

Are You Certifiable?

A quality manager's guide
to ASQ certification

by Scott M. Paton

Quality professionals have a thankless job. They are expected to possess in-depth knowledge of a variety of both complex quality issues and general business skills. In addition, although they are often the first to receive complaints when products fail, they seldom get praise when everything goes according to plan.

However, 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.

ASQ began its certification program in 1968 when it realized that there weren't many ways to recognize quality professionals. "There wasn't a college program or degree program," says Sally Harthun, ASQ's quality certification program manager. "ASQ began looking into the program in 1966 when we wanted to find a way to really acknowledge that people had achieved a certain level of proficiency in quality."

The certification program began with the Certified Quality Engineer and has since grown to include more than 10 different professional certifications, from Certified Quality Auditor to Six Sigma Black Belt. More than 85,000 people have earned ASQ certification, and about 18,000 people go through various ASQ certification programs every year.

Show me the money

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. "For example, the average salary for quality engineers without certification is \$52,600, and it's just under \$60,000 for those who are Certified

Quality Engineers," explains Harthun. "The largest difference is with reliability engineers. Without ASQ certification, the average salary is \$59,500, and with certification it's \$82,500."

Where to begin?

Because the ASQ strives to maintain the quality of its various certification programs, the road to certification is not easy. In order to gain certification, candidates must pass an exam, and all of the exams require some level of pre-exam work experience. "Before you are allowed to sit for an exam, you have to have a certain level of experience in your field," Harthun reports. "For example, with the Six Sigma Black Belt certificate, we require at least one affidavit outlining your Six Sigma Black Belt project plus three years of work experience."

The first step in your certification quest should be to contact ASQ and obtain a brochure for the certificate that you're interested in obtaining. The brochures are available to download from ASQ's Web site at www.asq.org. They outline the body of knowledge needed to pass the exam. There are also numerous resources available to help candidates prepare for the exam. "We suggest that they purchase or borrow the reference books in each brochure's list of references to help them prepare," Harthun advises. "There are also section refresher courses that almost all of our local chapters and local sections have. Also, many companies have study groups for their employees who are interested in taking the exams."

Basic requirements

Many of the ASQ certificates have *similar* requirements. The key word here is "similar." Be sure to carefully read the requirements in the appropriate brochure *before* preparing for the exam. The basic requirements for most of the certificates follow.

In order to sit for the exam, candidates

must have a minimum number of years (usually eight) of on-the-job experience in one or more of the areas of the particular certificate's body of knowledge. A minimum number of years of this experience (usually three years) must be in a decision-making position, which ASQ defines as "the authority to define, execute or control projects/processes and to be responsible for the outcome."

However, if you are now (or were previously) certified by ASQ in a related certification program, the experience used to qualify for that certification also applies to other certifications.

In addition, if you have completed a degree from a college, university or technical school with accreditation accepted by ASQ, part of the 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

All candidates for certification must demonstrate "proof of professionalism" to ASQ. This can be done in one of three ways:

- Membership in ASQ, an international affiliate society of ASQ, or another society that is a member of the American Association of Engineering Societies or the Accreditation Board for Engineering and Technology
- Registration as a Professional Engineer
- The signatures of two people—ASQ members, members of an international affiliate society or members of another recognized professional society—verifying that you are a qualified practitioner of the quality sciences

Certification candidates are required to pass a written exam that consists of mul-

Message from GMP Labeling

We hope this newsletter includes information that you can use. Our goal is to periodically publish articles, written by quality professionals, that are timely and informative to the companies in our marketplace. Of course, along the way, we also hope to reinforce our image as a valuable resource to our customers.

Businesses regulated by the FDA and/or are ISO 9000 registered will find GMP Labeling products helpful in maintaining compliance. More than 5000 facilities in the U.S., Canada and Europe use GMP Labeling products on a daily basis.

multiple-choice questions (some certificate exams also include essay questions) that measure comprehension of the certificate's body of knowledge. Exams are offered only in English. Sample questions are included in study guides available from ASQ.

ASQ holds exams throughout the year at meeting places of ASQ sections and international organizations. Each exam usually occurs twice each year. All examinations are open-book. Each participant must bring his or her own reference materials. ASQ will send a seating letter to applicants that explains the use of reference materials and calculators.

Of course, in order to prepare for the exam, you need to know which certificate to pursue. *Quality Digest* has compiled a brief overview of each ASQ certificate. Remember that this is just a starting point. Be sure to contact ASQ for more information.

Certified Quality Engineer

This certification is designed for those who understand the principles of product and service quality evaluation and control. Candidates must have a minimum of eight years of on-the-job experience in one or more of the areas of the Certified Quality Engineer body of knowledge. A minimum of three years of this experience must be in a decision-making position.

As outlined in the body of knowledge for the CQE exam, candidates are expected to have in-depth knowledge of management and leadership in quality engineering; quality systems development, implementation and verification; planning, controlling and assuring product and process quality; reliability and risk management; problem solving and quality improvements and quantitative methods.

Each certification candidate is required to pass a written examination consisting of multiple-choice questions that measure comprehension of the certificate's body of knowledge. The CQE examination is a one-part, 160-question,

five-hour test. ASQ holds exams in June and December.

Certified Six Sigma Black Belt

Six Sigma Black Belt certification is designed for those who have a comprehensive understanding of Six Sigma and its methodologies. ASQ requires applicants to complete two projects with signed affidavits or one completed project with signed affidavit and three years of work experience within the Six Sigma Black Belt body of knowledge. Applicants can download the affidavit form from the certification section of ASQ's Web site.

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As outlined in the body of knowledge for the Six Sigma Black Belt exam, candidates are expected to have in-depth knowledge of enterprisewide deployment; business process management; project management; Six Sigma improvement methodology and tools, which cover the entire define, measure, analyze, improve and control cycle; lean enterprise; and design for Six Sigma. ASQ holds exams in March and October.

Certified Quality Auditor

This certification is designed for those who understand the standards and principles of auditing and the auditing techniques of examining, questioning, evaluating and reporting to determine quality systems adequacy.

In order to sit for the exam, candidates must have a minimum of eight years of on-the-job experience in one or more of the areas of the Certified Quality Auditor body of knowledge. A minimum of three years of this experience must be in a decision-making position.

As outlined in the body of knowledge

for the CQA exam, candidates are expected to have in-depth knowledge of ethics, professional conduct and liability issues; audit preparation; audit performance; audit reporting; corrective action follow-up and closure; audit program management; and general knowledge and skills.

Each certification candidate is required to pass a written examination that consists of multiple-choice questions designed to measure comprehension of the certificate's body of knowledge. The CQA examination is a one-part, 150-question, four-hour test. ASQ holds exams in June and December.

Certified Quality Auditor—Biomedical

This is the newest ASQ certification. It is specifically designed for auditors who work in the biomedical field. In order to sit for the exam, you must be an ASQ Certified Quality Auditor and have two years of experience working with quality audits in the biomedical technology areas. This two-year requirement can be part of the eight-year requirement used for the CQA exam.

The body of knowledge for the CQA—Biomedical certification covers medical devices (including in vitro diagnostics and biologics regulated as medical devices) and focuses on the understanding of national and international concepts and principles of biomedical quality auditing (including related regulations, directives, standards and guidance).

Each certification candidate is required to pass a written examination that consists of multiple-choice questions measuring comprehension of the certificate's body of knowledge. The CQA—Biomedical examination is a one-part, 100-question, four-hour test. Sample examination questions are currently being developed by ASQ and will be available in July 2002. ASQ holds exams in March and October.

Certified Quality Auditor—HACCP

Like the CQA—Biomedical certification, the CQ—HACCP program is an add-on to

the Quality Auditor certificate. It is specifically designed for those who are involved in hazard analysis and critical control point auditing. In order to sit for the exam, you must be an ASQ Certified Quality Auditor and have two years of experience auditing to the HACCP standards. This two-year requirement can be part of the eight-year requirement used for the CQA exam.

As outlined in the body of knowledge for the CQA exam, candidates are expected to have in-depth knowledge of HACCP, prerequisite programs, HACCP plan development, and implementation and maintenance of HACCP systems.

Each certification candidate must pass a written examination that consists of multiple-choice questions that measure comprehension of the certificate's body of knowledge. The CQA–HACCP examination is a one-part, 100-question, four-hour test. ASQ holds exams in March and October.

Certified Reliability Engineer

This certification is designed for those who understand the principles of performance evaluation and prediction to improve product/systems safety, reliability and maintainability.

In order to sit for the exam, candidates must have a minimum of eight years of on-the-job experience in one or more of the areas of the CRE body of knowledge. A minimum of three years of this experience must be in a decision-making position.

As outlined in the body of knowledge for the CRE exam, candidates are expected to have in-depth knowledge of reliability management, probability and statistical tools, modeling and prediction, data collection and analysis and corrective action, reliability tools in design and development, maintainability and availability, reliability testing, and product safety and liability.

Each certification candidate is required to pass a written examination that consists of multiple-choice questions that measure comprehension of the certificate's body of knowledge. The CRE examination is a one-part, 150-question, four-hour test. ASQ holds exams in March and October.

Certified Quality Technician

This certificate is designed for those who can analyze quality problems, prepare inspection plans and instruction, select sampling plan applications and apply fundamental statistical methods for process control.

In order to sit for the exam, candi-

dates must have at least four years of higher education and/or work experience in one or more of the areas of the Certified Quality Technician body of knowledge.

As outlined in the body of knowledge for the CQT exam, candidates are expected to have in-depth knowledge of quality concepts and tools, statistical techniques, metrology and calibration, inspection and test, quality audits, and preventive and corrective action.

Each certification candidate is required to pass a written examination of multiple-choice questions that measure comprehension of the certificate's body of knowledge. The CQT examination is a one-part, 100-question, four-hour test. ASQ holds exams in March and October.

Certified Mechanical Inspector

This certificate is designed for those who, under professional direction, can

**To prepare
for the exam,
you need to know
which certificate
to pursue**

evaluate hardware documentation, perform laboratory procedures, inspect products, measure process performance, record data and prepare formal reports.

In order to sit for the exam, candidates must have two years of on-the-job experience in mechanical inspection or a related field and a high-school diploma or GED. If the applicant does not have a high school diploma or GED, an additional three years of related on-the-job experience is required.

As outlined in the body of knowledge for the CMI exam, candidates are expected to have in-depth knowledge of technical mathematics, inspection and test, measurement tools, statistical techniques, and quality improvement.

Each certification candidate is required to pass a written examination that consists of multiple-choice questions measuring comprehension of the certificate's body of knowledge. The CMI examination is a one-part, 100-question, four-hour test. ASQ holds exams in March and October.

Certified Quality Manager

This certification is designed for those who understand quality principles and

standards in relation to organization and human resource management.

In order to sit for the exam, candidates must have a minimum of 10 years of on-the-job or educational experience in one or more of the areas of the Certified Quality Manager body of knowledge. A minimum of five years of this experience must be in a decision-making position.

As outlined in the body of knowledge for the Certified Quality Manager exam, candidates are expected to have in-depth knowledge of leadership, strategy development and deployment, quality management tools, customer-focused organizations, supplier performance, management, and training and development.

Each certification candidate is required to pass a written examination of 150 multiple-choice and two essay questions that measure comprehension of the certificate's body of knowledge. The Certified Quality Manager examination is a two-part, four-hour test. ASQ holds exams in March and October.

Certified Software Quality Engineer

This certification is designed for those who have a comprehensive understanding of software quality development and implementation; have a thorough understanding of software inspection and testing, verification, and validation; and can implement software development and maintenance processes and methods.

In order to sit for the exam, candidates must have a minimum of eight years of on-the-job experience in one or more of the areas of the Certified Software Quality Engineer body of knowledge, which has recently been updated for the June 2002 exam. A minimum of three years of this experience must be in a decision-making position.

As outlined in the body of knowledge for the CSQE exam, candidates are expected to have in-depth knowledge of conduct and ethics; software quality management; software processes; software project management; software metrics, measurement and analytical methods; software inspection, testing, verification and validation; software audits; and software configuration management.

Each certification candidate is required to pass a written examination consisting of multiple-choice questions that measure comprehension of the certificate's body of knowledge. The CSQE examination is a one-part, 160-question,

four-hour test. ASQ holds exams in June and December.

Certified Quality Improvement Associate

This certificate is designed to assess basic knowledge of quality tools and their uses by individuals who are involved in quality improvement projects, but do not necessarily come from traditional quality areas.

In order to sit for the exam, candidates must have two years of work experience or an associate degree.

As outlined in the body of knowledge for the CQIA exam, candidates are expected to have in-depth knowledge of quality basics, teams and continuous improvement.

Each certification candidate is required to pass a written examination that consists of multiple-choice questions

that measure comprehension of the certificate's body of knowledge. The CQIA examination is a one-part, 100-question, three-hour test. ASQ holds exams in June and December.

In order to ensure a successful journey to certification, do your homework.

Study, study, study!

This overview of the various ASQ certification programs is just that, an over-

view. Each of the certificates has its own unique requirements, qualifications and body of knowledge. In order to ensure a successful journey to certification, do your homework. Visit ASQ's Web site and carefully review the requirements, sample questions, body of knowledge and suggested reference lists. Good luck!

About the author

Scott M. Paton is Quality Digest's editor in chief and publisher. E-mail him at: spaton@qualitydigest.com.

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