Certification Requirements

Is this the right certification for you?

Here are the minimum expectations, requirements, experience and exam specifics for a Software Quality Engineer. If you already know that this is the certification you want to pursue, move on to exam preparation.

Minimum Expectations of a Software Quality Engineer - 2008

- Must possess a fundamental understanding of quality philosophies, principles, methods, tools, standards, organizational and team dynamics, interpersonal relationships, professional ethics, and legal and regulatory requirements.
- Must evaluate the impact of software quality management principles on business objectives and demonstrate comprehensive knowledge of developing and implementing software quality programs, which include tracking, analyzing, reporting, problem resolution, process improvement, training, and supplier management. Must have a basic understanding of how and when to perform software audits including audit planning, approaches, types, analyses, reporting results and follow-up.
- Must understand systems architecture and be able to implement software development and maintenance processes, quantify the fundamental problems and risks associated with various software development methodologies, and assess, support, and implement process and technology changes.
- Must be able to apply project management principles and techniques as they relate to software project planning, implementation and tracking. Must be able to evaluate and manage risk.
- Must select, define and apply product and process metrics and analytical techniques, and have an understanding of measurement theory and how to communicate results.
- Must have a thorough understanding of verification and validation processes, including early software defect detection and removal, inspection, and testing methods (e.g., types, levels, strategies, tools and documentation). Must be able to analyze test strategies, develop test plans and execution documents, and review customer deliverables.
- Must have a basic understanding of configuration management processes, including planning, configuration identification, configuration control, change management, status accounting, auditing and reporting. Must assess the effectiveness of product release and archival processes.

Education and/or Experience

You must have eight years of on-the-job experience in one or more of the areas of the Certified Software Quality Engineer Body of Knowledge. A minimum of three years of this experience must be in a decision-making position. ("Decision-making" is defined as the authority to define, execute, or control projects/processes and to be responsible for the outcome. This may or may not include management or supervisory positions.)

If you've ever been certified by ASQ as a Quality Engineer, Quality Auditor, Reliability Engineer, or Quality Manager, experience used to qualify for certification in these fields applies to certification as a Software Quality Engineer.

If you have completed a degree* from a college, university or technical school with accreditation accepted by ASQ, part of the eight-year experience requirement will be waived, as follows (only one of these waivers may be claimed):

- Diploma from a technical or trade school–one year will be waived.
- Associate degree–two years waived.
- Bachelor's degree–four years waived.
- Master's or doctorate–five years waived.

*Degrees or diplomas from educational institutions outside the United States must be equivalent to degrees from U.S. educational institutions.

Examination

Each certification candidate is required to pass a written examination that consists of multiple choice questions that measure comprehension of the Body of Knowledge. The Software Quality Engineer examination is a one-part, 160-question, four-hour exam and is offered in English only.

Examinations are conducted twice a year, in June and December, by local ASQ sections and international organizations. All examinations are open-book. Each participant must bring his or her own reference materials. Use of reference materials and calculators is explained in the seating letter provided to applicants.

Please Note: The Body of Knowledge for certification is affected by new technologies, policies and the changing dynamics of manufacturing and service industries. Changed versions of the examination based on the current Body of Knowledge are used at each

offering.