New Jersey’s Advanced Manufacturing Cluster

Presented by:

Jason Timian, Labor Market Analyst

Bureau of Labor Market Information

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Overview

There nearly 3,400 establishments in New Jersey that employ more than 122,000 people in the advanced manufacturing cluster. Employment is scattered throughout the state and found in places ranging from very large pharmaceutical firms to much smaller machine shops. These establishments are generally found in the Northeastern part of the state and also along the Interstate 95 corridor.

The occupational composition within advanced manufacturing industries is continuously changing as more technical skills are required to operate more advanced processes. The expectation of higher skills has resulted in many higher paying jobs, especially among chemical manufacturing firms.

The profile of the average worker is generally older than average and male. More than 50 percent of the workforce is aged 45. Racially, it is more diverse than average, especially among the Asian population. The workforce is highly educated, with nearly 48 percent having attained at least a bachelor’s degree.
New Jersey Advanced Manufacturing Highlights

• The advanced manufacturing industry cluster contributed over $17 billion to the Gross Domestic Product in 2009, or about 3.6 percent of all output

• New Jersey employs the third most people in chemical manufacturing, the state’s largest segment of advanced manufacturing, behind only California and Texas

• Nearly half of all manufacturing industry employment remaining in the state is classified as advanced

• Average wages paid in many advanced manufacturing industries are well above the statewide average of $55,700

• Advanced manufacturing establishment employers paid nearly $11.8 billion in total wages in 2010, or about 6.8 percent of all wages paid
Advanced Manufacturing

Industry Analysis
New Jersey has followed a similar employment trend as the nation, but has fared worse over the last 20 years.

Manufacturing has lost nearly 272,000 jobs in New Jersey since 1990, a 3.5% annual decline, while the nation has declined at a 2.1 annual rate, shedding nearly 6.2 million jobs.

The “other” non-agricultural industries posted a net gain of 491,200 jobs in New Jersey, while the United States added about 26.5 million jobs.

Since 1990, the manufacturing sector in New Jersey has failed to experience a year over year gain. Its best year was a 0.2 decline from 1999-2000.

Source: Current Employment Statistics
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Manufacturing employment in New Jersey has declined from 14.6% of all jobs in 1990 to 6.7% in 2010

Nationally, manufacturing’s share of total employment has declined from 16.2% in 1990 to 8.9% in 2010

Widespread and consistent losses among industries that manufacture both durable and non-durable goods have resulted in closely distributed annual average losses of 3.7 and 3.4 percent, respectively

During the six worst years for manufacturing employment in New Jersey (‘91-'92, ‘01-'02, ‘08-'09), more than 156,000 of the 271,800 total jobs losses occurred, an average rate of decline of more than 6% per year

Source: Current Employment Statistics
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
The New Jersey Department of Labor and Workforce Development has classified 151 out of 473 NAICS-based manufacturing industries as advanced.

Employment in advanced manufacturing industries declined at a lesser rate in New Jersey and the nation from 2005 to 2010, 3.8 and 3.2 percent, respectively, than its non-advanced counterpart (5.6 & 4.8 percent).

In 2010, there were more than 122,000 people employed in industries classified as advanced manufacturing in New Jersey.

Nearly 48 percent of all manufacturing employment in New Jersey occurred in advanced industries in 2010 versus only 39 percent nationwide.

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
The advanced manufacturing sector and its components with some examples of industries classified within them

**Chemical Manufacturing**
- Basic chemical
- Pharmaceutical & medicine
- Cleaning compound and toiletry
- Paint, coating & adhesive

**Computer and Electronic Product Manufacturing**
- Computers and peripheral equipment
- Communications equipment
- Audio and visual equipment
- Semiconductors and other electronic components

**Machinery Manufacturing**
- Industrial machinery
- HVAC and commercial refrigeration equipment
- Commercial and service industry machinery
- Turbine and power transmission

Source: North American Industry Classification System (NAICS)
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
The complete list of 151 detailed NAICS classified as advanced manufacturing
The three major components of advanced manufacturing account for nearly 80% of its workforce in New Jersey in 2010

Chemical manufacturing, which includes pharmaceuticals and medicine, employed over 56,000 in 2010, which is greater than 21 percent of all manufacturing in the state.

Computer and electronic product and machinery manufacturing together employed nearly 41,700 in 2010.

The remaining 21 percent of advanced manufacturing employment is comprised of a group of industries producing goods such as glass and glass products, electrical equipment, transportation equipment, and medical instruments and devices.

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
These industries each employ a significant number of people in New Jersey and account for a large portion of industry employment in the nation.

New Jersey Employment as a Percentage of the nation: 2010

- Surgical Appliance and Supplies: 7.0%
- Toiletry Preparation: 11.9%
- Pharmaceutical Preparation: 13.6%
- Sanitary Paper Product: 24.4%
- Medicinal and Botanical: 22.2%

Chemical manufacturing in New Jersey, where the top three industries on this list are classified, accounts for over 7 percent chemical manufacturing employment in the nation.

All but sanitary paper product manufacturing would be classified as advanced.

Overall, New Jersey employed 2.7 percent of all advanced manufacturing in the nation.

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
The five largest manufacturing industries make up over 20% of all manufacturing employment in the state.

Pharmaceutical preparation accounts for one of every ten manufacturing jobs in New Jersey, but less than 2 percent of all manufacturing jobs nationally.

Among these five largest manufacturing industries, only commercial lithographic printing is not considered to be advanced.

Each of these industries earns a substantial average annual wage, ranging from $56,530 for commercial lithographic printing to $140,000 for pharmaceutical preparation.

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Average wages in New Jersey in 2010 among advanced manufacturing industries are about 78% more than those non-advanced manufacturing industries.

From 2005 to 2010, average wages in New Jersey in advanced manufacturing have increased 4.8 percent per year compared to only 2.3 percent per year for non-advanced.

Average wages paid are 29 percent higher in New Jersey in 2010 than the nation among advanced manufacturing industries.

One of the highest paying industries in New Jersey, the advanced manufacturing industry earns about 72 percent more than the state average of $55,740 in 2010.

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Average wages in New Jersey among the three main components of advanced manufacturing have averaged 4.7 annual growth from 2005 to 2010.

Each component of advanced manufacturing earns more than the state average of $55,740 in 2010.

The chemical manufacturing industry earns more than twice as much as the state average in 2010, and averaged annual increases of 5.5 percent from 2005 to 2010.

The higher average wages paid in both chemical and computer and electronic product manufacturing are reflective of the greater composition of jobs requiring higher educational levels.

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Eight detailed industries make up the roughly 25,700 workers employed in the “other” advanced manufacturing component.

Nearly half of these “other” workers are employed in the medical equipment and supplies manufacturing industry, and tend to have very high average wages and are primarily located in northeast New Jersey.

Glass and glass product manufacturing is a vital industry in New Jersey unique mainly to its southern counties and their optimal geological attributes.

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Employment in advanced manufacturing is highly concentrated in New Jersey’s most populous counties and along the Interstate 95 corridor.

New Jersey offers unique business advantages including:

- geographic proximity to roughly 40 percent of the US population, or roughly 100 million potential consumers
- highly educated and very diverse workforce
- extensive transportation network in place to carry goods by land, air, and sea

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Industry components tend to group among one another within the advanced manufacturing cluster.

Nearly 80 percent of all chemical manufacturing employment is found in these six counties in northeastern region of New Jersey:

- Bergen  
- Essex  
- Somerset  
- Union  
- Morris  
- Middlesex

Nearly a third of all computer and electronic product manufacturing employment is found in southern counties of Camden and Burlington.

Cumberland county is the glass center of New Jersey, employing two-thirds of all glass product manufacturing workers in the state.

Source: Quarterly Census of Employment and Wages  
Prepared by: New Jersey Department of Labor and Workforce Development  
December 2011
Many of New Jersey’s most well known manufacturing companies are classified as advanced.

**Bristol-Myers Squibb**
Princeton, NJ
Pharmaceutical and medicine manufacturing

**Crestron Electronics**
Rockleigh, NJ
Semiconductor and electronic component manufacturing

**Novartis Pharmaceuticals**
East Hanover, NJ
Pharmaceutical and medicine manufacturing

**L-3 Communications**
Camden, NJ
Radio and television broadcasting and wireless communications equipment manufacturing

**Lockheed Martin**
Mooresstown, NJ
Navigational, measuring, electromedical and control instruments manufacturing
Advanced Manufacturing

Occupational Analysis
More than 70% of all advanced manufacturing jobs are classified into these five groups:

Breakdown of Major Occupational Groups within Advanced Manufacturing Industry: New Jersey, 2010

- Production: 35%
- Office & Administrative: 10%
- Management: 10%
- Science: 8%
- Engineering: 8%

Greater than one-third of advanced manufacturing workers are directly involved with production.

Roughly one out of six workers contributes to research and development as part of the engineering and science groups.

The “other” 29 percent of advanced manufacturing occupations primarily consists of business, computer, material moving, and sales occupations.

Source: Occupational Employment Statistics Survey
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
This list shows the top 20 occupations by employment in advanced manufacturing.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2010 Employment</th>
<th>Share of Industry</th>
<th>2010 Average Salary</th>
<th>Education/Training Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total, All Occupations</td>
<td>128,762</td>
<td>100.0%</td>
<td>$60,080</td>
<td></td>
</tr>
<tr>
<td>Top 20 Occupations</td>
<td>52,389</td>
<td>40.7%</td>
<td>$49,120</td>
<td></td>
</tr>
<tr>
<td>Packaging and Filling Machine Operators and Tenders</td>
<td>5,623</td>
<td>4.4%</td>
<td>$26,650</td>
<td>Short-term on-the-job training</td>
</tr>
<tr>
<td>Supervisors of Production and Operating Workers</td>
<td>4,385</td>
<td>3.4%</td>
<td>$60,970</td>
<td>Work experience in a related occupation</td>
</tr>
<tr>
<td>Mixing and Blending Machine Setters, Operators, and Tenders</td>
<td>4,324</td>
<td>3.4%</td>
<td>$34,850</td>
<td>Moderate-term on-the-job training</td>
</tr>
<tr>
<td>Inspectors, Testers, Sorters, Samplers, and Weighers</td>
<td>3,675</td>
<td>2.9%</td>
<td>$35,950</td>
<td>Moderate-term on-the-job training</td>
</tr>
<tr>
<td>Electrical and Electronic Equipment Assemblers</td>
<td>3,435</td>
<td>2.7%</td>
<td>$31,090</td>
<td>Short-term on-the-job training</td>
</tr>
<tr>
<td>Chemists</td>
<td>3,272</td>
<td>2.5%</td>
<td>$76,190</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Team Assemblers</td>
<td>3,099</td>
<td>2.4%</td>
<td>$25,960</td>
<td>Moderate-term on-the-job training</td>
</tr>
<tr>
<td>Electromechanical Equipment Assemblers</td>
<td>2,318</td>
<td>1.8%</td>
<td>$32,800</td>
<td>Short-term on-the-job training</td>
</tr>
<tr>
<td>Wholesale Sales Representatives</td>
<td>2,171</td>
<td>1.7%</td>
<td>$71,480</td>
<td>Work experience in a related occupation</td>
</tr>
<tr>
<td>Industrial Machinery Mechanics</td>
<td>2,050</td>
<td>1.6%</td>
<td>$50,510</td>
<td>Long-term on-the-job training</td>
</tr>
<tr>
<td>Industrial Production Managers</td>
<td>2,025</td>
<td>1.6%</td>
<td>$118,500</td>
<td>Work experience in a related occupation</td>
</tr>
<tr>
<td>Chemical Technicians</td>
<td>1,958</td>
<td>1.5%</td>
<td>$44,840</td>
<td>Associate degree</td>
</tr>
<tr>
<td>Chemical Equipment Operators and Tenders</td>
<td>1,951</td>
<td>1.5%</td>
<td>$44,690</td>
<td>Moderate-term on-the-job training</td>
</tr>
<tr>
<td>Packers and Packagers, Hand</td>
<td>1,940</td>
<td>1.5%</td>
<td>$21,520</td>
<td>Short-term on-the-job training</td>
</tr>
<tr>
<td>Shipping, Receiving, and Traffic Clerks</td>
<td>1,863</td>
<td>1.4%</td>
<td>$32,210</td>
<td>Short-term on-the-job training</td>
</tr>
<tr>
<td>Computer Software Engineers, Systems Software</td>
<td>1,776</td>
<td>1.4%</td>
<td>$101,570</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Machinists</td>
<td>1,721</td>
<td>1.3%</td>
<td>$44,750</td>
<td>Long-term on-the-job training</td>
</tr>
<tr>
<td>Industrial Engineers</td>
<td>1,657</td>
<td>1.3%</td>
<td>$84,080</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Customer Service Representatives</td>
<td>1,587</td>
<td>1.2%</td>
<td>$35,550</td>
<td>Moderate-term on-the-job training</td>
</tr>
<tr>
<td>Mechanical Engineers</td>
<td>1,558</td>
<td>1.2%</td>
<td>$84,740</td>
<td>Bachelor's degree</td>
</tr>
</tbody>
</table>

Source: Occupational Employment Statistics Survey  
Prepared by: New Jersey Department of Labor and Workforce Development  
December 2011
Skills, Knowledge and Abilities most important to the top 20 occupations found in advanced manufacturing

**In addition to industry specific SKAs, effective communication is key**

Source: O*NET www.onetonline.org  
Prepared by: New Jersey Department of Labor and Workforce Development  
December 2011
Many of the occupations found in advanced manufacturing have moderate to high education/training requirements for entry.

<table>
<thead>
<tr>
<th>Total Number of Employment</th>
<th>in Advanced Manufacturing by Minimum Education/Training Requirement</th>
<th>New Jersey, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total High Requirements</strong></td>
<td>39,912</td>
<td>31.0%</td>
</tr>
<tr>
<td>First professional degree</td>
<td>124</td>
<td>0.1%</td>
</tr>
<tr>
<td>Doctoral degree</td>
<td>3,967</td>
<td>3.1%</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>519</td>
<td>0.4%</td>
</tr>
<tr>
<td>Bachelor’s or higher degree, plus work experience</td>
<td>8,906</td>
<td>6.9%</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>21,105</td>
<td>16.4%</td>
</tr>
<tr>
<td>Associate degree</td>
<td>5,291</td>
<td>4.1%</td>
</tr>
<tr>
<td><strong>Total Moderate Requirements</strong></td>
<td>26,028</td>
<td>20.2%</td>
</tr>
<tr>
<td>Postsecondary vocational training</td>
<td>2,466</td>
<td>1.9%</td>
</tr>
<tr>
<td>Work experience in a related occupation</td>
<td>15,059</td>
<td>11.7%</td>
</tr>
<tr>
<td>Long-term on-the-job training</td>
<td>8,504</td>
<td>6.6%</td>
</tr>
<tr>
<td><strong>Total Low Requirements</strong></td>
<td>54,154</td>
<td>42.1%</td>
</tr>
<tr>
<td>Moderate-term on-the-job training</td>
<td>30,880</td>
<td>23.4%</td>
</tr>
<tr>
<td>Short-term on-the-job training</td>
<td>24,075</td>
<td>18.7%</td>
</tr>
<tr>
<td><strong>Unavailable Data</strong></td>
<td>8,667</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

Scientists and engineers primarily account for the nearly one-third of the occupations found in advanced manufacturing that require at least an associate’s degree for entry.

Among the roughly 20% that have moderate requirements are many of the craftsmen, supervisors, and sales people.

The remaining 42% of the workforce are employed mostly in production occupations that may have lower requirements for entry, but often require a great deal experience and skill.
Advanced Manufacturing

Closer Look at Components
Some well-known employers vital to New Jersey’s economy include:

- Johnson & Johnson
- Bristol-Myers Squibb
- Hoffman-La Roche
- Colgate Palmolive
- Smith Kline Beecham
- Sanofi-Aventis
- Novartis
- L’Oreal
- Merck
- Pfizer

While employment has declined by an average of 4.4% per year, the number of establishments has actually increased by over 0.6% per year.

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Occupations requiring **high levels of education** for entry make up 39% of chemical manufacturing. Nearly 18% require a bachelor’s degree and almost 7% of the workforce requires at doctorate degree.

Nearly 19% have **moderate education and training** requirements. Work experience in a related field is the most common among this group.

The remaining 42% of the workforce require only **moderate- or short-term on-the-job training**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Employment</th>
<th>Education/Training Requirement</th>
<th>2010 Average Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging and Filling Machine Operators and Tenders</td>
<td>5,510</td>
<td>Short-term on-the-job training</td>
<td>$ 26,650</td>
</tr>
<tr>
<td>Mixing and Blending Machine Setters, Operators, and Tenders</td>
<td>3,995</td>
<td>Moderate-term on-the-job training</td>
<td>$ 34,850</td>
</tr>
<tr>
<td>Chemists</td>
<td>3,206</td>
<td>Bachelor’s degree</td>
<td>$ 76,190</td>
</tr>
<tr>
<td>Chemical Equipment Operators and Tenders</td>
<td>1,948</td>
<td>Moderate-term on-the-job training</td>
<td>$ 44,690</td>
</tr>
<tr>
<td>Chemical Technicians</td>
<td>1,864</td>
<td>Associate degree</td>
<td>$ 44,840</td>
</tr>
<tr>
<td>Supervisors of Production and Operating Workers</td>
<td>1,743</td>
<td>Work experience in a related occupation</td>
<td>$ 60,970</td>
</tr>
<tr>
<td>Biochemists and Biophysicists</td>
<td>1,517</td>
<td>Doctoral degree</td>
<td>$ 91,450</td>
</tr>
<tr>
<td>Medical Scientists</td>
<td>1,373</td>
<td>Doctoral degree</td>
<td>$ 115,390</td>
</tr>
<tr>
<td>Inspectors, Testers, Sorters, Samplers, and Weighers</td>
<td>1,287</td>
<td>Moderate-term on-the-job training</td>
<td>$ 35,950</td>
</tr>
<tr>
<td>Industrial Machinery Mechanics</td>
<td>1,141</td>
<td>Long-term on-the-job training</td>
<td>$ 50,510</td>
</tr>
</tbody>
</table>

Nearly 60% of all chemists and over 50% of all biochemists and biophysicists in the state work for companies classified in chemical manufacturing.
**Computer and Electronic Manufacturing**

<table>
<thead>
<tr>
<th></th>
<th>Establishments</th>
<th>Employment</th>
<th>Employment Per Establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>733</td>
<td>30,884</td>
<td>42</td>
</tr>
<tr>
<td>2010</td>
<td>771</td>
<td>26,806</td>
<td>35</td>
</tr>
<tr>
<td>Change</td>
<td>38</td>
<td>-4,078</td>
<td>-7</td>
</tr>
</tbody>
</table>

Among the three components, employment has declined at the slowest rate (-2.8% per year) and the number of establishments has grown the fastest (1.0% per year).

Some well-known employers vital to New Jersey’s economy include:

- L-3 Communications
- Lockheed Martin
- Creston Electronics
- ITT Industries
- Smiths Detection
- Dataskope
- BAE Systems
- Honeywell
- Anadigics
- Oticon

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Occupations requiring **high levels of education** for entry make up 41% of computer and electronic product manufacturing. Nearly 35% require at least bachelor’s degree.

Roughly 20% have **moderate education and training** requirements. Work experience in a related field is the most common among this group.

The remaining 39% of the workforce require only **moderate- or short-term on-the-job training**

### Engineering and production occupations account for more than half of all employment in this industry.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Employment</th>
<th>Education/Training Requirement</th>
<th>2010 Average Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical and Electronic Equipment Assemblers</td>
<td>2,321</td>
<td>Short-term on-the-job training</td>
<td>$31,090</td>
</tr>
<tr>
<td>Computer Software Engineers, Systems Software</td>
<td>1,764</td>
<td>Bachelor’s degree</td>
<td>$85,570</td>
</tr>
<tr>
<td>Electromechanical Equipment Assemblers</td>
<td>1,178</td>
<td>Short-term on-the-job training</td>
<td>$32,800</td>
</tr>
<tr>
<td>Inspectors, Testers, Sorters, Samplers, and Weighers</td>
<td>1,138</td>
<td>Moderate-term on-the-job training</td>
<td>$35,950</td>
</tr>
<tr>
<td>Electronics Engineers, Except Computer</td>
<td>841</td>
<td>Bachelor’s degree</td>
<td>$109,740</td>
</tr>
<tr>
<td>Electrical and Electronic Engineering Technicians</td>
<td>807</td>
<td>Associate degree</td>
<td>$57,030</td>
</tr>
<tr>
<td>Electrical Engineers</td>
<td>799</td>
<td>Bachelor’s degree</td>
<td>$86,300</td>
</tr>
<tr>
<td>Supervisors of Production and Operating Workers</td>
<td>717</td>
<td>Work experience in a related occupation</td>
<td>$60,970</td>
</tr>
<tr>
<td>Mechanical Engineers</td>
<td>708</td>
<td>Bachelor’s degree</td>
<td>$84,740</td>
</tr>
<tr>
<td>Team Assemblers</td>
<td>707</td>
<td>Moderate-term on-the-job training</td>
<td>$25,960</td>
</tr>
</tbody>
</table>
Machinery manufacturing is the only component to lose establishments from 2005-2010

Employment also declined an average of 3.8% per year

As a result, many of the establishments in this component are relatively small and dispersed throughout the state, have less popularity or name recognition, and more commonly serve their locality instead of a broader market

Source: Quarterly Census of Employment and Wages
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Occupations requiring **high levels of education** for entry make up 18% of machinery manufacturing. Most of this group are classified as either engineering or computer occupations.

Nearly 35% have **moderate education and training** requirements. Work experience in a related field is the most common among this group.

The remaining 46% of the workforce require only **moderate- or short-term** on-the-job training.

Many of the occupations on this list have low **minimum** educational and training requirements for entry, but are filled by workers with vast levels of experience.

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Source: Occupational Employment Statistics Survey
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Advanced Manufacturing

Demographic profile
The age breakdown of people working in the advanced manufacturing industries differs significantly from the overall economy.

Only 4 percent of the workforce is under 25 years of age compared to over 12 percent overall.

Advanced manufacturing’s workforce is very middle-aged heavy, with nearly 55 percent of all workers compared to about 47 percent overall.

There is a greater proportion of the workforce aged 55 and older in advanced manufacturing compared to the overall economy, 24 and 21 percent, respectively.

Source: American Community Survey
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Gender, racial, and ethnic profile of New Jersey’s health care work force

Advanced Manufacturing

Male
58%
Female
42%

Racially, the greatest difference in the advanced manufacturing workforce is the higher proportion of Asians

Advanced Manufacturing

Hispanic
14%
Non-Hispanic
86%

Advanced Manufacturing

Hispanic
17%
Non-Hispanic
83%

Racially, the greatest difference in the advanced manufacturing workforce is the higher proportion of Asians

Advanced Manufacturing

Asian
14%
Black
9%
Other
7%

All Industries

White
70%
Non-Hispanic
83%

The Hispanic population is slightly less among advanced manufacturing industries

All Industries

White
70%
Non-Hispanic
86%

Advanced manufacturing’s workforce is slightly more male than the overall economy

All Industries

White
70%
Non-Hispanic
86%

The Hispanic population is slightly less among advanced manufacturing industries

Source: American Community Survey
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Self-reported educational attainment and average wage of the advanced manufacturing workforce

Nearly 50% of the workforce reported that they have earned at least a bachelor’s degree, while...

...more than 60% of the workforce claimed to have earned wages above the state average of about $50,000

**Education Level**

- Doctoral degree: 4.7%
- Masters/Professional degree: 17.7%
- Bachelors degree: 26.3%
- Some college/Associate degree: 21.3%
- High School diploma: 24.3%
- Less than High School: 5.8%

**Average Wage**

- $200,000 & more: 5.1%
- $150,000-$200,000: 5.4%
- $100,000-$150,000: 16.5%
- $75,000-$100,000: 14.5%
- $50,000-$75,000: 19.2%
- $25,000-$50,000: 20.5%
- Less than $25,000: 18.7%

Source: American Community Survey
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Advanced Manufacturing

Outlook
Manufacturing employment in New Jersey has been declining for decades, but the losses are projected to slow.

Manufacturing has shed nearly 272,000 jobs in New Jersey from 1990-2010, a 3.5% annual decline.

From 2008 through 2018, declines are projected to slow in advanced and non-advanced manufacturing industries to -1.9 and -2.6 percent per year, respectively.

Despite these consistent employment declines, output (by GDP) had remained steady from 1997 to 2007.

The recession that began in late 2007 had strong effects on advanced manufacturing, particularly the chemical manufacturing sub-sector, and GDP dropped nearly 25% over those two years.

Source: Current Employment Statistics United States Bureau and Economic Analysis
Prepared by: New Jersey Department of Labor and Workforce Development
December 2011
Most online job postings by occupation over last 60 days ending June 19, 2012
Most online job postings by **employer** over last 60 days ending June 19, 2012

<table>
<thead>
<tr>
<th>Employer</th>
<th>Job Postings</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOHNSON &amp; JOHNSON</td>
<td>134</td>
</tr>
<tr>
<td>MERCK &amp; COMPANY</td>
<td>83</td>
</tr>
<tr>
<td>NOVARTIS</td>
<td>66</td>
</tr>
<tr>
<td>CELGENE CORP.</td>
<td>44</td>
</tr>
<tr>
<td>INTEGRA LIFESCIENCES</td>
<td>41</td>
</tr>
<tr>
<td>SIEMENS</td>
<td>41</td>
</tr>
<tr>
<td>STRYKER MEDICAL</td>
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<td>LOREAL USA INC.</td>
<td>32</td>
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</tr>
<tr>
<td>GENERAL ELECTRIC CO.</td>
<td>30</td>
</tr>
<tr>
<td>DICKINSON CO.</td>
<td>27</td>
</tr>
<tr>
<td>SANKYO PHARMA</td>
<td>26</td>
</tr>
<tr>
<td>XEROX</td>
<td>26</td>
</tr>
<tr>
<td>JOHNSON CONTROLS INC.</td>
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</tr>
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<td>BRISTOL-MYERS SQUIBB</td>
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Most online job postings by **skill** over last 60 days ending June 19, 2012

<table>
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<th>Skill</th>
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<tbody>
<tr>
<td>Validation</td>
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<td>SAP</td>
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</table>
Contact Information

New Jersey Department of Labor and Workforce Development

http://lwd.dol.state.nj.us

Jason Timian
Labor Market Analyst
Tel: 609-633-0553
E-mail: jason.timian@dol.state.nj.us