from Naval Base Ventura County (NBVC) / Naval Sea Systems Command (NAVSEA) to provide professional development courses for Model Based training in Enterprise, Engineering, and Management. This model based curriculum and PLM (Product Lifecycle Management) has been previously offered at Purdue University. Initial survey of the southern California region indicates that no other university offers related model based courses. Jason suggested that this might be an opportunity for the manufacturing committee and Workforce Development Board (WDB) to connect closely with NBVC/ NAVSEA and to be supportive of a study to determine industry needs prior to curriculum development, or a letter of support from the WDB. Alex Rivera asked Jason to gather more information for presentation at the next committee meeting.

- MRVC: PLANNING UPDATE

  MFG DAY 2017:

  Alex Rivera reported on behalf of MRVC Chair Byron Lindros. Alex reported that MRVC's Leadership Group is considering to allow VCOE/ VC Innovates to take the lead in scheduling 2017 MFG DAY tours. Alex explained that Career Technical Education (CTE) courses and bus tours are funded through VC Innovates and without their funds, schools would have difficulty to attend the company tours. Other criteria being considered is that the Workforce Innovation and Opportunity Act (WIOA) has added emphasis to serve Out of School youth ages 16-24.

MRVC leadership agreed that clear communication with education partners and the needs of business is critical in future MFG DAY planning. Manufacturing Committee members discussed ideas to expand MFG DAY to be more inclusive of adult and other populations beyond in-school youth, such as hosting college exhibits, Edge Factor movies, involvement with employment agencies, and other public outreach directed beyond in-school youth. Alex reported that MRVC Leadership Group will have further discussion about MFG DAY future direction and how MRVC might incorporate WIOA into the workgroup's mission and events.

MANUFACTURERS NETWORK EVENT:

The October event at Hi-Tech Engineering was highly successful with 18 in attendance. Haas Automation is willing to host a February 2017 event. Dynamic Automation is willing to host a future event in 2nd quarter of 2017. Bill Pratt reported success at previous networking events hosted at Kinamed Inc. and Milgard Windows & Doors. Manufacturing Committee members suggested that city economic development managers have an active role in promoting these events. Also that, the Economic Development Collaborative – Ventura County (EDC-VC) may be an excellent partner to communicate with the city managers. Patrick Newburn commented that the cities of Simi Valley and Camarillo economic development managers have been active.

- WIOA SECTOR PLANNING

Patrick Newburn reported on behalf of WDB Executive Director Cheryl Moore, that the two year plan (2017-2020) required by the California Workforce Development Board (CWDB) will be published online for public comment within the next few days. The two plans (WDBVC Regional Plan and WDBVC Local Plan) will outline our alignment with WIOA Federal mandates and the California State Plan. WIOA priorities are to promote career skills training within career pathways, culminating with industry-recognized credentials that lead to self-sustaining employment within in-demand occupations. Additionally WIOA programs are to serve priority populations such as veterans, people lacking basic employable skills, and out of school youth and other people with barriers to employment. Patrick explained the need for the committee to evaluate locally available credentials and their usefulness to sector based employment. An overview was given regarding the Ventura County Career Pathway Industry Credentials offered at the region's adult schools and community colleges. Committee members discussed the need to review and discuss in greater detail combining statistical data to determine the value of the listed credentials and gaps. Members also expressed the need for strong communication with education partners to develop timely courses based upon industry needs. Alex directed WDB staff to arrange a speaker to present more information on career technical education, career pathways, and industry credentials at a future meeting.

Patrick provided an overview of the manufacturing sector "Wall Notes" from the August 5, 2016 Regional Sectors Meeting. The next step is to determine the Committee focus for new workgroup projects and direction for the next two years. Below is a summary of two lists generated by the Manufacturing Committee. Both will need further refinement and prioritizing before deciding on an action plan.

High-Demand

- Additive Manufacturing Technician
- Cyber Security
- Design Engineer
- Discrete Hyper Skills
- Engineers – Systems
- Equipment Maintenance
- Experienced Machinists
- Maintenance Technicians
- Manufacturing Systems Technicians/Engineers
- Manufacturing Technician
- Mechanical Engineer
- Metal Finishers/Coating Experts
- Mid-level Managements Skills

- Facilities Maintenance
- High Technology Assemblers
- I.T. integrate with manufacturing EQ
- Industry-specific interns
- Inspectors (Dimensional, Visual, Electrical)
- Inventory Control
- Machinists with 10 Years' Experience
- Plant Operator
- Programmer (CNC/Controls)
- Quality Assurance (ISO/AS 9100 + Physical Inspection)
- Skilled Assembly
- Software Migration
- Technician (Electrical or Mechanical)
- UAV Technicians

Hardest to Fill

- Design Engineer: *lack of hands-on experience; educational programs to provide hands-on experience are in nascent phase*
- Experienced Machinists:*lack of awareness,lack of experience,job jumping, lack of training*
- Quality Assurance(ISO/AS 9100+Physical Inspection):*no training program;lack of experience*
- Programmer (CNC/Controls): *lack of awareness, lack of experience, job jumping, lack of training*

5.0 Committee Member Comments

- Marybeth Jacobsen: Reported that the Workforce Education Coalition successfully distributed 45 PC laptops to local poverty level students, funded from a $15K grant received from Alcoa.

- Scott Rabe reported that biotechnology courses are receiving vigorous student attention and that continued collaboration between Moorpark and Ventura Colleges is ongoing. Additionally, that Ventura College is in collaboration with Foothill Technology High School for career technical education articulation. Scott also invited Committee members to attend the Architecture & Design Student Showcase at Ventura College on December 16, 2016.

6.0 Adjournment

Alex Rivera adjourned the meeting at 9:39 a.m.

Next Meeting

February 16, 2017 (8:00 a.m. – 9:.30 a.m.)
United Food and Commercial Workers International Union (UFCW)
816 Camarillo Springs Rd. (Suite A), Camarillo, CA

Workforce Development Board Ventura County
Manufacturing Sector Wall Notes from Regional Sectors Meeting August 5, 2016

Manufacturing

High-Demand Jobs	Hardest to Fill	Why Hard to Fill?
• Additive Manufacturing Technician • Cyber Security • Design Engineer • Discrete Hyper Skills • Engineers – systems • Equipment Maintenance • Experienced Machinists • Facilities Maintenance • General Concerns • High Technology Assemblers • I.T. integrate with manufacturing EQ • Industry-specific interns • Inspectors (Dimensional, Visual, Electrical) • Inventory Control • Machinists with 10 Years' Experience • Maintenance Technicians • Manufacturing Systems Technicians / Engineers • Manufacturing Technician • Mechanical Engineer • Metal Finishers / Coating Experts • Mid-level managements skills • Plant Operator • Programmer (CNC / controls) • Quality Assurance (ISO/AS 9100 + Physical Inspection) • Skilled Assembly • Software Migration • Technician (Elec. Or Mech.) • UAV Technicians	• Design Engineer • Experienced Machinists • Quality Assurance (ISO/AS 9100 + Physical Inspection) • Programmer (CNC / controls) • General Concerns	• Lack of hands-on experience. Educational program to provide hands on are in nascent phase • Lack of awareness, lack of experience, job jumping, lack of training • No training program. Lack of experience. • Lack of awareness, lack of experience, job jumping, lack of training • Critical thinking vs. standardized tests • Critical thinkers/agility • Career awareness of teachers • Trouble shooters • Self-teachers • Off-shoring of manuf. (and its appeal) • H.S. "shop" classes extinct • Unrealistic expectations • Need for basic skills • No time to grow people into jobs • Minimal trade training • Lack of training resources in area • Self-regulators

Workforce Development Board Ventura County
Manufacturing Sector Wall Notes from Regional Sectors Meeting August 5, 2016

Common Challenges	Ideas for Action
<u>Education and Training</u> • Basic skills (read, write, math, tech) • Career awareness • Certification • College education → no job → entry level → stuck. • Educational levels (industry skills needed/engage educators • Improve perception of vocational training • Internships/apprentice / OJT • Lack of employer-based training • Lack of experience / training • Leadership skills • Need to train the people who live here • Saturation of degrees • Soft skills (employability skills) • Training • Training (cost, right program, investment (continuous)) • Understanding the "new employee" mindset <u>Economic Development</u> • Cost of living • Employee retention (in an employee(s) market) • How do we get people to stay here? (Locally and with the same employer) • Lack of local resources • Need all jobs to be more green (Mfg., Health) • Negative perception of industry • Proximity to L.A. County causes employee(s) to go elsewhere • Retention • Salary (benefits) <u>Technology</u> • Cyber security • Technology challenges	• Engage students with industry (site visits, classroom guest speakers from small business to large employers. Vocational training day at schools (hands on for students, class field trips). Need school boards on "board". • Job advancement plan (skill-based, not time based) • Pre-apprenticeship programs • Provide opportunities for educators to experience industry demands • Retention (share info, review compensation/benefits small business outreach for retention and training of employees)

Ventura County Industry-Valued Certificates
Manufacturing Career Pathways

In the Ventura County regional plan, the four primary career clusters identified are related to the Business Services, Clean/Green, Healthcare, and Manufacturing sectors. The relevant post-secondary credential providers in Ventura County offer over 50 industry-valued certificates with national or state recognition, all within Ventura County's in-demand industry sectors: Business Services, Clean/Green, Healthcare, and Manufacturing. Manufacturing Career Pathway post-secondary certificates and degrees available in Ventura County are listed in the table below:

ADULT SCHOOLS				
CAREER PATHWAY	**CERTIFICATE**	**AUTHORITY**	**RECOGNITION**	**SCHOOL**
Applied Manufacturing	• CNC Machining • 3D Modeling • CAD/CAM • Basic Metalworking	NATIONAL INSTITUTE FOR METALWORKING SKILLS (NIMS) & California Adult Schools Consortium	Industry Recognized	OAS
Machinist Training	• Basic machine shop	California Adult Schools Consortium	Industry Recognized	SICE
	• CNC operations & programming			
	• Introduction to MasterCAM			
	• Introduction to GibbsCAM			
	• Advanced machine shop			
	• Gibbs CAM 3D			
Master Welder/ Advanced Welding	• L.A. City Structural Steel, Flux Cored Arc Welding, Light Gage	California Adult Schools Consortium	Industry Recognized	SICE
	• AWS D1.1 Structural Steel & D1.5 Bridge Welding			
	• A SME pressure vessel pipe certification			
	• API 1104 pipe certification			
	• Mil Std 1595A in Carbon Steel, Chromolly, Stainless Steel, Aluminum, Titanium and Inconel.			
Solidworks Technician (Computer-Aided Design)	• Certified Solidworks Associate	California Adult Schools Consortium	Industry Recognized	VACE, SICE

Ventura County Industry-Valued Certificates
Manufacturing Career Pathways

COMMUNITY COLLEGES				
CAREER PATHWAY	**CERTIFICATE**	**AUTHORITY**	**RECOGNITION**	**SCHOOL**
Biomedical Device Manufacturing Technician	• COA- Biomedical Device Manufacturing	Ventura County Community College District	Industry Recognized	MC, VC
Biotechnology & Manufacturing Operator	• AS- Biotechnology • COA- Biotechnology Manufacturing Operator	Ventura County Community College District	Industry Recognized	MC
Drafting	• AA/AAS – Drafting Technology • COA- Industrial Design & Manufacturing	Ventura County Community College District	Industry Recognized	VC
Welding	• AA/AS - Welding Technology • COA- Welding Technology	Ventura County Community College District	Industry Recognized	VC

Schools/Colleges: OAS= Oxnard Adult School; SICE= Simi Institute for Careers and Education; VACE= Ventura Adult and Continuing Education; MC= Moorpark College; VC=Ventura College

MANUFACTURING COMMITTEE 2-YEAR PLAN
Workforce Development Board of Ventura County
2016-2018

Goal

Champion the creation, support, and training of a diverse pipeline of skilled workers to fill in-demand manufacturing positions in Ventura County. Align educational skills development with hiring trends and emerging technologies. Foster an environment that will engage and bring together Ventura County partners to advocate manufacturing workforce needs and support a robust manufacturing sector.

Components of Plan

1. Engage Leaders

Maintain a core team of Ventura County employers, key agencies, and organizations most involved in manufacturing workforce development: Invite others to participate in topic-specific discussions.

- Ventura County manufacturers
- Manufacturing Roundtable of Ventura County
- Economic Development Collaborative-Ventura County
- Chambers of Commerce
- California State University, Channel Islands
- Ventura County Community College District
- Adult education
- Ventura County Office of Education
- Career pathways programs
- Maker Spaces
- Professional Societies
- Labor Unions
- Ventura County STEM Network
- City Incubators
- Naval/ Military Command Staff

2. Analyze Data

Update labor market data annually. Seek local employer feedback regarding data as it relates to regional industry sector workforce needs.

- Form a workgroup to analyze labor market data and report to the committee.
- Interpret data in relation to local business needs.
- Form a workgroup to provide forums for feedback from manufacturers on workforce needs and opportunities.
- Disseminate findings and data analyses.

3. Take Inventory

For the list below, inventory current manufacturing training programs and providers in the region Develop a matrix and/or Venn diagram for communicating easily. Develop a one-stop, online catalog of manufacturing training/education in Ventura County for easy reference by employers and job seekers.

- Industry-recognized certificates
- National certificates
- Stackable credentials
- Apprenticeships
- Internships
- Externships
- On-the-job training
- Career pathways
- Regional Occupational Programs
- Adult education
- Community colleges
- Universities
- Trades
- Community organizations

- Inventory business/education participation opportunities. Develop a one-stop, online resource for employers to see descriptions of the opportunities and register to participate.

- Inventory key manufacturing leaders. Develop a list and a strategy for outreach.

4. Determine Priorities

Group priorities into three areas:

- Linking Business and Educational Communities
  - Develop opportunities for classroom participation (e.g., real world problem solving)
  - Facilitate mentoring and coaching opportunities
  - Internships
  - Externships
  - Job shadowing
  - Manufacturing Day tours

- Promoting the Manufacturing Sector
  - Foster manufacturing networks
  - Find out what manufacturers are willing to do to help promote/support manufacturing in Ventura County
  - Raise business and community awareness of what manufacturing brings to the county
  - Leverage and coordinate communication channels (e.g., Manufacturing Roundtable of Ventura County; Manufacturing Day; Workforce Wednesday; Ventura County Grows Business; government and education activities)
  - Provide inventory of manufacturing support resources (training support, etc.)
  - Identify opportunities to raise awareness of the value of manufacturing sector

MANUFACTURING COMMITTEE 2-YEAR PLAN
Workforce Development Board of Ventura County
2016-2018

- Manufacturing Workforce Development
  - Sector workforce readiness skills
  - Career pathways
  - Sector certifications
  - Apprenticeship programs
  - Curriculum development
  - Preferred applicant programs

5. Identify Gaps

- Identify gaps between education preparedness and manufacturing workforce needs
- Identify gaps in manufacturing support resources

6. Take Action

***Note to Manufacturing Committee**: We need to develop an action plan that is "achievable" in a two-year window. A suggestion would be to form workgroups that could report progress to the Manufacturing Committee:*

- Employer Needs Workgroup Analyze labor market data and report to the committee, Offer forums for hearing feedback from manufacturers on workforce needs and opportunities.
- Manufacturing Roundtable of Ventura County (MRVC): Continue to support Manufacturing Day (Week), including a meeting of manufacturing and educational leaders. Convene informal evening mixers for networking. Participate in the regional manufacturing expo event in spring 2016. Work toward the development of private resources to support MRVC.
- Business/Education: Continue to provide input for the development of manufacturing courses, manufacturing certificates, manufacturing apprenticeships, and other workforce development opportunities. Continue to provide input for career pathways curriculum development and promote manufacturer participation in learning experiences at school and business locations. Explore development of a website that would enable employers to volunteer to offer hands-on learning experiences (all levels of education).
- Regional Partnerships Workgroup Participate in/stay connected with the research and activities of the Advanced Manufacturing Partnership of Southern California (AMP SoCal) and its pillar committees.

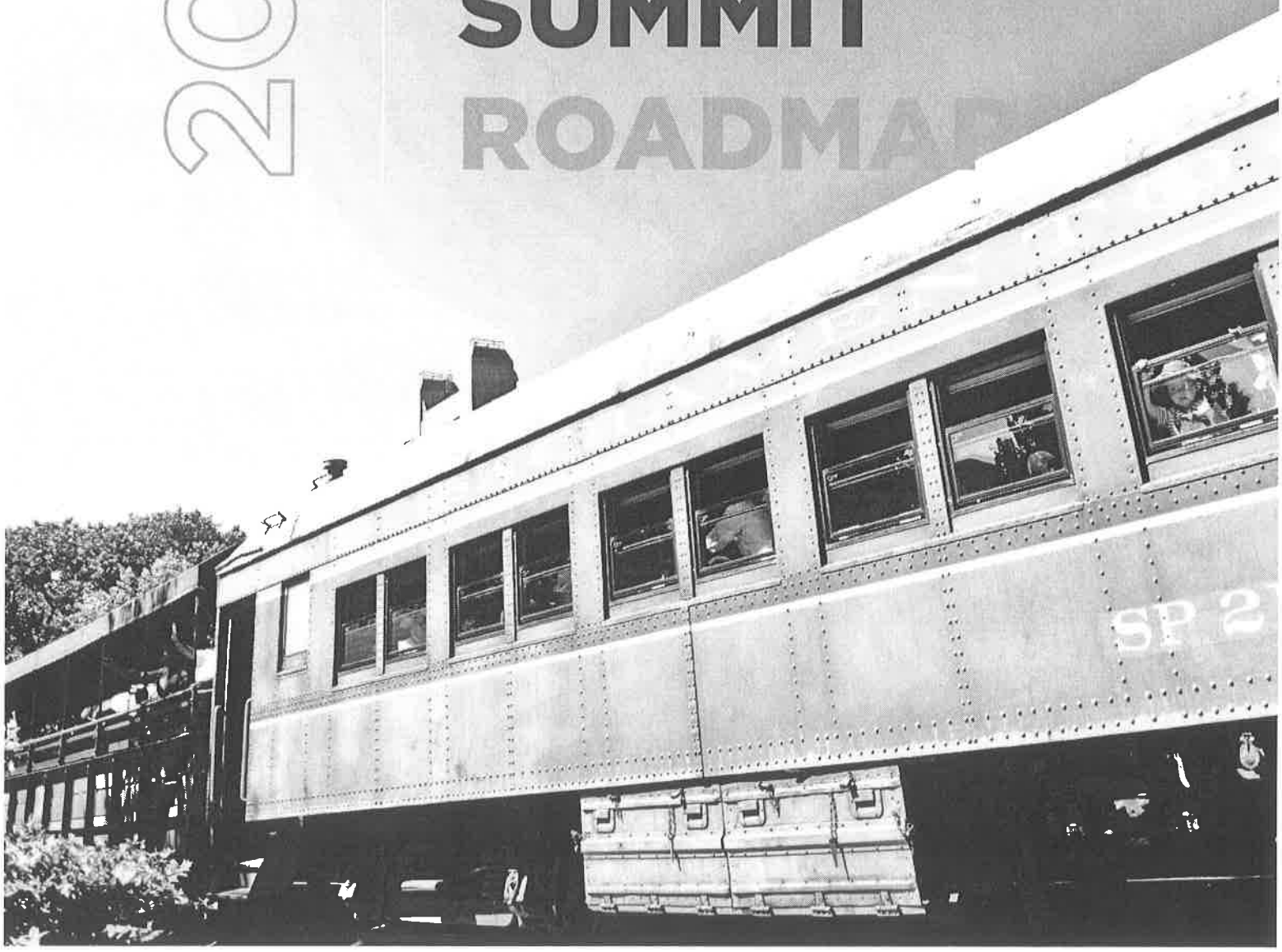
7. Monitor Progress

The Manufacturing Committee will report on progress through the annual Workforce Development Board Year-End Review process and a review of the Committee's 2-Year Plan.

2017

CALIFORNIA ECONOMIC SUMMIT

ROADMAP



The Roadmap to Shared Prosperity

#CAECONOMY.ORG

ONE MILLION MORE SKILLED WORKERS

To restore upward mobility and meet employers' needs, California needs to produce one million more graduates with bachelor's degrees and one million more workers with middle-skilled credentials over the next 10 years.

New investments in workforce development programs have received strong bipartisan support as a primary and unifying strategy for reducing poverty and restoring upward mobility. But California—its economic regions, industry clusters, and educational and training institutions—has a long way to go to achieve an adequate, integrated, and efficient system that serves students, recalibrates workers, and supports employers.

Expectations for what can be accomplished are raised by what *has* been accomplished. A new Strong Workforce Program requires community colleges to rely on labor market data, plan regionally, and consult with employers and civic leaders to determine new Career Technical Education (CTE) programs. The state and local workforce investment boards and the Adult Education Block Grants are aligned with the colleges on metrics and crafting new partnerships with employers.

Guided pathway efforts to create linked learning through CTE Incentive Grants and California Career Pathway Trust funds are expanding pipelines from the K-12 system. And the Awards for Innovation in Higher Education spotlight how collaboration among institutions can reduce a student's time to completion.

To be successful, this effort must be tailored to each of the state's diverse economic regions.

These initiatives must now be forged into coherent community and regional systems—uniformly informed by data, strengthened by efficient relationships with employers, and held accountable for performance by government, business, and civic stewards. The Summit's efforts in 2016 identified some specific ways to further encourage and support regional coherence and state alignment.

Maturing these systems will be a powerful lever to increasing earning power and economic resiliency—giving all Californians a chance to succeed in dynamic workplaces that have left many behind.

THE VALUE: IMPROVING THE WORKFORCE TRAINING PIPELINE

The Summit will be successful when:

- **More workers are developing the skills** they need to earn a livable wage
- **Employers can work more easily with institutions** to produce the skilled employees they require
- **Businesses spend fewer resources** searching for and training workers
- **Training programs adapt more quickly** to meet new demands for specific skills
- **New marketplaces are created** for partnerships between institutions and employers through contract education

AN ACTION PLAN FOR 2017

1 DEVELOP EMPLOYER ENGAGEMENT MODEL AND ENCOURAGE ADOPTION

The Summit will assemble a model for efficient and effective networking of institutions and employers to drive transparent and data-informed policy, program, and budget choices. Effective engagement is key to continuous improvement and cultivating political support for workforce pipelines. This work will include:

- Assemble a model based on proven practices that taken together provide comprehensive connectivity on issues of supply and demand, curriculum, workplace alignment, and feedback for continuous improvement.
- Create a model that is flexible and easily accessible to employers, backed by data metrics, and supported by strong regional workforce partners and civic leaders.
- Work with regional stewards to encourage adaptation of the model and to inform and assess progress.
- Assess the utility and efficiency of the model with business associations and major employers.
- Host consultations to help business leaders, civic leaders, workforce, and education leaders understand the need for and value of effective employer engagement.

2 RAISE AWARENESS ABOUT PATHWAYS AND EXPAND STUDENT ACCESS

The Summit will work with regional public and private partners to leverage tools where students can assess their interests and abilities and understand options for in-demand careers so they can make smart choices on how to acquire those skills, experiences, and relationships.

- Generate awareness for CTE stars (programs with proven workforce outcomes) and CTE rising stars (programs in emergent areas without enough time to show proven outcomes).
- Share online tools in use by regions so students, teachers/faculty, and counselors in secondary and post-secondary institutions can efficiently access information (e.g. Salary Surfer, From Here to Career mobile app, Career Coach, Get Focused Stay Focused)
- Increase access to work-based learning, paid internships, and work experience opportunities within the student journey.

"The Summit has identified the key to success: the need to tailor this effort to each of the state's economic regions."

-CECILIA ESTOLANO, BOARD OF GOVERNORS OF THE CALIFORNIA COMMUNITY COLLEGE

3 IMPROVE COORDINATION BETWEEN INSTITUTIONS, EMPLOYERS

Summit partners will work alongside institutions and employers to improve communication and coordination—and to align institutions with the needs of students and regional labor markets. Better coordination can increase the reliability of financial resources and recession-proof essential programs.

- Identify best practices used in other states or regions informed by the needs of regional economies to improve alignment among colleges.
- Showcase data and analytics to improve the alignment of curricula and programs between K-12, community college, and university-level education.
- Spotlight successes in partner events to encourage innovation, and communicate the value of effective employer engagement.

LINKING LEADERS AND SOLUTIONS

Some of the workforce training innovators involved in the Summit:

- **Gustavo Herrera,** Young Invincibles
- **Michael Kirst,** California State Board of Education
- **Cathy Martin,** California Hospitals Association
- **Rebecca Miller,** SEIU-UHW
- **Janet Napolitano,** Univ. of California President
- **Eloy Ortiz Oakley,** CA State University Chancellor (incoming)
- **Alma Salazar,** LA Area Chamber of Commerce
- **Van Ton-Quinlivan,** California Community College Chancellor's Office
- **Timothy P. White,** CA State University Chancellor

Ventura College 1/25/2016
Manufacturing Technology
Steps 2 Work

Time line: DRAFT

Week 1-2

- Computer Applications
  - Computer Navigation, Computer Security, Computer Etiquette, Software Applications, Basic ERP Applications, Paperless Data Applications and Graphic Formats, Internet job search,

Week 3-4

- Blueprint Reading and Interpretation
  - Mechanical, Electrical, Hydraulic/Pneumatic, Mechanical Assembly
- Inspection, Measurement and Quality
  - Industry Quality Standards, Measurement Systems, Technical Math, Precision Measuring Tools, Lean Manufacturing (6 Sigma)

Week 4-5

- Manufacturing Processes and Operations
  - Machine Operation - Process, Manufacturing Planning, Manufacturing Safety, Technical Assembly Electro-Mechanical, Bio Tech Manufacturing and Compliance

Week 5-6

- Industry Safety
  - OSHA Standards, Bio Mechanics, MSDS applications and use

Week 7--8

- Manufacturing - Tools and Applications
  - Hand and Power Tools, Pneumatic Tools, Machine Tools – CNC Applications

Week 9-10

- Employability and Soft Skills
  - Basics of Interviewing Skills, Communication Skills, Understanding of Business and Company Policy, Chain of Command Protocol, Etiquette, Supervision and Management, Work Organization and Time Management

Use of the Internet

PURPOSE OF THE INTERNET: The Internet access provided by Ventura College is to be used to support the instructional process of students who are actively enrolled in a designated course. Non-educational, recreational and commercial uses of the Internet are prohibited on the Ventura College network.

RULES FOR USING THE INTERNET: Each student is responsible for ensuring that he or she uses the College provided Internet access in an effective, efficient, ethical and lawful manner. To this end, students must comply with the following rules:

1.
Observe the guidelines for acceptable use of networks or services.
2.
Only attempt to gain access to resources for which he or she has authorization. Ventura College will not assume financial responsibility for unauthorized Internet-related expenditures.
3.
Do not make harassing or defamatory remarks using the Internet.
4.
Do not create a personal link to any Ventura College page, and do not represent Ventura College on any personal page.
5.
Do not install any software.
6.
Do not use any unapproved software.
7.
Do not violate any federal or state law, including copyright laws.
8.
Download data from the Internet onto personal data storage Units and any data found on a College-owned hard drive will be deleted.
9.
Do not create any social networking page on behalf of Ventura College or claiming to represent Ventura College.
PRIVACY ON THE INTERNET: Please be aware that any electronic mail is not private since classes will be sharing a mailbox, and that the College reserves the right to access any such information on College-owned servers.

RESPONSIBILITY FOR INFORMATION ON THE INTERNET: Through the Internet, the College provides access to public and private outside networks which furnish electronic mail, information services, bulletin

boards, conferences, etc. Please be advised that the College does not assume responsibility for the contents of any of these outside networks.

OBSCENE MATERIAL: District information resources should not be used for knowingly viewing, downloading, transmitting, or otherwise engaging in any communication which contains obscene, indecent, profane, lewd, or lascivious material or other material which explicitly or implicitly refers to sexual conduct. This policy does not prohibit the use of appropriate material for educational purposes, nor limit academic freedom. However, knowingly displaying sexually explicit or sexually harassing images or text in a private and/or public computer facility or location that can potentially be in view of other individuals is prohibited.

MANUFACTURING TECHNOLOGY

Proficiency Award

CNC MACHINE OPERATOR

(Awarded by the Department)

REQUIRED COURSES:		Units
DRFT V02A/ WEL V02A	Blueprint Reading: Manufacturing	3
MT V05-V06	CNC Machining I&II	2-2
MT V08	CNC Program Editing	3
MT V35	Production Machining and Tooling Design Techniques	3
DRFT V50	Flexible Manufacturing Applications: Computer Assisted Drafting (CAD) Computer Assisted Machining (CAM)	3
		16

For other course descriptions, see Drafting

Proficiency Award

MANUFACTURING APPLICATIONS

(Awarded by the Department)

REQUIRED COURSES:		Units
DRFT V02A/ WEL V02A	Blueprint Reading: Manufacturing	3
DRFT V05/ ARCH V23	Introduction to Autocad	2
MT V02-V03	Applied Machining I & II	2-2
MT V04/Drft V04	Measurements and Computations	3
MT V05	CNC Machining I	2
MT V15	Manufacturing Processes	3
		17

Biomedical Device Manufacturing Certificate of Achievement

Biomedical Device Manufacturing Certificate provides skills needed for the manufacturing of medical devices and tooling, including basic quality control, government regulations as well as applied skills such as product quality, machining, CAD/CAM, and manufacturing processes. Other skills include working in ultra clean environments. This certificate will prepare students to obtain employment in the field of medical device manufacturing technology. Students complete 13 specified units.

This Certificate of Achievement is a joint program between Moorpark College and Ventura College.
Contact: Ventura College 805-289-6430
www.vcccd.edu
www.venturacollege.com
Srabe@vcccd.edu
Required Courses: 3 courses for 6 units Moorpark College

BIOT M02A Environmental Control and Process Support – 2 units

or

BIOT M02B Manufacturing: Quality Control and Validation Quality - 2units

Or

BIOT M02E Business Practices and Government Regulation - 2 units

Required Courses: 3 courses for 7 units Ventura College

MT V02 Applied Machining I -	2 units
MT V05 CNC Machining I -	2 units
MT V15 Manufacturing Processes -	3 units
Total Units	13

MANUFACTURING

Ventura College

APPLICATION FOR DEPARTMENTAL PROFICIENCY AWARD

CNC MACHINE OPERATOR

Print name as you wish it to appear on certificate.* _____ Previous name(s) if any. _____

Mailing Address City State Zip _____

Student I.D. Number _____ Birthdate _____ Contact Phone _____ Email Address _____

NAME OF PROFICIENCY AWARD CNC MACHINE OPERATOR

Requirements completed by end of term: FALL, 20 ____ SPRING, 20 ____ SUMMER, 20 ____

OTHER COLLEGES ATTENDED _____

Attach an unofficial Ventura College transcript ***and official*** transcripts from other colleges if coursework is being used for this award.

CLASSES REQUIRED FOR PROFICIENCY AWARD: Catalog Year ____-____

	Units Completed	Units in Progress
DRFT 2A/WELD 2 BLUEPRINT READING		
MTV05 CNC MACHINING I		
MTV06 CNC MACHINING II		
MTV08 CNC PROGRAM EDITING		
MTV35 PRODUCTION - TOOL DESIGN		
DRFTV50 FLEXIBLE - CAD/CAM		
No. Units at VC:		
Total Award units:		

Cumulative GPA (2.0 or higher): _____

Student Signature _____ Date _____

DEPARTMENT DECISION:

This application has been evaluated and it has been determined that the student: ____ has ____ has not met the requirements for this Proficiency Award.

Authorized Department Signature _____ Date _____

Print Name _____

Student notified of Department Decision on _____
Date

Ventura College
Manufacturing Technology

3/10/2006
Course descriptions

MT V01 - MANUFACTURING SUPPORT – 2 Units
Recommended Preparation: EP V06
Hours: 2 Lecture weekly

This course is designed for limited English speaking students wishing to seek the training related to, and/or employment within the manufacturing environment. The course emphasis is on the job-shop terminology commonly used in the manufacturing environment. Selective machine tools as well as measuring tools nomenclature will be covered in details.

Field trips may be required.

MT V02 – APPLIED MACHINING I – 2 Units
Recommended Preparation: EP V05 and/or MATH V09
Hours: 1 Lecture, 3 Laboratory weekly

This entry-level course is designed for students interested in job-skill preparation as applied to operating engine lathes and vertical mills in a general manufacturing setting. Basic blueprint reading and inspection processes are also covered.

Field trips may be required.

MT V03 - APPLIED MACHINING II – 2 Units
Recommended Preparation: EP V06; MATH V09; MT V02

This course is an extension of Applied Machining I. It consists of a series of lecture and enhanced lab activities as applied to operating conventional mills and lathes and introduces students to selective CNC (Computer Numerical Control) based technology. Machining lab projects are structured around OJT (On-The-Job-Training) principles. The course is open to students interested in further machining related job-skill preparation.

MT V04 – MEASUREMENTS AND COMPUTATIONS – 3 Units
Hours: 3 Lecture weekly

This course is the occupational application of measurements and computations as used by technology students. Topics include geometric shape calculations, practical trigonometry, areas, volumes, ratio and proportion, units and conversions, decimals and fractions, and applied algebra.

Field trips may be required. Same as DRFT V04

MT V05 – CNC MACHINING I – 2 Units
Recommended Preparation: MT V02
Hours: 1 Lecture, 3 Laboratory weekly

This course consists of a series of lectures and laboratory exercises relevant to the principles of general machining as applied to the manufacturing environment with conventional machine tools, such as drill press, lathes, milling machines and grinders. The fundamentals of measurement, blueprint reading and CNC (computer numerical control) are also covered.

Field trips may be required.

MT V06 – CNC MACHINING II – 2 Units
Recommended Preparation: MT V05
Hours: 1 Lecture, 3 Laboratory weekly

This course is an extension of CNC Machining I. Students will supplement basic blueprint reading with general principles of geometric dimensioning and tolerancing per current ASME Y14.5 standards. In addition, the extended machining principles for conventional lathes, mills and grinders, as well as CNC machining, is covered throughout the course.

Field trips may be required.

MT V07 – CNC MACHINING III – 2 Units
Recommended Preparation: EP V06, MATH V09
Hours: 1 Lecture, 3 Laboratory weekly

This course is an extension of CNC Machining II. The focus of this course is on job-development entry level skills as applied to operating CNC (Computer Numerical Control) machine tools in a manufacturing environment. Machining lab projects are structured and/or comprised around OJT (On-The-Job) training principles where CNC operating procedures, reading of actual engineering drawings per current ANSI/ASME Y14.5 dimensioning and tolerancing standard, as well as manufacturing support documentation (Machining Process Plan, Q.C. Inspection Log, Tooling/Setup Sheet, etc.) are stressed throughout the course.

Field trips may be required.

MT V08 – CNC PROGRAM EDITING – 2 Units
Recommended Preparation: MT V06
Hours: 1 Lecture, 3 Laboratory weekly

This course introduces the student to manual CNC parts programming with special emphasis on program editing as applied to Fanuc/Yasnac based CNC Controllers.

Field trips may be required.

MT V09 – GEOMETRIC DIMENSIONING AND TOLERANCING – 3 Units
Recommended Preparation: MT V02
Hours: 3 Lecture weekly

This course covers general dimensioning and tolerancing principles as applied to mechanical engineering drawings, with a special emphasis on accurate interpretation of current geometric symbology and conventions per ASME Y14.5 dimensioning and tolerancing standards. It is intended for manufacturing industry technical staff responsible for product design and procurement as well as students majoring in mechanical or manufacturing engineering, and /or manufacturing machine technology fields.

Field trips may e required.

MT V10 – QUALITY CONTROL AND MECHANICAL INSPECTION – 2 Units
Recommended Preparation: MT V02 and MT V09
Hours: 1 Lecture, 3 Laboratory weekly

This is an introductory course dealing with the quality control field with special emphasis on part inspection/verification processes as applied to CMM & OM (coordinate measuring machine & optical measurement) technology. Open-end (surface-plate) mechanical inspection principles are also covered.

Field trips may be required.

MT V15 – MANUFACTURING PROCESSES – 3 Units
Hours: 2 Lecture, 3 Laboratory

This course introduces modern manufacturing processes and systems. The various manufacturing materials and techniques of machining, casting, forming and industrial design will also be covered.

Field trips will be required. Transfer credit: CSU