

## CERTIFIED MANAGER of SOFTWARE QUALITY



*The Certified Manager of Software Quality (CMSQ) certification establishes a worldwide standard for the assessment of the capabilities and competencies of software quality assurance professionals that are working at, or soon will work at, the software quality assurance management level.*

*Acquiring the designation of Certified Manager of Software Quality (CMSQ) indicates a level of professional competence in both the principles and practices of software quality assurance, demonstrating the skills and capabilities necessary to manage the software quality assurance function. CMSQ certification provides IT upper management a necessary tool to predict the likelihood of success of individuals applying for management level positions. The CMSQ certification provides the IT professional with an objective assessment of their management skills.*

**Program History** The QAI Global Institute, formerly QAI Worldwide, was established in 1980 as a professional association formed to represent the software quality assurance industry. The first certification began development in 1985 and the first formal examination process was launched in 1990. Today, Software Certifications, administered by QAI Global Institute, has a multinational reach. Since its inception, Software Certifications has certified over 35,000 IT professionals in 43 countries on 6 of the 7 continents in the world.

### **Objectives and Benefits of Certification**

The Certified Manager of Software Quality program is intended to establish standards for management qualification and continuing improvement of professional competence. This certification program helps to:

1. Define the tasks (skill categories) associated with managing software quality duties in order to evaluate skill mastery.
2. Demonstrate an individual's willingness to improve professionally.
3. Acknowledge attainment of an acceptable standard of management competency.
4. Aid organizations in selecting qualified managers.
5. Motivate managers having software quality responsibility to maintain their professional competency.
6. Assist individuals in improving and enhancing their organization's software quality programs.

### **Mission Statement**

*To support the needs of information technology quality assurance managers by providing certification of their supervisory and leadership skills as advanced level professionals within their respective disciplines.*

### **Code of Ethics**

A distinguishing mark of a profession is the acceptance of responsibility by its members to the interests of those it serves. Those certified must maintain high standards of conduct in order to effectively discharge their responsibility.

The CMSQ candidate must continue to adhere to the Software Certifications Code of Ethics agreed to as part of the CMSQ certification. Software Certifications includes processes and procedures for monitoring certificant adherence to these policies. Failure to adhere to the requirements of the Code is grounds for decertification of the individual by the Software Certifications Board.



# SOFTWARE CERTIFICATIONS

## Prerequisites

A Certification of Candidacy Application must be completed on-line for entrance into the manager's certification program. To qualify for candidacy, individuals must:

- Currently hold an active CSQA Certification
- Be working in the field covered by the certification designation
- Have the experience (described under the Real World Experience heading) to demonstrate mastery of the skills identified in the current Software Quality Assurance Common Body of Knowledge
- Be prepared to submit documentation that supports your real-world experience in the software quality assurance field (described under the Real World Experience heading)
- Be prepared to take the required manager's level examination
- Meet one of the following three prerequisites:
  1. A bachelor's degree from an accredited college-level institution plus a minimum of four years experience in the software quality assurance field, or
  2. An associate degree plus a minimum of six years of experience in the software quality assurance field, or
  3. Eight years of experience in the software quality assurance field.

The application process requires the applicant to provide details supporting one of the above three prerequisites. All information provided is subject to further verification if selected for audit according to Software Certifications audit sampling plan. *Fees in this program are nonrefundable and nontransferable.* Do not apply unless you feel confident that your work activities and experiences have prepared you to submit the required "real-world" experience documentation and to sit for the examination.

## Certification Candidacy/Application Process

Individuals applying for the CMSQ Certification Candidacy must submit:

1. A completed on-line Certification Candidacy Application via the Customer Portal on the Software Certifications web site: [www.softwarecertifications.org](http://www.softwarecertifications.org)
2. A \$600 (USD) non-refundable, non-transferable fee (payable by check or credit card).

**Application Fee:**  
**\$600.00 USD**

A completed Certification Candidacy Application must be submitted via the Customer Portal on the Software Certifications web site for entrance as a candidate for any particular certification. This application should only be submitted by individuals who:

- Are working, or have worked at any time within the prior 18 months, in the field covered by the certification designation
- Have significant experience and breadth of knowledge to have mastered the entire Software Quality Assurance Common Body of Knowledge
- Have reviewed the Software Quality Assurance Common Body of Knowledge

## Examination

In 2008, Software Certifications selected Prometric, a world leader in assessment testing services, as its partner for the administration of certification examinations. Prometric's international network of testing centers provides the framework needed to support Software Certifications' global needs. This partnering will allow candidates to easily schedule their exam via the Internet and take it at a Prometric Testing Center in or outside of the United States. However, some global locations will remain paper-based (Sponsored Exams) and delivered on a quarterly basis – please refer to the Software Certifications web site for specific location details.

**NOTE: All candidates must first register to take the certification examination through the Software Certifications Customer Portal ([www.softwarecertifications.org](http://www.softwarecertifications.org)). Once registered, those in the areas serviced by Prometric will, after a mandatory 72 hour waiting period, receive a Prometric Exam Code. Only then can candidates schedule their exam with Prometric. Candidates can not schedule their exam at Prometric without first registering with Software Certifications.**

Candidates for certification must pass a four-part constructed response examination in order to obtain certification. The examination tests the candidate's "practical" knowledge in the following four areas:

1. Quality Leadership
2. The Quality Assurance Function
3. Quality Planning and Execution
4. Communications and Relationships

Candidates who do not successfully pass the examination may re-sit for the examination by submitting the retake application and paying all required fees.

# Real-World Experience Documentation



Once the Certification Candidacy Application has been submitted and the candidate has been accepted into the CMSQ program, they must demonstrate that they have developed real solutions to challenges in their IT organizations. This must be done for three (3) categories selected from the six (6) categories listed below:

1. Quality Planning
2. Define, deploy and improve work processes
3. Measurement
4. Organizational Development (teams and management)
5. Communication (leadership and behavioral skills)
6. Risk Management

The documentation for each of the three categories must be submitted to the Software Certifications division and must include the following:

- Problem – What was the problem?
  - a. Provide a statement of the problem explaining in detail how the problem was affecting your organization
  - b. Define any terms used
  - c. Include any organizational “standards” that would be followed to develop the solution
  - d. Include the metrics relevant to the problem prior to your deployment of the solution
- Approach – What was the proposed solution?
  - a. Describe input, process, output (DO process)
  - b. Describe QC process (CHECK process)
  - c. How is success measured
  - d. How does this approach align to business objectives
  - e. Include interim deliverables:
    - i. requirements documentation
    - ii. detailed plans or design documents
    - iii. include any “action plan” that was used
    - iv. status reports
  - f. If you did any research into possible solutions, provide a list of the research material and/or methods you used to research possible solutions
- Development – How was the solution developed?
  - a. What process did you follow to develop the solution
  - b. If the costs of the development of the solution were tracked, include the cost breakdown
  - c. What quality control mechanisms were in place during the development of the solution to insure the solution was tested against the requirements
  - d. Include a copy of documentation of the process solution
- Deployment – How was the solution deployed?
  - a. Include documentation describing the transitional process from the current process to the new solution
  - b. What type of training (on the new process/solution delivered to personnel who would be using the new solution) was provided
  - c. What type of monitoring was performed to assure the new solution was used correctly
- Results – What were the results of the implementation of the solution?
  - a. Describe the improvements realized as a result of the new process/solution
  - b. Provide any metrics that compare pre-implementation with post implementation
  - c. Include any ROI post-implementation documents

The “acceptance criteria checklist” used by the evaluation team includes all the items listed above. If a candidate decides that one of these items is not applicable for their “experience” documentation, an explanation of why that item is not applicable must be included with the submitted documentation. If the documentation in a category or categories is found to be insufficient to meet the acceptance criteria, a candidate will be given feedback on the deficiencies and allowed one opportunity to resubmit corrected documentation.

*For a more detailed explanation of each category, visit the Software Certifications web site at [www.softwarecertifications.org](http://www.softwarecertifications.org).*



## Recertification

The Software Certifications Board strives to maintain the highest degree of integrity within Software Certifications. To maintain this integrity, a certificant must maintain a current knowledge base of principles, practices, and technical knowledge as the information technology industry advances and technologies become obsolete. By requiring that the certificant maintain and increase their level of competency through various avenues of education and activity, the board is assured that the certification standards of integrity are being met and the value of the certification designation is being maintained.

To maintain the CMSQ certification, it is a requirement that the certified manager continue to mature their technical and managerial competencies. Certified managers must earn 30 CPE (continuing professional education) points in each of the following four categories every three years (120 CPE total in three years):

- Management Skills (30 CPE / 3 years)
- Technical Skills (30 CPE / 3 years)
- Professional Development Activities in the Industry (30 CPE / 3 years)
- Additional activities in selected categories (30 CPE / 3 years)

The CSQA certification remains active as long as the CMSQ certification is maintained.

## Frequently Asked Questions

### What is the fee for certification?

The initial fee for CMSQ certification is \$600 USD. This includes the application processing fee, administration fee, and your initial sitting fee. The fee also includes a downloadable version of the Software Quality Assurance Common Body of Knowledge via the Customer Portal on the Software Certifications web site. If you sit for the exam the first time within twelve months of applying and do not receive passing marks, there is an additional fee of \$100 USD for each retake exam (limit two).

### What is the exam format?

The four hour exam is made up of four sections. All four parts are composed of constructed response (essay) questions. There is a ten-minute break between each part of the examination.

### How do I study for the exam?

There is no specific outline of study curriculum established by Software Certifications. Candidates are responsible for their own study and preparation. The QAI Global Institute as administrator of Software Certifications, does not infer that attending specific courses or programs will significantly enhance the candidate's chances of passing the examination. Bibliographic references are included in the Software Quality Assurance Common Body of Knowledge description for information purposes, however, candidates are expected to know and pursue other resources.

Professional certification is a significant undertaking. Sufficient time and energy should be allocated by the candidate toward preparation. Most of the needed preparation involves reviewing and brushing up on the various skill categories in the certification's respective Common Body of Knowledge. If candidates have extensive experience in managing the software quality assurance practice described in the skill categories of the Common Body of Knowledge, the examination should not be difficult. Candidates should avoid last minute cramming, as it is rarely beneficial in the long term.

## Other Certifications

Certified Associate in Software Quality (CASQ)  
Certified Software Quality Analyst (CSQA)  
Certified Associate in Software Testing (CAST)  
Certified Software Tester (CSTE)  
Certified Manager of Software Testing (CMST)  
Certified Software Business Analyst (CSBA)  
Certified Software Project Manager (CSPM)  
Certified Software Process Engineer (CSPE)  
Certified Quantitative Software Process  
Engineer (CQSPE)

*Please visit:*

*[www.softwarecertifications.org](http://www.softwarecertifications.org)  
for more information regarding other certifications.*

## Software Certifications

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