Advanced Manufacturing

LABOR MARKET ANALYSIS
REPORT HIGHLIGHTS
San Diego County
October 2014

For the full report, please visit:
workforce.org/industry-reports
This study highlights four occupational clusters that are most commonly employed by Advanced Manufacturing firms: drafting and technician, computer/software, production and engineering. The top three professions with the most employment in each cluster are listed below:

**Drafting and Technician**
- Chemical technicians
- Engineering technicians, except drafters (all other)
- Environmental science and protection technicians, including health

**Computer/Software**
- Software developers, applications
- Software developers, systems software
- Computer user support specialists

**Production**
- Installation, maintenance and repair occupations
- Food processing workers
- Inspectors, testers, sorters, samplers and weighers

**Engineering**
- Computer hardware engineers
- Electrical engineers
- Mechanical engineers

San Diego’s Advanced Manufacturing careers are diverse and demand high-tech skills in computers, robotics and information technologies. This study serves to inform the workforce development system—educational training institutions, Workforce Investment Boards and community workforce development organizations—on how to best prepare the future workforce for this sector. The full report analyzes data on job growth, training gaps, hiring challenges and skills in demand from firms in the Advanced Manufacturing sector.

The Advanced Manufacturing sector accounts for 10% of all establishments, 15% of all paid employment and 22% of all annual payroll.

The Advanced Manufacturing sector is dominated by small- to medium-sized businesses with 82% of firms employing less than 20 employees.

**SIZE OF ADVANCED MANUFACTURING ESTABLISHMENTS BY NUMBER OF EMPLOYEES**
- 100+ Employees: 4%
- 1-19 Employees: 82%
- 20-99 Employees: 14%

**ADVANCED MANUFACTURING SECTOR PROJECTED EMPLOYMENT GROWTH**

<table>
<thead>
<tr>
<th>2013 EMPLOYMENT</th>
<th>2018 EMPLOYMENT</th>
<th>6% INCREASE IN JOBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>170,800</td>
<td>180,700</td>
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Production occupations are projected to have the greatest absolute growth in the region with more than 3,700 jobs between 2014 and 2018. Drafting and technician occupations are expected to grow at the fastest rate of 19% during this period.

**PROJECTED EMPLOYMENT GROWTH BY OCCUPATIONAL CLUSTER 2014-2018**

<table>
<thead>
<tr>
<th>Occupation Cluster</th>
<th>Percentage Growth</th>
<th>Absolute Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drafting &amp; Technician</td>
<td>19%</td>
<td>508</td>
</tr>
<tr>
<td>Computer/Software</td>
<td>11%</td>
<td>2,288</td>
</tr>
<tr>
<td>Production</td>
<td>6%</td>
<td>3,754</td>
</tr>
<tr>
<td>Engineering</td>
<td>6%</td>
<td>529</td>
</tr>
</tbody>
</table>
More than 250 employers in the Advanced Manufacturing sector in San Diego were surveyed and interviewed for this report. This sector includes diverse industries such as electronics, aerospace and biotechnology. No one industry dominated the Advanced Manufacturing sector. Eleven percent of firms specified other industries as their primary business function, which included medical equipment, dental restorations, custom foam inserts, breweries, radio frequency identification, musical instruments and more.

This study provides an analysis of jobs gaps within the Advanced Manufacturing sector. A gap is created when the number of trained workers produced by the region’s educational institutions does not match the number of available job openings. Comparing employer demand with worker supply helps identify jobs gaps that can be addressed with workforce development.

**Recommendations for Workforce Development**

- Shift the public image of traditional manufacturing to Advanced Manufacturing
- Develop an Advanced Manufacturing talent pipeline
- Increase employer knowledge about business assistance programs for workforce training
- Add an internship and/or work experience requirements to education and training programs
- Encourage critical thinking and real world application in education and training programs
- Standardize certifications and articulation agreements

For complete details, view full report at workforce.org/industry-reports
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