

New York State Green Occupation Spotlight



Mechanical Engineer

What do they do?

Mechanical Engineers plan and design tools, engines, machines, and other mechanically functioning equipment. They oversee installation, operation, maintenance, and the repair of equipment such as centralized heat, gas, water, and steam systems.

General Description

On average, how many openings are there per year?

There are some 270 openings for mechanical engineers annually.

What is a typical entry-level wage?

\$35.96 hourly, \$74,800 annually

How should I prepare for the job?

Mechanical engineers must typically have a bachelor's degree in Mechanical or Electrical Engineering.

What types of employers might hire me?

Automobile and other transportation manufacturers, laboratories and research institutions, and energy companies are the typical employers of mechanical engineers.

Where can I get training?*

- University at Albany (SUNY), E2TAC
- Rochester Institute of Technology
- Cornell University
- CUNY City College and Graduate Center
- SUNY Stony Brook

*See a more complete list of training providers at www.greencareersny.com

Green Description

How many mechanical engineers are working in a green job in New York State?

In component manufacturing, more than 60 green mechanical engineers work at 44 firms. Many of these engineers are Fuel Cell Engineers.

What do employers say about recruiting them?

52% of businesses in component manufacturing that hire green mechanical engineers report having difficulty recruiting qualified workers for these jobs.

What kind of green activities would I do?

Over half of the green Fuel Cell Engineers are involved in energy efficiency projects, such as retro-fitting or new construction. Close to three-quarters of green fuel cell engineers are also involved in renewable energy projects, for example solar or wind energy.

How would I get the skills to do green projects?

Over four-fifths of the companies (in component manufacturing) that employ mechanical engineers require employees to acquire new or enhanced skills to perform a green job. The most common source of these skills is on-the-job training, followed by in-house training.

For more Information about this occupation go to:

- www.onetonline.org/link/summary/17-2141.01
- www.bls.gov/oes/current/oes172141.htm

For more information about green jobs, go to:

- Green Careers NY: www.greencareersny.com
- Labor Statistics: www.labor.ny.gov/stats/green

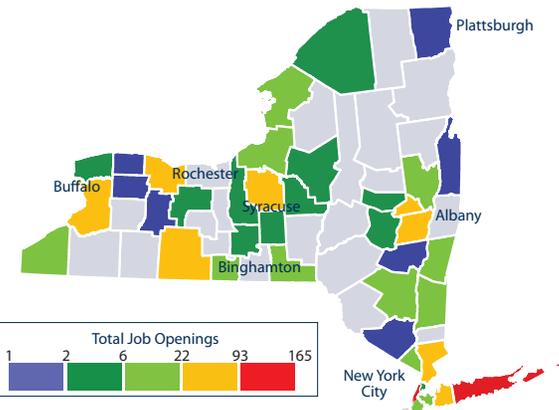
Case Study

One type of specialized mechanical engineer is the Fuel Cell Engineer, who designs fuel cell systems, subsystems, stacks, assemblies, or components, such as electric traction motors and power electronics. They also calculate the efficiency and power output of a fuel cell system or process.

A fuel cell is a device that converts fuel into electricity through a chemical reaction. Hydrogen is the most common fuel, but hydrocarbons such as natural gas are sometimes used. The primary 'waste' product produced by a fuel cell is water, a green and clean source of energy.

Fuel cell engineers do cutting-edge research, like identifying and defining the vehicle and system integration challenges for fuel cell vehicles. They design, evaluate, modify, and construct fuel cell components and systems for transportation, stationary, or portable applications.

Job Ads for Mechanical/Fuel Cell Engineer



Source: Geographic Solutions, ALMA©, 2nd Q 2011