

ABOUT THIS OCCUPATION

In engineering and manufacturing, quality control and quality engineering are used in developing systems to ensure products or services are designed and produced to meet or exceed customer requirements. These systems are often developed in conjunction with other business and engineering disciplines using a cross-functional approach. (Source from http://en.wikipedia.org/wiki/Quality_control).

Quality engineer: Designs, installs, and evaluates quality assurance process sampling systems, procedures, and statistical techniques; designs or specifies inspection and testing mechanisms and equipment; analyzes production and service limitations and standards; recommends revision of specifications when indicated; formulates or helps formulate quality assurance policies and procedures. May conduct training on quality assurance concepts and tools. Interfaces with all other engineering components within the organization and with customers and suppliers on quality related issues. (Source from <http://www.asq.org/career/job-definitions.html>)

When a product is released to the public, it has usually been tested exhaustively and inspected individually to make sure it is safe and reliable. Customers take for granted the amount of work it takes to get products into stores and the amount of importance placed on customer trust and reliance. Companies and manufacturers know what it means to have a good reputation among consumers and employ quality control and safety experts to ensure only the best products make it off of the manufacturing floor to be sold in stores. Without quality control, contaminated food and medicine bottles, faulty electronics, and unsafe vehicles would make it to stores and businesses. (Source from http://education-portal.com/quality_engineering_programs.html)

A quality engineer at a company can fulfill different roles, from monitoring day-to-day factory floor activities to training operators, to being the liaison to customers and suppliers.

Monitoring Product Quality: Quality engineers define what methods and equipment will be used to measure key quality characteristics of a process, from call center wait times to weld integrity. Quality technicians operate machines and collect data.

Continuous Improvement Activities: Quality engineers also work to improve the quality of the process, using data collected from the operations and applying problem-solving techniques.

Training: Training the production staff in updated work instructions and procedures falls into the purview of the quality engineer as the conduit from management to operations.

Customers and Suppliers: Any customer complaints about the quality of the final product filter go to quality engineers, who allocate resources based on the problem's source. This includes working with product engineering, and sales and purchasing, as well as going to parts suppliers.

(Source from http://www.ehow.com/facts_5230400_job-description-quality-engineer.html)

EDUCATION, EXPERIENCE, SKILLS

The minimum Expectations of a Quality Engineer from the ASQ website listed the following minimum expectations and requirements for the quality engineering certification.

Will have a fundamental understanding of quality philosophies, principles, systems, methods, tools, standards, organizational and team dynamics, customer expectations and satisfaction, supplier relations and performance, leadership, training, interpersonal relationships, improvement systems and professional ethics.

Will have a fundamental understanding of a quality system and its development, documentation and implementation to domestic and international standards or requirements.

Will have a basic understanding of the audit process including types of audits, planning, preparation, execution, reporting results and follow-up.

Will be able to develop and implement quality programs, including tracking, analyzing, reporting and problem solving.

Will be able to plan, control and assure product and process quality in accordance with quality principles, which include planning processes, material control, acceptance sampling and measurement systems.

Will have basic knowledge of reliability, maintainability, and risk management, including key terms and definitions, modeling, systems design, assessment tools and reporting.

Will have a thorough understanding of problem-solving and quality improvement tools and techniques. This includes knowledge of management and planning tools, quality tools, preventive and corrective actions, and how to overcome barriers to quality improvements.

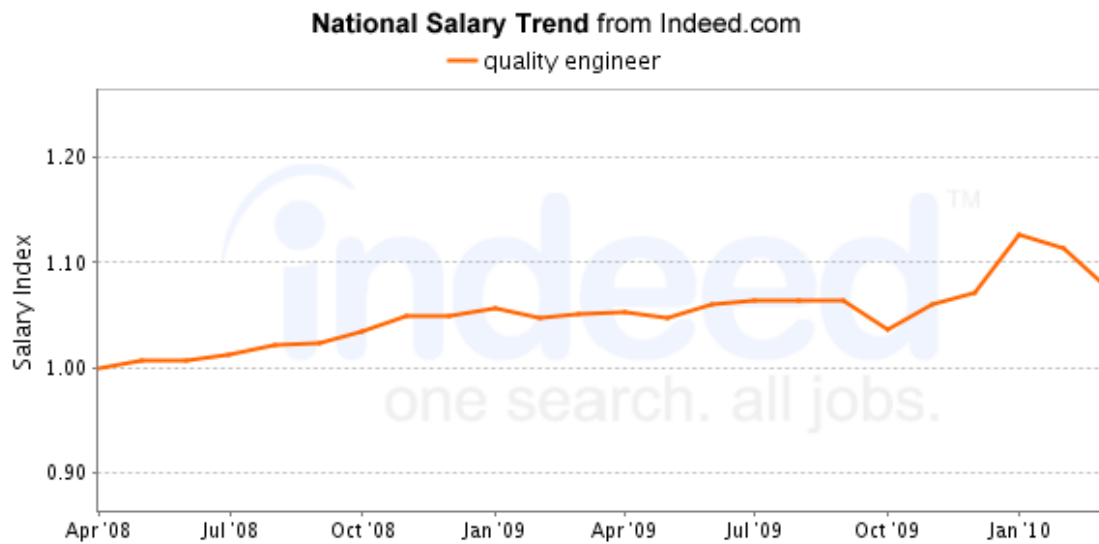
Will be able to acquire and analyze data using appropriate standard quantitative methods across a spectrum of business environments to facilitate process analysis and improvements.

CERTIFICATION

An education and training in the field of quality control and safety widely varies depending on the complexity of the job. A high school diploma can be sufficient to work in quality control product testing or to perform other simple tasks. To participate in more complex areas, an employee will need to be trained to use special meters, gauges, computers, certain quality-control techniques, and learn to read blueprints. Some training programs at postsecondary institutes provide this type of training, but according to the Bureau of Labor Statistics, www.bls.gov, most employers prefer to train their workers on the job. (Source from http://education-portal.com/quality_engineering_programs.html)

Many quality professionals find satisfaction in becoming certified to one of the many professional certificate programs offered by the American Society for Quality. Not only does ASQ certification offer personal satisfaction, but it also provides for increased income and promotion possibilities and increases the odds of employment. There's good reason why so many people get ASQ certification. According to the latest ASQ salary survey, those with certificates earn considerably more than those without. (Source from <http://www.qualitydigest.com/dec01/html/cert.html>)

SALARIES AND TRENDS



<http://www.indeed.com/salary?q1=quality+engineer&l1=&tm=1>

For other good sites to explore about the quality engineering occupation, visit:

<http://online.onetcenter.org/link/summary/19-4099.01>

<http://www.qualitydigest.com/>

<http://www.asq.org>

<http://www.asq.org/career/job-definitions.html>