

Air Conditioning Engineer

DESCRIPTION

Air conditioning engineers install, service and maintain systems and equipment which maintain the quality, temperature and humidity within buildings. The work of an air conditioning and refrigeration engineer may involve: Undertaking preparatory work. Inspecting, testing, certifying and commissioning.



EDUCATION & TRAINING

To become an air-conditioning engineer you need at least a bachelor's degree in engineering. Most air-conditioning engineers have degrees in mechanical or electrical engineering.

WORK ENVIRONMENT

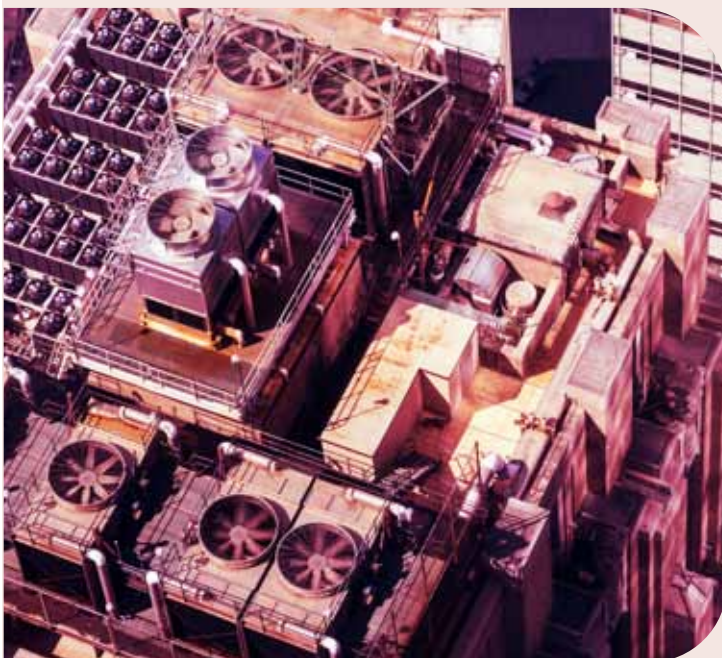
Air-conditioning engineers working in research and development generally spend most of their time in offices and laboratories. They usually work forty hours per week. Engineers working in production usually spend more of their time on production lines or at construction sites.

KEY COMPETENCIES

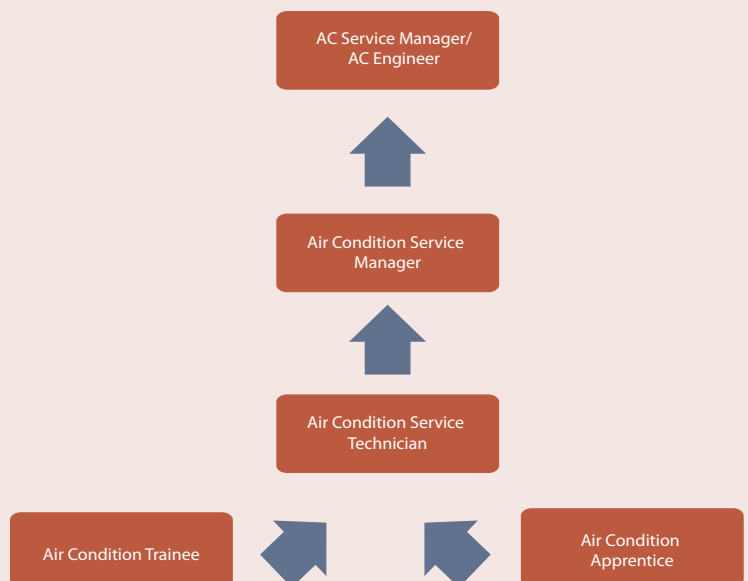
1. Installation and troubleshooting skills for heating and cooling systems.
2. Finding and fixing the source of a problem.
3. Finding or altering replacement parts.
4. Installing individual parts (pumps, pipes, fans, etc.)
5. Using power tools safely.
6. Maintaining air and water treatments in HVAC systems.

JOB OUTLOOK

Air-conditioning engineers are in high demand to build, install, and maintain our constantly evolving systems, and experts predict the demand of HVAC technicians will only rise through 2026.



Air Conditioning Engineer



Career Development Services Unit
Gordon Road, Kingston 6
Tel: 876 994-3278
<https://www.cdjamaica.org/>

Carpenter

Description

Carpenters work with wood to build and repair structures and other items. They calculate quotes, meet with clients and design plans for remodeling projects. They can undertake a range of jobs including installing doors and windows, building furniture, designing and fitting kitchens and rebuilding roofs.



KEY COMPETENCIES

1. Business skills
2. Detail oriented
3. Manual dexterity
4. Math skills
5. Physical stamina
6. Physical strength
7. Problem-solving skills

WORK ENVIRONMENT

Carpenters work indoors and outdoors on many types of construction projects, from installing kitchen cabinets to building highways and bridges. Carpenters may work in cramped spaces and frequently alternate between lifting, standing, and kneeling.

EDUCATION & TRAINING

A high school diploma or equivalent is typically required. High school courses in mathematics, mechanical drawing, and general vocational technical training are considered useful. Some technical schools offer associate's degrees in carpentry.

JOB OUTLOOK

Employment of carpenters is projected to grow 8 percent from 2016 to 2026, about as fast as the average for all occupations. Population growth should result in more new-home construction—the largest segment employing carpenters—which will require many new workers.



Carpentry

Independent Contractor

Construction Supervisor

Specialist Carpenter

Carpenter

Carpenter Apprentice



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Electrical Engineer

Description

Electrical engineers design, develop, test, and supervise the manufacture of electrical equipment.



KEY COMPETENCIES

1. Enthusiasm
2. Good technical abilities
3. Innovation
4. Teamworking skills
5. The ability to work well under pressure
6. The motivation to work extra hours when necessary

WORK ENVIRONMENT

Electrical and electronics engineers work in industries including research and development, engineering services, manufacturing, telecommunications, and the federal government. Electrical and electronics engineers generally work indoors in offices. However, they may have to visit sites to observe a problem or a piece of complex equipment.

EDUCATION & TRAINING

Electrical and electronics engineers must have a bachelor's degree. Employers also value practical experience, such as internships or participation in cooperative engineering programs.

JOB OUTLOOK

Overall employment of electrical and electronics engineers is projected to grow 3 percent from 2019 to 2029, about as fast as the average for all occupations. Employment growth is expected to be tempered by slow growth or decline in some industries, such as manufacturing and utilities.



Electrical Engineer

Electrical Engineer

Electrical Inspector

Electrical Line Installers
Repairers
and Cable Joiners

Electrician

Electrical
Trainee/Apprentice

Electrical Assistant



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Hyperbaric Welder

Description

Underwater welders are responsible for repairing pipelines, offshore oil drilling rigs, ships, dams, locks, sub-sea habitats and nuclear power facilities, to name a few.



KEY COMPETENCIES

1. Underwater cutting
2. Fitting and rigging
3. Inspection and nondestructive testing
4. Drafting
5. Underwater photography

WORK ENVIRONMENT

Although we normally picture underwater welding being done while fully submerged in water, most of it is done in dry habitats. Dry welding makes use of a dry chamber or habitat (hyperbaric chamber) where water is replaced by a mixture of gas so one or multiple welders can do the job in dry conditions

JOB OUTLOOK

Underwater welders are almost always in demand. Aging infrastructure, new infrastructure, and increasing offshore drilling projects continue to drive the need for skilled, experienced underwater welders – both inland and offshore.

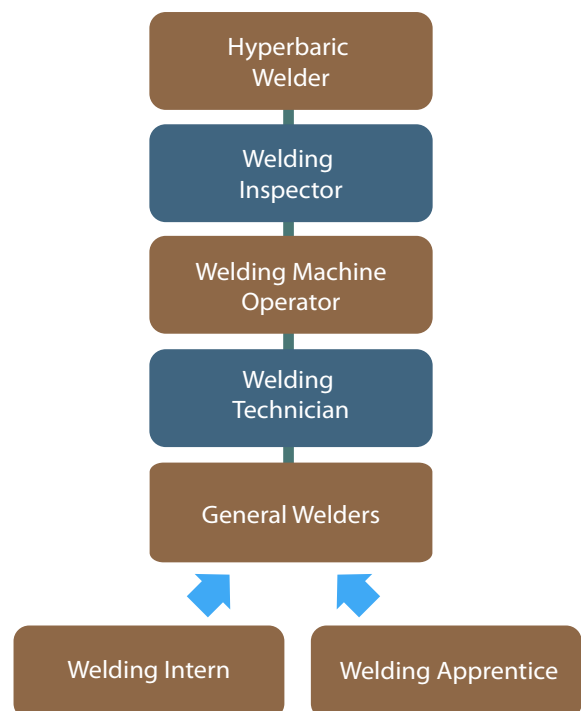
While job outlooks for welders in general remains steady between four and six percent, underwater welding is a different story. Underwater welders, because they are so uniquely skilled and there are comparatively so few of them, have much higher job growth over the next ten years.

EDUCATION & TRAINING

Get certified in welding and commercial diving



Hyperbaric Welder



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Crane Operator

DESCRIPTION

As a Crane Operator, your duties may include the following: Operating cranes to lift, move or place equipment and materials. Inspecting cranes and calculating capacities. ... Performing routine crane maintenance such as cleaning and lubricating.



EDUCATION & TRAINING

Crane operators need a high school diploma or its equivalent to gain the required certification.

A one- or two-year course teaches students practical construction skills and how to operate heavy machinery, including cranes.

WORK ENVIRONMENT

Crane operators may work outdoors, on construction sites, docks for example, or indoors, in factories, and warehouses.

These workplaces are often noisy, as crane operators are usually surrounded by heavy machinery, including their own crane, but earplugs can minimize the impact.

KEY COMPETENCES

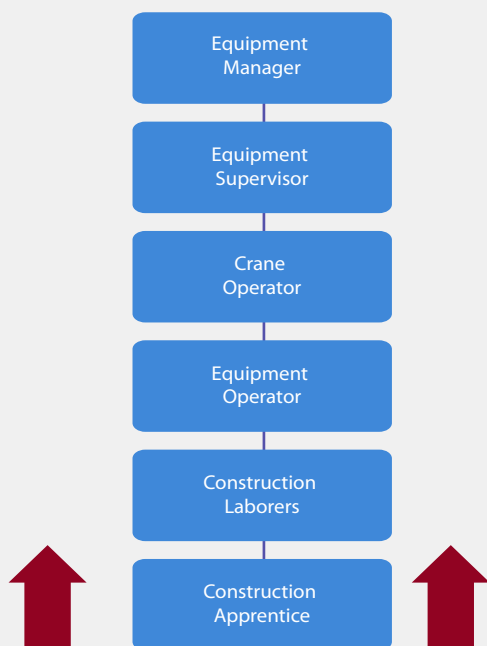
1. Operate heavy equipment including crane, forklift, skid loader and on-site vehicles.
2. Follow all safety protocols and standards.
3. Log inspections and maintain log files.
4. Regularly inspect assigned equipment and perform maintenance as needed.

JOB OUTLOOK

According to the Bureau of Labor Statistics, Crane Operator jobs are expected to grow 8% from 2014 to 2024.

This is slightly above the national average for the universal job market, but well above the national average for highly skilled jobs.

Crane Operator



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Elevator Installer

Description

Elevator installers and repairers, also called elevator constructors or elevator mechanics, assemble, install, maintain, and replace elevators, escalators, chairlifts, moving walkways, and similar equipment in buildings. Elevator installers and repairers usually specialize in installation, maintenance, or repair work.



KEY COMPETENCIES

1. Detail oriented
2. Mechanical skills
3. Physical stamina
4. Physical strength
5. Troubleshooting skills

WORK ENVIRONMENT

Elevator and escalator installers and repairers often work in cramped areas inside crawl spaces and machine rooms, and they may work at significant heights in elevator shafts. Most elevator and escalator installers and repairers work full time. Repairers may be on call 24 hours a day or may need to work overtime.

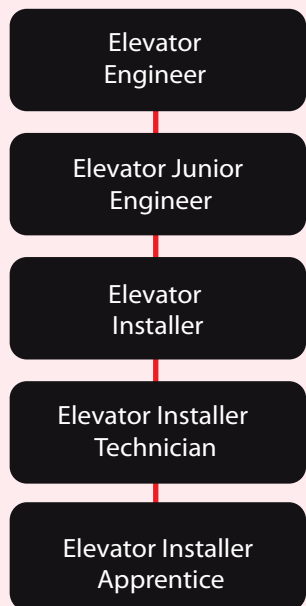
EDUCATION & TRAINING

Elevator and escalator installers and repairers typically need a high school diploma or equivalent. Nearly all learn how to do the work through an apprenticeship. Most workers are required to be licensed.

JOB OUTLOOK

Employment of elevator and escalator installers and repairers is projected to grow 7 percent from 2019 to 2029, faster than the average for all occupations. New installation and maintenance of elevators and escalators in stores and residential and commercial buildings is expected to spur demand for workers.

Elevator Installer



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