



at Santa Fe Springs & Paramount

MANUFACTURING SECTOR

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TRENDS FOR ADVANCED MANUFACTURING

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SOUTHEAST AREA SOCIAL SERVICES FUNDING AUTHORITY (SASSFA)
MANUFACTURING SECTOR OCCUPATION SUMMARY
EDD EMPLOYMENT PROJECTIONS 2012-2022

Los Angeles County

7/17/2015

Item #	SOC CODE #	Occupational Title	Occupation Search Key Word	Median Hourly	Jobs Estimated 2012	Jobs Projected 2022	Number	Job Change %	Annual Average Openings
1	13-1111	Management Analysts	Analyst	\$40.06	21,340	26,680	5,340	25.0%	865
2	49-9071	Maintenance & Repair Workers, General	Maintenance	\$18.85	27,110	29,510	2,400	8.9%	761
3	15-1132	Software Developer, Applications	Engineer	\$48.01	15,620	18,800	3,180	20.4%	518
4	15-1133	Software Developer, Systems Software	Engineer	\$55.93	12,850	15,380	2,530	19.7%	417
5	27-1024	Graphic Designers	Packaging	\$25.51	12,130	12,990	860	7.1%	407
6	43-5061	Production, Planning & Expediting Clerks	Production	\$22.70	11,960	12,450	490	4.1%	348
7	49-9041	Industrial Machinery Mechanics	Maintenance	\$28.66	5,300	6,630	1,330	25.1%	287
8	13-1051	Cost Estimators	Analyst	\$30.95	4,770	5,950	1,180	24.7%	271
9	51-4041	Machinists	Automation	\$17.07	9,080	9,190	110	1.2%	219
10	13-1023	Purchasing Agents	Purchasing	\$30.87	9,360	9,400	40	0.4%	173
11	13-1081	Logisticians	Management	\$39.78	2,940	3,730	790	26.9%	113
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SOUTHEAST AREA SOCIAL SERVICES FUNDING AUTHORITY (SASSFA)
CAREERS IN THE MANUFACTURING SECTOR

Definition: Manufacturing involves planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering. Traditional manufacturing is changing with new technology giving way to the new term “Advanced Manufacturing”. More information on this is provided on page two. Below is a summary of sample occupations involved in the overall Manufacturing Sector, organized by several career pathways¹. The information is provided as an overview to careers/jobs in the Manufacturing Sector.

Sample of Career Specialties / Occupations	<ul style="list-style-type: none"> ◆ Assembler ◆ Automated Manufacturing Technician ◆ Bookbinder ◆ Calibration Technician ◆ Electrical Installer and Repairer ◆ Electromechanical Equipment Assembler ◆ Extruding and Drawing Machine Setter/Set-Up Operator ◆ Extrusion Machine Operator ◆ Foundry Worker ◆ Grinding, Lapping, and Buffing Machine Operator ◆ Hand Packers and Packager ◆ Hoist and Winch Operator ◆ Instrument Maker ◆ Large Printing Press Machine Setter and Set-Up Operator ◆ Machine Operator ◆ Manager, Supervisor ◆ Medical Appliance Maker ◆ Milling Machine Setter, Set-Up Operator ◆ Millwright ◆ Operator, Tender, Cutter/Brazer, Solderer, Machine Operator ◆ Painter ◆ Pattern & Model Maker ◆ Precision Layout Worker ◆ Precision Optical Goods Worker ◆ Production Associate ◆ Sheet Metal Worker ◆ Solderer and Brazer ◆ Tool and Die Maker ◆ Welder 	<ul style="list-style-type: none"> ◆ Cost Estimator ◆ Design Engineer ◆ Electrical and Electronics Technician and Technologist ◆ Electronics Engineer ◆ Engineering and Related Technician and Technologist ◆ Engineering Technician ◆ Graphics Designer ◆ Industrial Engineer ◆ Labor Relations Manager ◆ Management Analyst ◆ Manufacturing Engineer ◆ Manufacturing Technician ◆ Power Generating and Reactor Plant Operator ◆ Precision Inspector, Tester, and Grader ◆ Process Improvement Technician ◆ Production Manager ◆ Purchasing Agent ◆ Software Developer ◆ Systems/Applications Supervisor 	<ul style="list-style-type: none"> ◆ Biomedical Equipment Technician ◆ Boilermaker ◆ Communication System Installer/Repairer ◆ Computer Installer/Repairer ◆ Computer Maintenance Technician ◆ Electrical Equipment Installer/Repairer ◆ Facility Electrician ◆ Industrial Electronic Installer/Repairer ◆ Industrial Facilities Manager ◆ Industrial Machinery Mechanic ◆ Industrial Maintenance Electrician ◆ Industrial Maintenance Mechanic ◆ Industrial Maintenance Technician ◆ Instrument Calibration and Repairer ◆ Instrument Control Technician ◆ Job/Fixture Designer ◆ Laser Systems Technician ◆ Maintenance Repairer ◆ Major Appliance Repairer ◆ Meter Installer/Repairer ◆ Millwright ◆ Plumber, Pipefitter and Steamfitter ◆ Security System Installer/Repairer 	<ul style="list-style-type: none"> ◆ Calibration Technician ◆ Inspector ◆ Lab Technician ◆ Process Control Technician ◆ Quality Control Technician ◆ Quality Engineer ◆ SPC Coordinator 	<ul style="list-style-type: none"> ◆ Communications, Transportation and Utilities Manager ◆ Dispatcher ◆ Freight, Stock, and Material Mover ◆ Industrial Truck and Tractor Operator ◆ Logistical Engineer ◆ Logistician ◆ Material Associate ◆ Material Handler ◆ Material Mover ◆ Process Improvement Technician ◆ Quality Control Technician ◆ Traffic Manager ◆ Traffic, Shipping, and Receiving Clerk 	<ul style="list-style-type: none"> ◆ Environmental Engineer ◆ Environmental Specialist ◆ Health and Safety Representative ◆ Safety Coordinator ◆ Safety Engineer ◆ Safety Team Leader ◆ Safety Technician
Pathways	Production	Manufacturing Production Process Development	Maintenance, Installation & Repair	Quality Assurance	Logistics & inventory Control	Health, Safety and Environmental Assurance

Notes: 1. Information based on the Career Cluster Framework for Manufacturing developed by the National Career Technical Education Foundation (NCTEF) managed by the National Association of State Directors of Career Technical Education Consortium (NASDCTEC) at <http://www.careertech.org/career-clusters>.

SOUTHEAST AREA SOCIAL SERVICES FUNDING AUTHORITY (SASSFA)
CAREERS IN THE MANUFACTURING SECTOR

WHICH CAREER IS RIGHT FOR YOU?	CAREER PATHWAYS ²																				
<p>If you are good with your hands, are a problem solver, have technical skills, or are interested in health and the environment, Manufacturing could be a great way to go. According to the National Association of Manufactures (NAM), Manufacturing contributes more than 60% of all U.S. exports totaling about \$50 billion per month. Plus wages and benefits are about 25% higher than non-Manufacturing jobs. Add that 81% of manufacturing representatives who responded to a NAM Skills Survey said they could not find qualified people to fill open positions. Jobs are available at all levels.</p> <p>The manufacturing sector is also changing as a result of new technology. The term “advanced manufacturing” has become widely recognized as the evolution of high-technology progresses into the manufacturing processes. According to employer survey results on advanced manufacturing in Los Angeles County, conducted by the Centers of Excellence (COE) of the California Community Colleges Economic and Workforce Development Program, there is a significant impact by advanced manufacturing in the workforce and the economy. Top trends in advanced manufacturing impacting the workforce include automation, 3-D printing, and high-speed machining. Manufacturing has evolved from a highly labor-intensive set of mechanical processes to an increasingly sophisticated set of technological processes. This trend will continue as manufacturing technology keeps advancing. Some of the current trends influencing advanced manufacturing include: Widespread role of Information Technology; Use of modeling and simulation; Accelerated innovation in supply chain management; and Rapid adaptability of manufacturing to respond to customer needs and external impediments¹.</p> <p>The manufacturing sector has six (6) career pathway options. A brief description is provided for each career pathway in the next section of this write up.</p>	<p>Production – This pathway involves careers that work on the shop floor making parts or assembling them. They work with machines, making or assembling electrical parts, constructing or assembling modular housing, performing welding jobs, or printing various materials.</p> <p>Manufacturing Production Process Development – This pathway includes careers that are responsible for product design and design of the manufacturing process.</p> <p>Maintenance, Installation & Repair – This pathway involves careers that perform preventative maintenance procedures on machines, tools and equipment. These are performed routinely and on a regular basis. They also troubleshoot and repair electrical, electronic and mechanical systems. This will include mechanical repair as well as using computer-based inventory control systems, retrieving information histories on each machine from computer records, and recording repair activities on the system to keep accurate records of repairs performed on each machine.</p> <p>Quality Assurance – This pathway focuses on careers that assure standards and procedures are adhered to and that delivered products or services meet performance requirements. They may have</p>	<p>responsibility for monitoring and maintaining the quality of parts and manufacturing processes. This could include identifying the raw product to ensure it meets specifications, as well as measuring or otherwise testing products and parts to ensure they meet required customer specifications.</p> <p>Logistics & Inventory Control – This pathway deals with careers that work with an inventory of raw materials and finished parts. They move raw materials to the production line, unload trucks with raw materials, wrap pallets of finished products for shipment, and communicate with traffic managers.</p> <p>Health, Safety and Environmental Assurance – This pathway involves careers that ensure that the equipment is being used safely in the workplace; plan for safety in new production processes; conduct health, safety and/or environmental incident and hazard investigations; conduct preventive health, safety and/or environmental incident and hazard inspections; and implement health and/or environmental programs, projects, policies or procedures. They may train workers in health, safety and/or environmental issues and provide event documentation.</p>																			
<p>L.A. County Logistics Sector Sample Occupations with the Most Openings³</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">-Management Analysts</td> <td style="width: 25%;">Med. Wage \$ 40.06/hr.</td> <td style="width: 25%;">-Maintenance & Repair Workers</td> <td style="width: 25%;">Med. Wage \$18.85/hr.</td> <td style="width: 25%;">-Software Developer/Apps.</td> <td style="width: 25%;">Med. Wage \$48.01/hr.</td> </tr> <tr> <td>-Software Developer/Systems</td> <td>Med. Wage \$ 55.93/hr.</td> <td>-Graphics Designers</td> <td>Med. Wage \$25.51/hr.</td> <td>-Production Clerk</td> <td>Med. Wage \$22.70/hr.</td> </tr> <tr> <td>-Industrial Machinery Mechanics</td> <td>Med. Wage \$ 28.66/hr.</td> <td>-Cost Estimators</td> <td>Med. Wage \$30.95/hr.</td> <td>-Machinists</td> <td>Med. Wage \$17.07/hr.</td> </tr> </table>				-Management Analysts	Med. Wage \$ 40.06/hr.	-Maintenance & Repair Workers	Med. Wage \$18.85/hr.	-Software Developer/Apps.	Med. Wage \$48.01/hr.	-Software Developer/Systems	Med. Wage \$ 55.93/hr.	-Graphics Designers	Med. Wage \$25.51/hr.	-Production Clerk	Med. Wage \$22.70/hr.	-Industrial Machinery Mechanics	Med. Wage \$ 28.66/hr.	-Cost Estimators	Med. Wage \$30.95/hr.	-Machinists	Med. Wage \$17.07/hr.
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Notes: 1. Information from Centers of Excellence, Advanced Manufacturing Report, December 2013. 2. See reference note 2 on page one. 3. L.A. County LMI Information from the Employment Development Department (EDD) at <http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html> 07/17/15