Environmental Engineering Technicians

Summary

Environmental engineering technicians perform outdoor work on environmental quality.

Environmental engineering technicians carry out the plans that environmental engineers develop. They test, operate, and, if necessary, modify equipment used to prevent or clean up environmental pollution. They may collect samples for testing, or they may work to mitigate sources of environmental pollution.

Work Environment
Most environmental engineering technicians work full time. They typically work indoors, usually in laboratories, and often have regular working hours. However, they must sometimes work irregular hours in order to monitor operations.

How to Become an Environmental Engineering Technician
Environmental engineering technicians typically have an associate's degree in environmental engineering technology or a related field.

Pay
The median annual wage for environmental engineering technicians was $45,350 in May 2012.

Job Outlook
Employment of environmental engineering technicians is projected to grow 18 percent from 2012 to 2022, faster than the average for all occupations. Employment in this occupation is typically tied to projects created by environmental engineers. Over the next ten years, state and local governments are expected to focus their efforts and resources on efficient water use and wastewater treatment, and thus to increase demand for environmental engineering technicians.

Similar Occupations
What Environmental Engineering Technicians Do

Environmental engineering technicians collect water samples.

Environmental engineering technicians carry out the plans that environmental engineers develop.

Duties

Environmental engineering technicians typically do the following:

- Set up, test, operate, and modify equipment used to prevent or clean up environmental pollution
- Maintain project records and computer program files
- Conduct pollution surveys, for which they collect and analyze samples such as air and ground water
- Perform indoor and outdoor work on environmental quality
- Work to mitigate sources of environmental pollution
- Review technical documents to ensure their completeness and conformance to requirements
- Review work plans to schedule activities
- Arrange for the disposal of lead, asbestos, and other hazardous materials

Environmental engineering technicians work under the direction of engineers and as part of a team with other technicians. They must be able to communicate and work well with both supervisors and peers.

In laboratories, environmental engineering technicians record observations, test results, and document photographs. To keep the laboratory supplied, they also may get product information, identify vendors and suppliers, and order materials and equipment.

Environmental engineering technicians help environmental engineers develop devices used to clean up environmental pollution. They also inspect facilities for compliance with the regulations that govern substances such as asbestos, lead, and wastewater.

Work Environment
Environmental engineering technicians must wear protective gear when they are working outdoors on environmental remediation.

Environmental engineering technicians held about 19,000 jobs in 2012. The industries that employed the most environmental engineering technicians in 2012 were as follows:

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Engineering services</td>
<td>22%</td>
</tr>
<tr>
<td>Management, scientific, and technical consulting services</td>
<td>20%</td>
</tr>
<tr>
<td>Local government, excluding education and hospitals</td>
<td>11%</td>
</tr>
<tr>
<td>Waste management and remediation services</td>
<td>9%</td>
</tr>
<tr>
<td>Testing laboratories</td>
<td>8%</td>
</tr>
</tbody>
</table>

Environmental engineering technicians typically work indoors, usually in laboratories, and often have regular working hours. They also work outdoors, sometimes in remote locations.

Because environmental engineering technicians help out in environmental cleanup, they can be exposed to hazards from equipment, chemicals, or other toxic materials. For this reason, they must follow proper safety procedures, such as wearing hazmat suits and sometimes respirators, even in warm weather. When they work in wet areas, environmental engineering technicians wear heavy rubber boots to keep their legs and feet dry.

**Work Schedules**

Most environmental engineering technicians work full time and typically have regular hours. However, they must sometimes work irregular hours in order to monitor operations.

**How to Become an Environmental Engineering Technician**
Environmental engineering technicians perform indoor and outdoor environmental quality work.

Environmental engineering technicians typically have an associate’s degree in environmental engineering technology or a related field.

**Education**

Prospective engineering technicians should take as many high school science and math courses as possible to prepare for programs in engineering technology after high school.

Environmental engineering technicians typically have an associate’s degree in environmental engineering technology or a related field. Programs can be found in vocational–technical schools and community colleges. Vocational–technical schools include postsecondary public institutions that serve local students and emphasize training needed by local employers. Community colleges offer programs similar to those in technical institutes but include more theory-based and liberal arts coursework. Associate’s degree programs generally include courses in mathematics, chemistry, solid and hazardous waste, and environmental biology, among others.

[ABET](http://www.abet.org) accredits programs at the associate’s level and above. Some environmental engineering technicians enter the occupation with a bachelor’s degree in a natural science, such as biology or chemistry.

**Important Qualities**

**Critical-thinking skills.** Environmental engineers rely on environmental engineering technicians to help identify problems and their solutions and to implement the engineers’ plans. To do these tasks, technicians must be able to think critically and logically.

**Listening skills.** Environmental engineering technicians must be able to listen carefully to the instructions that engineers give them.

**Observational skills.** Environmental engineering technicians are the eyes and ears of environmental engineers and must assume responsibility for properly evaluating situations onsite. These technicians must be able to recognize problems so that the environmental engineers are informed as quickly as possible.

**Reading skills.** Environmental engineering technicians must be able to read and understand legal and technical documents to ensure that regulatory requirements are being met.

**Advancement**

Environmental engineering technicians usually begin work as trainees in entry-level positions supervised by an [environmental engineer](http://www.bls.gov/ooh/architecture-and-engineering/environmental-engineers.htm) or a more experienced technician. As they gain experience, technicians take on more responsibility and carry out assignments under general supervision. Some eventually become supervisors.

Technicians who have a bachelor’s degree often are able to advance to engineering positions.

**Pay**
The median annual wage for environmental engineering technicians was $45,350 in May 2012. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than $28,680, and the top 10 percent earned more than $76,560.

In May 2012, the median annual wages for environmental engineering technicians in the top five industries in which these technicians worked were as follows:

- Local government, excluding education and hospitals: $53,170
- Engineering services: $44,660
- Waste management and remediation services: $43,100
- Management, scientific, and technical consulting services: $40,280
- Testing laboratories: $36,030

Nearly all environmental engineering technicians work full time and typically have regular hours. However, they must sometimes work irregular hours in order to monitor operations.

**Job Outlook**

The job outlook for environmental engineering technicians is projected to grow 18% from 2012 to 2022, which is much faster than the average for all occupations.
Employment of environmental engineering technicians is projected to grow 18 percent from 2012 to 2022, faster than the average for all occupations. However, because it is a small occupation, the fast growth will result in only about 3,500 new jobs over the 10-year period.

Employment in this occupation is typically tied to projects created by environmental engineers. Over the next ten years, state and local governments are expected to focus their efforts and resources on efficient water use and wastewater treatment, and thus to increase demand for environmental engineering technicians.

The increasing call to clean up contaminated sites, as mandated by Congress and directed by the Environmental Protection Agency, is expected to help sustain demand for environmental engineering technicians’ services. In addition, wastewater treatment is becoming a larger concern in areas of the country where new methods of drilling for shale gas require the use and disposal of large volumes of water. Environmental engineering technicians will continue to be needed to help utilities and water treatment plants comply with new federal or state environmental regulations.

### Employment projections data for Environmental Engineering Technicians, 2012-22

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<tbody>
<tr>
<td>Environmental engineering technicians</td>
<td>17-3025</td>
<td>19,000</td>
<td>22,500</td>
<td>18 percent</td>
<td>3,500</td>
</tr>
</tbody>
</table>


### Similar Occupations

This table shows a list of occupations with job duties that are similar to those of environmental engineering technicians.

<table>
<thead>
<tr>
<th>OCCUPATION</th>
<th>JOB DUTIES</th>
<th>ENTRY-LEVEL EDUCATION</th>
<th>2012 MEDIAN PAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Engineers</td>
<td>Environmental engineers use the principles of engineering, soil science, biology, and chemistry to develop solutions to environmental problems. They are involved in efforts to improve recycling, waste disposal, public health, and water and air pollution control.</td>
<td>Bachelor's degree</td>
<td>$80,890</td>
</tr>
<tr>
<td>Environmental Science and Protection Technicians</td>
<td>Environmental science and protection technicians do laboratory and field tests to monitor the environment and investigate sources of pollution, including those affecting public health. Many work under the supervision of environmental scientists and specialists, who direct the technicians' work and evaluate their results.</td>
<td>Associate's degree</td>
<td>$41,240</td>
</tr>
<tr>
<td>Environmental Scientists and Specialists</td>
<td>Environmental scientists and specialists use their knowledge of the natural sciences to protect the environment and human health. They may clean up polluted areas, advise policy makers, or work with industry to reduce waste.</td>
<td>Bachelor's degree</td>
<td>$63,570</td>
</tr>
<tr>
<td>Hazardous</td>
<td>Hazardous materials (hazmat) removal workers identify and dispose of asbestos,</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Environmental Engineering Technicians  

Materials Removal Workers | radioactive and nuclear waste, arsenic, lead, and other hazardous materials. They also neutralize and clean up materials that are flammable, corrosive, reactive, or toxic. | High school diploma or equivalent | $37,590

Contacts for More Information

For more information about accredited programs, visit

[ABET](http://www.abet.org)

For more information about general engineering education and career resources, visit

[Technology Student Association](http://www.techstudent.org)

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