



WORKFORCE DEVELOPMENT BOARD OF VENTURA COUNTY

MANUFACTURING COMMITTEE MEETING

Tuesday June 13, 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
<i>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.</i> | Alex Rivera |
| 8:05 a.m. | 3.0 Consent Items <ul style="list-style-type: none">• Approval of Minutes: April 20, 2017• 2017-2018 Committee Meeting Calendar | Alex Rivera |
| 8:10 a.m. | 4.0 Presentation:
<i>California Advanced Manufacturing Apprenticeship Program</i>
Tracy DiFilippis,
Apprenticeship Coordinator & Sector Strategies Manager
Goodwill Southern California | |
| 8:55 a.m. | 5.0 WIOA Workforce Development Planning <ul style="list-style-type: none">• 2016-2017 Year-End Review (Draft)• Alignment with 2-year Plan (Draft)• Regional Partnership: AMP SoCal• MRVC: Planning Update
Networking Events | Alex Rivera
Patrick Newburn
Jason Miller
Byron Lindros |
| 9:25 a.m. | 6.0 Committee Member Comments | Committee Members |
| 9:30 a.m. | 7.0 Adjournment
<u>Next Meeting</u>
August 17, 2017
(8:00 a.m.-9:30 a.m.)
United Food and Commercial Workers International Union
816 Camarillo Springs Rd. (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.



WDB Manufacturing Committee Meeting
April 20, 2017

MINUTES

Meeting Attendees

Committee Members

Alex Rivera* (Chair)
Michael Bastine
Marybeth Jacobsen

Bill Pratt*
Scot Rabe
Mary Anne Rooney

WDB Staff

Patrick Newburn

Guests

Tracy Perez*
Rochelle Nitka (United Staffing
Associates)
Cynthia Muro (Human Services
Agency – AJCC staff)

**WDB Members*

1.0 Call to Order and Agenda Review

Chair Alex Rivera called the meeting to order at 8:05 a.m.

2.0 Public Comments

No public comments.

3.0 Approval of Minutes: February 16, 2017

Motion to approve: Scot Rabe

Second: Bill Pratt

Motion approved

4.0 Alignment with 2-year Committee Plan Discussion

- Alex Rivera led discussion regarding the Manufacturing Committee 2-year plan 2016-2018. The seven components of the plan were reviewed by committee members. The committee had several insights and observations about priorities which were captured on Wall Notes. Future workforce research and workgroup topics will be determined at future meetings.
- Patrick Newburn invited members to review the WDBVC 2017-2020 Regional and Local Plans posted online at www.workforceventuracounty.org in order to align committee's 2-year plan, research, and workgroup action.

WALL NOTES	
2-Year Plan Discussion	
<ul style="list-style-type: none">• Include California Lutheran University within the “Engage Leaders” section• Research employer lists in order to expand the “Engage Leaders” section (WDB staff to research available lists of Ventura county manufacturing employers and demographic data)• Survey employers in order to share with educators the need for industry driven curriculum• Encourage Economic Development Managers at city and county level to promote Ventura County as a place for starting and growing manufacturing businesses (e.g. San Bernardino and Pasadena have strong economic development programs)	

- Committee 2-year Plan should align with the WIOA 2017-2020 Regional and Local Plans (also look at Ventura County Strategic Plan)
- Research what resources are available to aid members in conducting research and expanding workgroups (Funding Grants? Staff?)
- Committee should narrow a list of priorities in order to identify workgroup projects (Committee Chair to work with WDB staff to survey and develop short list)
- WDBVC might include a webpage that allows employers to post feedback and share questions and concerns (e.g. <http://www.venturacountygrowsbusiness.com> or <http://www.workforceventuracounty.com>)
- Committee should support manufacturing occupations outreach to students and support career technical education centers sponsored by Haas Automation, VCOE, and/or Linked Learning Academies
- Identify gaps in Career Technical Education in order to ensure industry in-demand occupations and skills building opportunities
- Committee should research and support apprenticeships, guild, and related On-the-Job training models for manufacturing occupations
- Recommendation to continue the WDBVC joint industry sector forum model used at the August 2016 meeting in order capture the “voice of industry” and in-demand occupations and desired skills (meeting might provide centralized collaboration and required outcomes from all WIOA/AJCC partners)
- Explore methods for committee to achieve meaningful outcomes given limited funding

5.0 WIOA Workforce Development Planning

- National Association of Workforce Boards
 - Tracy Perez provided a recap of the National Association of Workforce Boards conference held March 26-28, 2017 in Washington D.C. Joining Ms. Perez in Washington were: Jim D. Faul (Chair), Vic Anselmo (Vice Chair), Gregory Liu, Byron Lindros, Tracy Perez, and WDB staff Talia Barrera and Patrick Newburn. She provided a few insights and observations for our local board’s consideration. Additionally the WDBVC attendees had meetings with three congressional representatives and their staff: Rep. Julia Brownley, Rep. Steve Knight, and Rep. Salud Carbajal.
- MRVC: Planning Update
 - Alex Rivera reported for Byron Lindros that the Manufacturing Roundtable Ventura County (MRVC) next Networking Event is being planned in late spring at an East County Manufacturer to be determined. Additionally the leadership group wants to stay in communication through VC Innovates regarding National MFG DAY tours. Lastly, the leadership is committed to expanding MRVC membership on LinkedIn and attendance at Networking Events.
 -
- Regional Partnership: AMP SoCal
 - No update available.

6.0 Committee Member Comments

- Mary Anne Rooney announced that the Oxnard Union High School District is seeking summer internship opportunities for 100 students.
- Scot Rabe announced his May retirement from Ventura College. Committee members thanked Scot for his past service and commitment to manufacturing.
- Patrick Newburn announced that the June 13 Committee meeting will feature an extended presentation on Registered Apprenticeships Model for Advanced Manufacturing delivered by Tracy DiFilippis, Goodwill of Southern California. Information available at: <http://www.camac.us/>

7.0 Adjournment

Alex Rivera adjourned the meeting at 9:35 a.m.

Next Meeting: (NEW DATE)

Tuesday June 13, 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



WDB Manufacturing Committee

2017-2018 Meeting Calendar

DATES:

- Thursday August 17, 2017
- Thursday October 19, 2017
- Thursday December 21, 2017
- Thursday February 15, 2018
- Thursday April 19, 2018
- June 2018 TBD (6/21/18 Conflict with WDB Executive Committee Meeting)

TIME:

8:00 a.m.-9:30 a.m.

LOCATION:

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



2016-2017 YEAR-END REVIEW

Workforce Development Board of Ventura County Manufacturing Committee

WDB MANUFACTURING COMMITTEE

2016-2017 Members

WDB Members: Alex Rivera, Chair (Milgard Windows & Doors), Gregory Liu, Vice Chair (Jaxx Manufacturing, Inc.), Vic Anselmo, (Applied Powdercoat), Greg Gillespie (Ventura County Community College District), Byron Lindros (Amgen Inc.), Cindy Guenette (Hi-Tech Engineering), Bill Pratt (Kinamed), Bruce Stenslie (Economic Development Collaborative-Ventura County), Peter Zierhut (Haas Automation, Inc.)

Other Members: Jim Avery (MWS Wire), Michael Bastine (SCCRC Deputy Sector Navigator for Manufacturing), Patrick Grimes (Dynamic Automation), Marybeth Jacobsen (Workforce Education Coalition), Teresa Johnson (Ventura County Adult Education Consortium), Subhash Karkare (Moorpark College), Jason Miller (California State University, Channel Islands), Tiffany Morse (Ventura County Office of Education), Scot Rabe (Ventura College), Mary Anne Rooney (Alliance for Linked Learning)

Committee Accomplishments

In support of the WDB's *Ventura County Regional Strategic Workforce Development Plan 2017-2020*, the WDB Manufacturing Committee:

- **Joint Regional Sector Committee Forum:**

Participated and provided feedback and list of in-demand manufacturing occupations at the Joint Regional Sector committee forum held in August. The four sector committees participating included: Business Services, Clean/Green, Healthcare, and Manufacturing. Topics discussed included: Determined high-demand jobs in the next 3-5 years: Additive Manufacturing Technician, Cyber Security, Design Engineer, Discrete Hyper Skills, Manufacturing Systems Engineers and Technicians, Equipment Maintenance Technicians, CNC Machinists, Facilities Maintenance technicians, High Technology Assemblers, Inspectors (Dimensional, Visual, Electrical), Inventory Control, Mechanical Engineer, Metal Finishers/Coating Technicians, Plant Operator Quality Assurance (ISO/AS 9100 + Physical Inspection), Software Migration Technician (Electrical or Mechanical), and UAV Technicians.

- **Manufacturing Roundtable of Ventura County (MRVC):**

- Partnered with the Manufacturing Roundtable of Ventura County (MRVC) to organize networking events for manufacturing professionals in Ventura County to help engage businesses in regional professional networking and workforce development. Manufacturers in the county will meet informally each quarter on-site at different locations. Businesses volunteering to host networking events were: Jaxx Manufacturing, Inc., Kinamed, Inc., Milgard Windows & Doors, Inc., Hi-Tech Engineering, and Haas Automation, Inc. MRVC will partner with city economic development representatives on Manufacturing Network events to foster local government engagement and collaboration on regional business and workforce issues.



2016-2017 YEAR-END REVIEW

Workforce Development Board of Ventura County Manufacturing Committee

- Identified ways to revitalize the MRVC LinkedIn site for communication and to align and coordinate messages to the manufacturers who are part of the MRVC network.

Committee Accomplishments (Continued)

- **National Manufacturing Day**
 - Collaborated on planning for 2016 National Manufacturing Day in October with the MRVC, local manufacturers, and the Ventura County Office of Education (VCOE). The weeklong event introduced careers in manufacturing to more than 300 students, and teachers. Expressed appreciation to the participating manufacturers: Amgen, Inc., Applied Powdercoat, Inc., Dynamic Automation, Haas Automation, Inc., Milgard Windows & Doors, Inc., and Shire PLC.
- **Advanced Manufacturing Partnership for Southern California (AMP SoCal)**
 - Provided a neutral platform for reporting and coordinating Ventura County participation on six AMP SoCal Pillar Committees (Workforce and Training, Supplier Networks, Research and Innovation, Infrastructure and Site Development, Trade and International Development, and Operations Improvement and Capital Access). Leveraged professional networks to help connect educators with aerospace and defense manufacturers to support for federal grant proposals.
- **Community Colleges**
 - Discussed bimonthly updates from the Deputy Sector Navigator for manufacturing, representing the South Central Coast Regional Consortium of Community Colleges. Updates are provided to the committee regularly.
 - Provided discussion and feedback to Ventura College regarding their curriculum of eight manufacturing-related courses.
- **Career Pathways**
 - Served in an advisory role and provided a neutral platform for facilitating employer interaction with educators in support of the California Career Pathways Trust Grants (*Alliance for Linked Learning* and *VC Innovates*) to develop curriculum aligned with manufacturing industry needs. Responded to questions about the California Manufacturing/Engineering Pathways Standards and provided feedback on the Manufacturing and Engineering Career Pathways Career Ladder Chart.

Insights

- Align with the State approved WIOA 2017-2020 Regional and Local Plans
- Narrow a list of priorities in order to identify workgroup projects



2016-2017 YEAR-END REVIEW

Workforce Development Board of Ventura County Manufacturing Committee

- Committee discovered the need for research and support of apprenticeships, guild, and related On the job training models for manufacturing occupations
- Explore other available resources potentially available to aid committee in conducting research and expanding workgroups
- Continue consistent manufacturing advocacy, collaborate on ongoing regional workforce issues, and leverage resources in order to increase regional economic value and visibility.
-
-

Insights (EXAMPLES from 2015-2016)

- Continue consistent manufacturing advocacy, collaborate on ongoing regional workforce issues, and leverage resources in order to increase regional economic value and visibility.
- Identify the advanced manufacturing skills (beyond manual skills) that employers expect from job seekers who want to work in manufacturing.
- Find efficient collaborative methods to connect business needs with education curriculum.
- Communicate with manufacturers about how they can participate in building a future skilled workforce by providing teacher externships/professional development opportunities that connect the classroom to the workplace.
- Communicate with manufacturers about how they can participate in building a future skilled workforce by providing student opportunities to gain awareness and appreciation in the value of manufacturing careers.
- Continue supporting the efforts of the Manufacturing Roundtable of Ventura County (MRVC) successful outreach, which has produced a marked increase in manufacturer's participation in Manufacturing Day/Week. MRVC has the potential to reach beyond Manufacturing Day/Week by incorporating a regional speaker's bureau.
- Use MRVC Manufacturing Week as a meaningful rudder for advancing public awareness in Ventura county region to raise appreciation and value of manufacturing careers and economic impact.



2016-2017 YEAR-END REVIEW
Workforce Development Board of Ventura County
Manufacturing Committee

DRAFT



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.

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

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

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



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

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.

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

- 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)
 - Externships
 - Facilitate mentoring and coaching opportunities
 - Internships
 - Job shadowing
 - Manufacturing Day tours
 - Support apprenticeships, guild, and related On the job training models for manufacturing occupations
- Promoting the Manufacturing Sector
 - Encourage Economic Development Managers at city and county level to promote Ventura County as a place for starting and growing manufacturing businesses



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

- Find out what manufacturers are willing to do to help promote/support manufacturing in Ventura County
 - Foster manufacturing networks
 - Identify opportunities to raise awareness of the value of manufacturing sector
 - 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.)
 - Raise business and community awareness of what manufacturing brings to the county
- **Manufacturing Workforce Development**
 - Alignment with the WIOA 2017-2020 Regional and Local Plans
 - Apprenticeship programs
 - Career pathways
 - Curriculum development
 - Preferred applicant programs
 - Sector certifications
 - Sector workforce readiness skills

5. Identify Gaps

- Explore methods for committee to achieve meaningful outcomes given limited funding
- Identify gaps between education preparedness and manufacturing workforce needs
- Identify gaps in Career Technical Education in order to ensure industry in-demand occupations and skills building opportunities
- Identify gaps in manufacturing support resources



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

**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. Support manufacturing occupations outreach to students and support career technical education centers. 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.
- Joint Industry Sector Forum: Participate in the WDBVC joint industry sector forum model used at the August 2016 meeting in order capture the “voice of industry” and in-demand occupations and desired skills

**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.

California Advanced Manufacturing Apprenticeship Collaborative



ApprenticeshipUSA

What is apprenticeship ?

► Apprenticeship is a combination of on-the-job training and related instruction in which workers learn the practical and theoretical aspects of a highly skilled occupation.

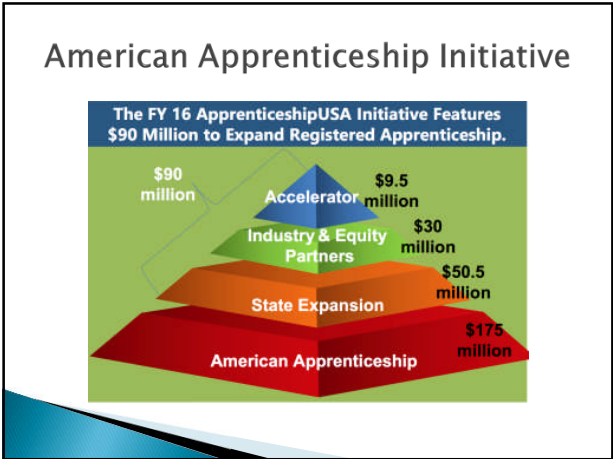
5 MAIN COMPONENTS!



The on going challenge!

Over the next decade nearly **3 1/2 Million** manufacturing jobs likely need to be filled. The skills gap is expected to result in **2 Million** of those jobs being unfilled.





DOC and Case Western University

THE BENEFITS AND COSTS OF APPRENTICESHIP: A BUSINESS PERSPECTIVE

Return on Investment Study Released

November 2016

ApprenticeshipUSA.org

ROI
Return On Investment

"One of the first studies of its type in the U.S."

"Businesses studied unanimously agreed that the benefits of RA outweigh its costs"

"Apprenticeship programs have improved overall performance, lowered job vacancies and provide a competitive advantage over other companies"

Pattern Standards of Apprenticeship

CALIFORNIA ADVANCED MANUFACTURING APPRENTICESHIP COLLABORATIVE (CAMAC)

16 Occasions

100% approved by DOL

Can be customized

In-demand - high need

Developed by industry

CAMAC

CAMAC

First Cohort of Companies

Employer Sponsor OJT

- Canyons.edu
- ToolingU

Employer Sponsor OJT

- College.edu
- Workhands

Employer Sponsor OJT

- Education
- Online Platform

Next Cohort of Companies

EMPLOYERS

- ▶ Learning On-the-Job
- ▶ Mentor/Trainer 1:1
- ▶ Receive 50% reimbursement of apprentice wages up to 640 hours
- ▶ Approve apprentice hours and skill gain
- ▶ Increase wages for skill gain

APPRENTICES

- ▶ Commit to a learning path (1–4)
- ▶ Earn and learn
- ▶ Develop competencies and increase in wages
- ▶ Earn a National Credential in Skilled Craft
- ▶ Become a valued Journey–Person in field

On-the-Job Training = OJT

- ▶ OJT = 2000 per year
- ▶ Training takes place in the work environment
- ▶ Time spent in work processes in specific tasks related to the occupation
- ▶ OJT hours range from 1–4 years
- ▶ Tracking hours and verification

Related Technical Instruction = RTI

- ▶ 144 hours of RTI per year
- ▶ Coordinated through local education agencies
- ▶ Can use on-line platforms
- ▶ Innovate through blended-learning
- ▶ Certifications or college credits

BENEFITS

- ▶ Access to candidate pools
- ▶ Training Dollars
- ▶ “Grow your Own” but NOT alone
- ▶ Competency-based frameworks
- ▶ Create pipeline of skilled workers
- ▶ Increased productivity
- ▶ Decreased turnover
- ▶ Reduction in absenteeism
- ▶ Increase employee engagement

A Collaborative Approach

Tracy DiFilippis
TDiFilippis@Goodwillocal.org
323-477-3923





MANUFACTURING APPRENTICESHIP

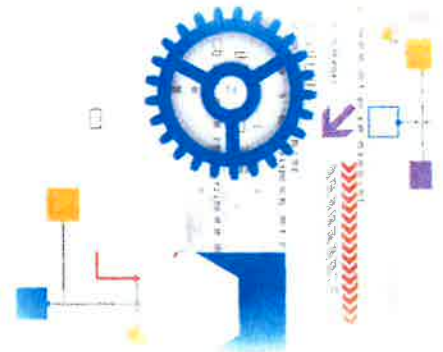
Join a West Coast Apprenticeship Movement in Advanced Manufacturing

Goodwill of Southern California's Manufacturing Sector Intermediary is the official Regional Partner of California Advanced Manufacturing Collaborative (CAMAC) in Southern California! In that role we are the first step in your journey to build Advanced Manufacturing Apprenticeship through USDOL.

16 different occupations pre-approved by the USDOL makes it easy to get started with tried and true work processes, including: Welding, CNC Operation & Programming, Machining, Metal Fabrication, Mechatronics, Manufacturing Technician, Machine Operator I.

Benefits to Employers:

- Low risk participation
- No administrative burden
- Grow your own workforce
- Access eligible, pre-screened, candidates
- Receive ongoing technical assistance
- Receive special workforce funding
- Apprentices receive a National Credential



Join the Employers Who are Already Part of CAMAC:

Superior Thread Rolling, Vanderhorst Bros. Inc., Lee's Enterprise, Repairtech International, Inc., Xceliron, Inc., Fralock, Meschkat Precision, FMI Aerostructures



Contact Tracy DiFilippis at 323.477.3923 or email Tdifilippis@goodwillocal.org to learn more about how Registered Apprenticeship can move your business forward!



Apprenticeship**USA**



Pattern Standards of Apprenticeship

DEVELOPED BY
**CALIFORNIA ADVANCED MANUFACTURING APPRENTICESHIP
COLLABORATIVE (CAMAC)**



California Advanced Manufacturing
APPRENTICESHIP COLLABORATIVE

FOR THE OCCUPATIONS OF

<i>Occupation</i>	<i>Occupation</i>
<i>Assembler, Metal Building</i>	<i>Fabricator-Assembler Metal Prod</i>
O*Net-SOC Code: 47-2221.00 RAPIDS Code: 0877	O*Net-SOC Code: 51-2041.0 RAPIDS Code: 0833
<i>Industrial Manufacturing Technician</i>	<i>Machinist (NIMS Certified)</i>
O*Net-SOC Code: 17-3029.09 RAPIDS Code: 2031HY	O*Net-SOC Code: 51-4041.00 RAPIDS Code: 0296CB
<i>Machinist</i>	<i>Machine Operator I</i>
O*Net-SOC Code: 51-4041.00 RAPIDS Code: 0296	O*Net-SOC Code: 51-4081.01 RAPIDS Code: 0511
<i>Material Coordinator</i>	<i>Mechatronics Technician</i>
O*Net-SOC Code: 43-5061.00 RAPIDS Code: 0856	O*Net-SOC Code: 49-2094.00 RAPIDS Code: 2014
<i>Metal Fabricator</i>	<i>Molder</i>
O*Net-SOC Code: 51-2041.00 RAPIDS Code: 0325	O*Net-SOC Code: 51-4071.00 RAPIDS Code: 0349
<i>Numerical Control Machine Operator</i>	<i>Tool Programmer, Numerical</i>
O*Net-SOC Code: 51-4011.00 RAPIDS Code: 0845R	O*Net-SOC Code: 51-4012 RAPIDS Code: 0690
<i>Welder</i>	<i>Welder, ARC</i>
O*Net-SOC Code: 51-4121.02 RAPIDS Code: 0622R	O*Net-SOC Code: 51-4121.06 RAPIDS Code: 0620
<i>Welder-Fitter</i>	<i>Welding Machine Operator, ARC</i>
O*Net-SOC Code: 51-4121.06 RAPIDS Code: 0627	O*Net-SOC Code: 51-4122.01 RAPIDS Code: 0945

DEVELOPED IN COOPERATION WITH THE U.S. DEPARTMENT OF LABOR
OFFICE OF APPRENTICESHIP

APPROVED BY

BY 
RICHARD DAVIS, CALIFORNIA STATE DIRECTOR
USDOL OFFICE OF APPRENTICESHIP

DATE APPROVED: MAY 10, 2016
DATE REVISED: DECEMBER 14, 2016

SERVING THE INDUSTRY WITH AN OFFICE OF APPRENTICESHIP (OA) APPROVED PROGRAM

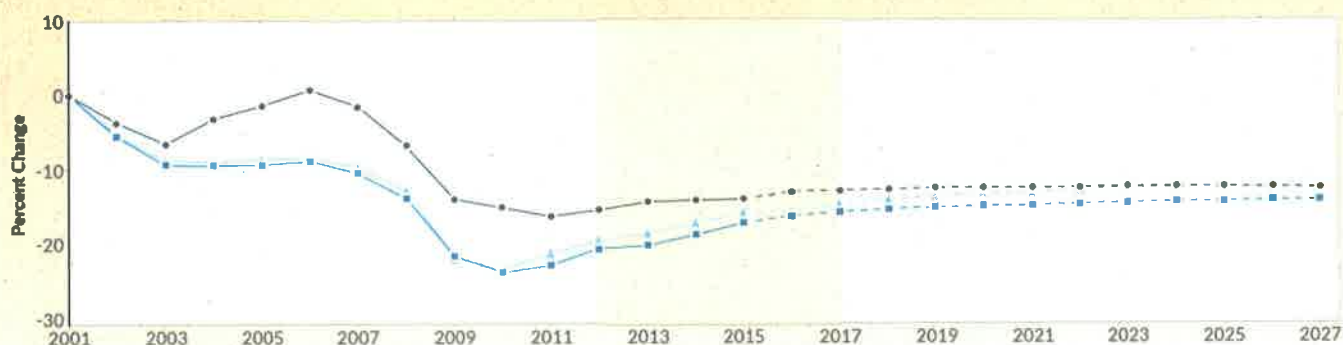




MANUFACTURING PRODUCTION SUB-SECTOR 2017

- 32,974 Jobs
- 3% growth over 5 years
- \$15.90 Median Hourly Wage in Production Occupations
- Total Regional Exports (2016) \$14.5 Billion

Regional Trends



	Region	2012 Jobs	2017 Jobs	Change	% Change
•	Ventura County	22,119	22,799	680	3.1%
•	California	966,841	1,026,189	59,348	6.1%
•	United States	9,485,783	10,049,290	563,507	5.9%

Production Earnings

\$13.03/hr	\$15.90/hr	\$20.43/hr
25th Percentile Earnings	Median Earnings	75th Percentile Earnings

Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
First-Line Supervisors of Production and Operating Workers (51-1011)	\$18.97	\$25.72	\$35.98
Electrical and Electronic Equipment Assemblers (51-2022)	\$10.76	\$12.76	\$17.92
Electromechanical Equipment Assemblers (51-2023)	\$12.97	\$16.04	\$18.41
Engine and Other Machine Assemblers (51-2031)	\$16.21	\$21.13	\$28.77
Structural Metal Fabricators and Fitters (51-2041)	\$13.75	\$18.05	\$25.86
Team Assemblers (51-2092)	\$10.18	\$13.31	\$17.76
Assemblers and Fabricators, All Other (51-2099)	\$9.84	\$12.70	\$15.42
Computer-Controlled Machine Tool Operators, Metal and Plastic (51-4011)	\$16.68	\$20.86	\$28.99
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic (51-4012)	\$21.60	\$26.13	\$30.40
Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic (51-4034)	\$13.71	\$14.98	\$17.99
Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic (51-4035)	\$13.63	\$17.67	\$22.46
Machinists (51-4041)	\$15.38	\$19.58	\$23.97

ECONOMIC DEVELOPMENT



TRAIN. LEARN. GROW.

Job Postings vs. Hires

315

Avg. Monthly Postings (Jan 2012 - May 2017)

1,031

Avg. Monthly Hires (Jan 2012 - May 2017)



Occupation	Avg Monthly Postings (Jan 2012 - May 2017)	Avg Monthly Hires (Jan 2012 - May 2017)
First-Line Supervisors of Production and Operating Workers	83	44
Inspectors, Testers, Sorters, Samplers, and Weighers	31	53
Machinists	30	35
Assemblers and Fabricators, All Other	27	69
Electrical and Electronic Equipment Assemblers	25	29
Helpers--Production Workers	12	134
Production Workers, All Other	11	76
Team Assemblers	9	109
Computer-Controlled Machine Tool Operators, Metal and Plastic	8	8
Photographic Process Workers and Processing Machine Operators	7	3
Packaging and Filling Machine Operators and Tenders	7	73
Welders, Cutters, Solderers, and Brazers	7	31
Electromechanical Equipment Assemblers	4	4
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	4	2

ECONOMIC DEVELOPMENT



TRAIN. LEARN. GROW.