

[micron.com/students](http://micron.com/students)



Engineering  
is it you?

## Web Resources:

Micron Student website  
[micron.com/students](http://micron.com/students)

Discover Engineering  
[www.discoverengineering.org/home.asp](http://www.discoverengineering.org/home.asp)

Engineering Your Future  
[www.engineeringk12.org/students](http://www.engineeringk12.org/students)

Engineer Girl!  
[www.engineergirl.org](http://www.engineergirl.org)



## Cool Things Engineers have Developed

- Snowboards
- Gore-Tex®
- Fuel injection systems
- Plastic knee and hip joints
- Velcro®
- Zip-lock® bags
- Lasers
- Bulletproof vests
- Cell phones
- Roller coasters
- Artificial organs
- Computer animation
- Compact disks
- Antibiotics
- Global positioning systems (GPS)
- Gaming Systems (XBOX 360®, Playstation 3®)
- Artificial heart valves
- Skin care products
- MP3 players (Apple iPod®)



# Careers in Engineering

## *Computer*

Computer engineers use software and electrical engineering principles to solve system and process problems. Examples: hand-held communication and imaging devices for automotive safety, security, and medical applications.

## *Chemical*

Chemical engineers are sometimes seen as mad scientists, sitting in their laboratories with beakers and Bunsen burners mixing and boiling chemicals. In actuality, they use chemical principles to develop new products and new properties for existing products that make our lives better. Examples: Gore-tex®, paint, plastic, medicines, clothes.

## *Electrical*

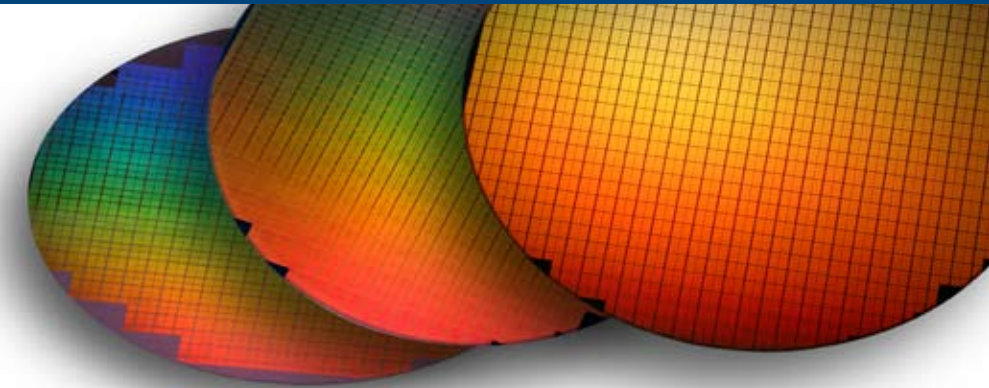
Electrical engineers work with electricity and determine how to use its properties to help solve problems. It can be as everyday as making your mom's blender work better or as cool as creating a new memory chip that makes your computer games more realistic. Examples: power plants, satellites, cell phones, GPS systems.

## *Environmental*

Environmental engineers work with Mother Nature to correct problems with and protect the environment. Examples: reducing acid rain, water pollution, air pollution, the hole in the ozone layer.

## *Manufacturing*

Manufacturing engineers help companies make things faster, better, and less expensively. They design tools or refine manufacturing techniques to increase the product quality and reduce the cost of making things. Examples: decreasing the size of integrated circuits 1000 fold and incorporating robots in manufacturing processes.



## *Mechanical*

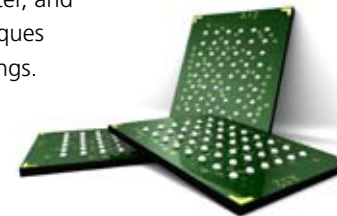
Mechanical engineers are experts in how to make something else do the work. They use the properties of force and heat to create mechanical systems that air condition our buildings, generate electricity, turn the wheels of your car, and much more. Examples: turbines for hydroelectric dams, hydraulic systems, windmills, heavy construction equipment.

## *Material Science Engineers*

Materials engineers use basic science, chemistry, physics, and electronics to study substances and enable technological revolutions. They determine why materials behave the way they do, how they are made, and how new ones can be developed to meet the demands for modern technology and cutting edge applications. Examples: carbon fiber bike frames, fuel cell technology for cars.

## *Software*

Software engineers are like animal trainers. They "teach" computers to do what they want them to do by writing the code that the machines understand. This paragraph was written on a computer using a word processing program written by a software engineer. Software engineers also create programs in areas such as automation, general business, animation (e.g. Star Wars®, Lord of the Rings®), and for devices that are part of cell phones, gaming systems (e.g. Nintendo Wii®, Playstation 3®) and military jet fighters.



## What does an engineer do?

This brochure describes the most common engineering professions all of which can be found designing and building the future at Micron.

To learn more about a future in engineering and other high-tech careers, visit our Web site at [micron.com/students](http://micron.com/students). You'll find interviews with real-life engineers, scholarship information, and other tips that can assist you in choosing a career.