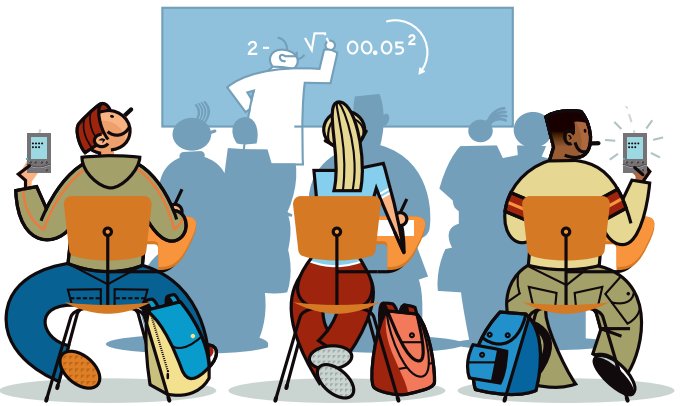


# Engineering as a career



Preparing you for one of the **best-paying jobs** upon graduation, an engineering degree opens the door to an **exciting** and **creative** lifetime career.

**“Scientists discover the world that exists; engineers create the world that never was.”** —Theodore Von Karman, aerospace engineer

**“The engineer has been, and is, a maker of history.”**  
—James Kip Finch, author of *The Story of Engineering*

**S**pace travel, undersea adventure, video games, MP3s, the world’s tallest buildings—none would be possible without engineers.

Engineers have a hand in just about everything that affects our lives. From designing bridges that span the world’s major waterways to researching new cars to developing a computer program for NASA to clothing production—engineering is everywhere!

## Did you know...

- Civil engineers use foam walls to give the Indy 500 Speedway safer curves.
- Computer science engineers are working on robots so tiny they might fit inside the human body.
- Chemical engineers have developed a spray-on skin that soldiers can use if wounded far from medical help.
- Electrical engineers make it possible to talk on the telephone, watch TV or go online.

More than ever, companies, organizations and society look to engineers to develop technology to fit their needs. What’s more, engineering degrees make up 7 of the 10 best paid jobs upon graduation.

An engineering degree can lay the groundwork for careers in business, law, medicine, art—even entertainment. You might think that to become an FBI agent you need to study law enforcement. Well, think again. Right now, majors sought by the FBI are engineering, computer science and physical science!

**A**n engineering education offers something for everyone. Here are some cool fields engineers are in:



### Aerospace Engineering

Aerospace engineers design commercial airplanes, military fighter jets, space telescopes and satellites that provide access to the future. They also develop sporting equipment such as golf balls and tennis racquets that require good aerodynamics.



### Biomedical Engineering

Biomedical engineers develop lifesaving technologies and devices related to health care, including medical diagnostic machines, medical instruments, artificial organs and more.



### Chemical Engineering

When you think of chemical engineers, think splitting the atom, plastics, wonder drugs, synthetic fibers, catalytic converters, reformulated gasoline, fertilizers, rubber and much more.



### Civil Engineering

Civil engineers help our cities and towns function through the design of airports, bridges, water treatment centers and sanitation plants. They also design streets, highways and transit systems that allow people to move safely and efficiently.



### Computer Engineering

Computer engineers can be credited for developing the Internet, iPods™ and the other technology-based tools we depend upon for entertainment, communication and performing the analyses needed for a new and better world.



### Electrical Engineering

Electrical engineers’ responsibilities range from very small objects like the light bulb to complex power stations that stretch across the nation, capable of providing everyone with electricity 24 hours a day.



### Environmental Engineering

Environmental engineers protect the fragile resources of our planet. They translate physical, chemical and biological processes into systems that destroy toxic substances, remove pollutants and eliminate contaminants from the air.



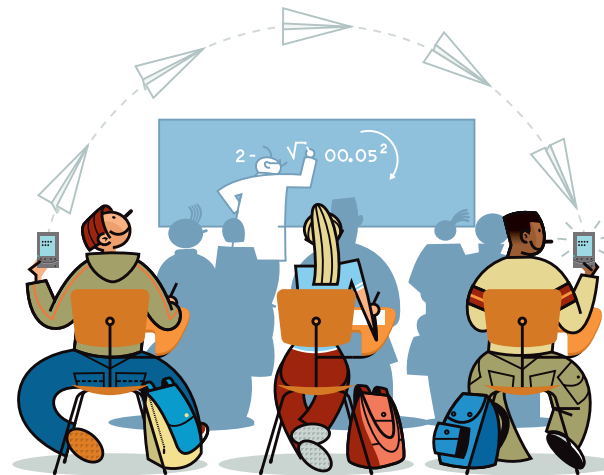
### Mechanical Engineering

Mechanical engineers put the ‘go’ in skateboards, race cars and everything in between. They also design heating and air-conditioning systems and have a hand in everything that’s manufactured.



### Structural Engineering

Structural engineers analyze and design stadiums, skyscrapers, roller coasters, office buildings and homes to ensure that the structures can support their own weight and resist dynamic environmental forces like hurricanes, earthquakes, blizzards and floods.



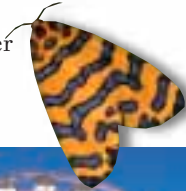


## What do Neil Armstrong, Jimmy Carter and Alfred Hitchcock have in common?

Though they eventually chose different careers—astronaut, president, filmmaker—they all started with an engineering education.

## Curious about other famous people with engineering backgrounds?

→ Grace Murray Hopper, an early computer engineer, popularized the term “bug,” when she discovered that a moth had jammed a computer.



→ George W. G. Ferris, a civil engineer, conceived, designed and built the Ferris Wheel.



→ Ryan Newman, the famous NASCAR driver, is a mechanical engineer.

→ Sue Ginter-Brooker, a professional golfer, is a mechanical engineer.



→ Montel Williams was a highly decorated former naval engineer and intelligence officer before becoming a popular television talk show host.



→ Rowan Atkinson, known as Mr. Bean, has an electrical engineering degree.

*“The well being of the world largely depends upon the work of the engineer...for a young person of imagination and keenness I cannot conceive a more attractive profession.”* — Sir William Halcrow, civil engineer

## Is it for me?

To be an engineer, you need good analytical skills and an interest in math and science. Chemistry, physics, social studies and computer courses are highly recommended. Good communication skills are increasingly important, as engineers must express their opinions and assume leadership roles.

### Ask yourself...

- ❓ Am I interested in improving the environment?
- ❓ Am I good at problem solving?
- ❓ Did I take apart my toys to see how they worked?
- ❓ Am I interested in helping people live better?
- ❓ Do I like turning ideas into things that work?

If some of these questions describe you, ask your teachers or counselors for course selection and college recommendations regarding engineering.

**Our future** as a nation will be closely tied to the environment and our ability to interact with and compete in the global economy. As a professional engineer, the personal and professional satisfaction you will feel from helping to maximize the quality of life and making our world a better place to live is endless. Engineering offers you a wide range of career choices—and an exciting future.

This brochure was produced by the **American Council of Engineering Companies of New York (ACEC New York)**. Its mission is to be the leading advocate in New York State for consulting engineers and to enhance the image and business practices of professional engineering companies.

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