

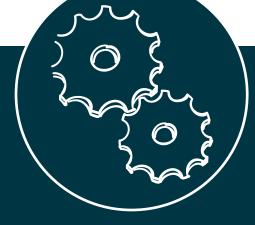
CAREER OPPORTUNITIES IN

# MANUFACTURING AND PRODUCT DEVELOPMENT INDUSTRY SECTOR



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390 W. Fir Ave, Suite 300, Bldg B Clovis, CA 93611 Phone: (559) 324-6410 Fax: (559) 324-6489 This material is made pursuant to agreement number CN088139 A.2 of the California Tech Prep Distribution Poin Grant. Funds were administered by the Secondary, Postsecondary, Adult Leadership Division of the California Department of Education in collaboration with the California Community College Chancellor's Office.

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The Manufacturing and Product Development Industry Sector provides a foundation in manufacturing processes and systems.

Manufacturing is the use of tools and labor to make products to sell. Product development involves the creation of an idea and the subsequent design and process that results in a product for sale. This sector is closely related to engineering and industrial design. An important part of California's economy, this sector produces a wide range of products from sophisticated electronic/computer-related equipment to the simplest of toys.

As our world becomes more dependent on electronics, students with training and education in manufacturing and product development will continue to be in high demand. The Manufacturing and Product Development Industry Sector is for students who enjoy working with their hands, building or designing infrastructures, and expressing themselves artistically.

# Web sites for further information:

www.californiacareers.info
www.whodouwant2be.com
www.californiacolleges.edu
www.edd.ca.gov/Jobs\_and\_Training/

## Career Pathways



### Graphic Arts Technology Pathway

The Graphic Arts Technology Pathway provides students with an understanding of manufacturing processes and systems common to careers in graphic arts and printing technology. Designers make sketches, models, and computer simulations that are presented to engineers and marketing staff. Students will be introduced to different printing enterprises, graphic design, photography, and art and copy preparation.

### **CAREERS/CAREER AREAS:**

- Publisher
- Editor
- Graphic Artist/Designer
- Desktop Publishing
- Production Manager
- Network Engineer
- Industrial Designer
- Commercial Photographer



# Integrated Graphics Technology Pathway

The Integrated Graphics and Technology Pathway is for students who have a passion for both the arts

and electronics. Technology related to this pathway is continually evolving. Creativity ranks in importance with education and experience. Text, graphics, audio, video, and animation are areas explored in this pathway. Careers in this pathway involve a wide range of activities including on-demand publishing, digital imaging, analog and digital videography, and electronic image assembly.

### **CAREERS/CAREER AREAS:**

- Special Effects Animator
- Webmaster
- Multimedia Producer
- Web Designer
- Publication Manager
- Special Effects Journeyman



# Machine and Forming Technology Pathway

The Machine and Forming Technology Pathway teaches students how machines are designed to form products in the manufacturing industry. After a layout design is developed, the machine forming process cuts, shapes, forges, molds, casts, fastens, and finishes the manufacturing process. Skilled craftsmen ensure the finished product meets the product specifications.

### **CAREERS/CAREER AREAS:**

- Assembler
- Design Engineer
- Tooling Technician
- Tooling Engineer
- Computer Programmer
- Mechanical Engineer
- Industrial Technology Educator
- Machine Operator
- Maintenance Mechanic



### Welding Technology Pathway

The Welding Technology Pathway provides students with an understanding of how welding and related careers fit in the manufacturing process. During the manufacturing process, highly skilled craftsmen apply a wide variety of bonding techniques. Topics include mechanical bonding, joining, cohesive bonding, adhesive bonding, and mechanical fastening. Newer welding methods include laser, ultrasonic, and electron beam. The demand for trained welders continues to look good.

### **CAREERS/CAREER AREAS:**

- Welder
- Boilermaker
- Blacksmith
- Ironworker
- Metallurgist
- Robotics Technician
- Quality Control Inspector
- Fabrication Designer
- Plastics Assembler
- Composite Fabricator
- Manufacturing Engineer

