

QUALITY ENGINEER

ALSO KNOWN AS:

QUALITY ASSURANCE ENGINEER

QUALITY CONTROL SPECIALIST

QUALITY SYSTEMS ENGINEER

PRODUCT QUALITY MANAGER

PERFECTION IS NOT JUST A GOAL, IT'S A PROCESS.

Quality Engineers are the guardians of excellence, ensuring that products and services meet the highest standards of performance, safety, and reliability.

KEY SKILLS

Skills which may benefit anyone considering a job as a quality engineer include:

- ✔ Documentation
- ✔ Process optimisation
- ✔ Regulatory compliance
- ✔ Root cause analysis
- ✔ Statistical Analysis

CAREER PROGRESSION

In this role, you may have the opportunity to progress to other positions. Career progression opportunities include:

- Chief Executive Officer
- Supply Chain Manager
- Chief Operating Officer
- Chief Engineering Officer

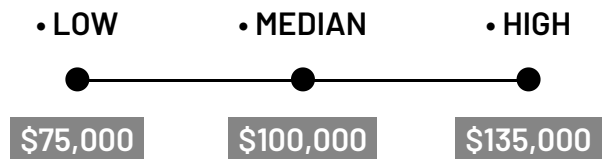
VALUES & ATTRIBUTES

Values and attributes of anyone considering a job as a quality engineer include:

- ✔ Precision
- ✔ Integrity
- ✔ Proactive
- ✔ Continuous learning
- ✔ Team Player
- ✔ Investigative – “Thinker”

SALARY EXPECTATION

The expected salary for Quality Engineer can vary across different areas of manufacturing and may vary as you become more experienced.



RELATED INDUSTRIES

- ▶ Aerospace and Defence ▶ Chemicals, Hydrocarbons and Refining ▶ Food and Beverage ▶ Furniture and Other Products
- ▶ General Manufacturing and Engineering ▶ Meat and Seafood Processing ▶ Pharmaceutical and Medical Technology
- ▶ Polymers, Plastic and Rubber ▶ Printing and Graphic arts ▶ Pulp, Paper and Packaging ▶ Renewables ▶ Textiles, Clothing and Footwear
- ▶ Timber and Wood ▶ Transport Equipment and Machinery

RECOMMENDED SCHOOL SUBJECTS

- Biology • Chemistry • Engineering Skills • Mathematical Methods • Physics • Specialist Mathematics

CORE SCHOOL SUBJECTS

- General Mathematics • Essential English • Engineering

JOB OVERVIEW

Quality Engineers play a crucial role in various manufacturing industries, from medical technology to transport and equipment, from food and beverage to aerospace. They are responsible for developing, implementing, and maintaining quality management systems that ensure products and services meet or exceed customer expectations and regulatory requirements.

In their daily work, Quality Engineers might be found on the production floor conducting inspections, in meetings collaborating with cross-functional teams, or at their desks analysing data and preparing reports. They use a variety of tools and techniques, including statistical process control, Six Sigma methodologies, and quality management software.

The role of a Quality Engineer requires a unique combination of technical knowledge, analytical skills, and interpersonal abilities. They must have a deep understanding of production processes, quality standards, and regulatory requirements, as well as the ability to communicate effectively with both technical and non-technical stakeholders.

WHAT WILL YOU DO?

Your role may include duties as follows:

1. Develop and implement quality assurance policies and procedures
2. Conduct audits and inspections to ensure compliance with quality standards
3. Analyse data to identify trends and opportunities for improvement
4. Investigate product or process failures and implement corrective actions
5. Train staff on quality management principles and techniques

HOW TO BECOME A QUALITY ENGINEER

Becoming a Quality Engineer typically requires a bachelor's degree in engineering or a related field, although some positions may accept candidates with significant relevant experience. Here are the steps to become a Quality Engineer:

1. Earn a bachelor's degree in engineering, quality assurance, or a related field
2. Gain practical experience through internships or entry-level positions in quality control
3. Research potential employers, look online for advertised jobs. Even if a job isn't advertised consider sending a resume and letter to an employer to show interest.
4. Develop expertise in quality management systems and methodologies like Six Sigma
5. Stay updated with industry standards and regulations through continuous learning

VOCATIONAL EDUCATION & TRAINING

While many Quality Engineer positions require a university degree, there are vocational education and training options that can provide valuable skills and knowledge for those entering the field or looking to enhance their capabilities in quality management.

Relevant qualifications include:

- Certificate IV in Competitive Systems and Practices (MSS40322)
- Diploma of Applied Technologies (MEM50822)
- Diploma of Engineering – Materials (MEM50522)
- Diploma of Competitive Systems and Practices (MSS50322)
- Diploma of Quality Auditing (BSB51615)
- Advanced Diploma of Engineering (MEM60122)
- Graduate Diploma of Engineering (MEM80122)

UNIVERSITY & HIGHER EDUCATION

A university degree is often required for Quality Engineer positions, particularly in technical industries. Most employers prefer candidates with a bachelor's degree in engineering, quality assurance, or a related field. These programs provide a strong foundation in mathematics, statistics, and engineering principles, along with specialised courses in quality management systems and methodologies.

For those looking to advance their careers or specialise in specific areas of quality management, postgraduate degrees such as a Master of Engineering (Quality Systems) or a Master of Business Administration with a focus on quality management can be beneficial. These advanced programs often involve in-depth study of quality philosophies, advanced statistical techniques, and leadership skills, preparing graduates for senior roles in quality management or organisational leadership.