Requirements for Quality Engineering Personnel

- Quality Engineering Professional (QEP)

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EOQ CS QEP 2022

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Preface

The European Organization for Quality EOQ, established 1956, is an association under Belgian law of organizations: National Representatives (European, non-profit quality organizations) and Associated Members, Affiliated Members and Partners worldwide.

The major goal of EOQ is to promote quality in the widest sense.

EOQ National Representatives (Full Member Organizations) are:
AEC (Spain), **AFQP** (France), **APQ** (Portugal), **ARC** (Romania), **CQI** (UK), **CSQ** (Czech Republic), **CYAQ** (Cyprus), **DGQ** (Germany), **EAQ** (Estonia), **HNC** (Hungary), **KOQIM** (Kazakhstan), **Quality Kosova** (Kosovo), **Finish Association for Quality** (Finland), **QRN** (Norway), **NNK** (Netherlands), **QA** (Austria), **RFATRM** (Russia), **SAQ** (Switzerland), **SFK** (Sweden), **SRMEK** (Serbia), **SSK** (Slovakia), **SZKO** (Slovenia), **TSE** (Turkey), **VCK** (Belgium)

The EOQ Competence Center has maintained a Harmonized Personnel Registration Scheme since the 80-ies of the last century. Parts of this scheme were and are competence requirements for quality professionals but also for professionals from other fields like environmental management, including also the requirements for the personnel certification process.

The competence requirements of the recently used EOQ Personnel Certification Scheme for Quality Engineering Professional (QEP) have been established as a publicly available normative document EOQ CoS QEP:2022, published in June 2022.

The adequate requirements for the personnel certification process have been merged in the EOQ CS QEP and have been noted by the EOQ General assembly the at their meetings of 24.06.2022.

This document has been developed under consideration of EOQ internal rules, including the needs of interested parties and has been noted by the EOQ General Assembly and endorsed by the EOQ-Competence Center on 10.05.2022.

All EOQ documents are published in English. EOQ members have the right to translate them into their own language as the valid national version in the respective country.

Queries regarding technical content can be addressed to the EOQ Technical Working Group. Please direct your queries to: eoq@eoq.org

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1 Introduction

The certification of Quality Management Personnel has a long tradition in Europe and worldwide. Recently a demand for a harmonized training and certification based on requirements concerning competent personnel related to functions in design and quality has emerged.

In Europe the EOQ developed harmonized schemes for Quality Management personnel with broad acceptance.

In the meantime, several different approaches and competence-profiles have been developed by many organizations. For personnel certification bodies and national accreditation bodies using ISO/IEC 17024 there is a need for common European criteria as a basis for accreditation and certification of persons.

These EOQ certification schemes have been developed by experts of the national agents of EOQ and can be used in accreditation processes of personnel certification bodies. These schemes have been developed on order of and issued by majority vote through the EOQ Competence Center, as the responsible scheme committee on XXX.

This edition of CS QEP was developed to fulfil the needs of the market and the interested parties regarding the competence of quality engineering personnel.

To comply with certification scheme requirements of ISO/IEC 17024:2012 and 17007:2021 the content for the certification scheme was divided into two parts:

- CS QE defines the requirements concerning the certification process.
- Corresponding CoS QE defines the knowledge and competence requirements.

2 Scope of certification

The scope of these certification schemes is to define the specific certification requirements for

- Quality Engineering Professional (QEP) within the countries with member organizations of EOQ and/or countries with certification bodies for persons accredited by accreditation bodies being member of EA MLA and/or recognized by IAF.

3 Terms and definitions

- **Assessment**:
  process that evaluates a person's fulfilment of the requirements of the **certification scheme for persons**, leading to a decision on certification
- **Candidate**: applicant who has fulfilled specified prerequisites and has been admitted to the **certification process**
- **Certification**:
  third-party attestation related to products, processes, systems or persons
- **Competence Specification**:
  (normative) document defining competence criteria for personnel
- **Certification scheme for persons:**
  competence and other requirements related to specific occupational or skilled categories of persons
- **Certification process**:
  all activities by which a certification body establishes that a person fulfils certification requirements, including application, examination, decision on certification, recertification and use of certificates and logos/marks

- **Competence:**

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ability to apply knowledge and skills to achieve intended results

- **Multiple Choice Questions (MC)**: kind of written exam in which the candidate is asked to select the best possible answer out of the choices from a group of predetermined choices. 1 of 4 type means: of 4 predetermined choices 1 choice is correct and 3 are false.
- **Qualification**: demonstrated education, training and work experience where applicable
- **Oral examination**: Includes oral, practical and workplace type of examination.

3.1 References

Applicable documents:

(1) The ISO 9000 family of International Standards
(2) ISO 19011
(3) ISO/IEC 17024
(4) ISO/IEC 17007:2021
(5) Set of EOQ Personnel Registration Unit documents, specific to this scheme.
(6) IEC 60300
(7) IEC 60812
(8) ISO 2859

All Documents in their valid version.

4 Requirements related to certification bodies

A certification body issuing certificates based on this certification scheme shall fulfil the requirements of ISO/IEC 17024.

5 Criteria and prerequisites for the initial certification

As prerequisites for the initial certification the certification body shall require objective evidence that the person applying for certification fulfils the *basic requirements related to the profile* as specified in the corresponding competence specification (CoS). It is the responsibility of each personnel certification body to identify the appropriate reference levels within the respective national qualification and training context.

The prerequisites cover:

Education

General Work Experience

Workplace-specific Experience

Formal training

Auditing Experience (if applicable)

Code of professional conduct

6 Training Programmes

The national EOQ CC Agent (personnel certification body) is responsible for the validation of training programmes based on the knowledge and skills specification in the corresponding CoS and the requirements defined in EOQ24 "EOQ methods and criteria for approval of training courses and training providers". Candidates shall provide sufficient documentation

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on the content, duration, and positive completion of relevant training programmes to the personnel certification body. Applicant's earlier training courses within the area of quality management and quality engineering may be taken into consideration by the certification body when deciding the necessary number of hours of vocational training.

7 Certification process for initial certification

7.1 Requirements for the initial certification

The certification requirements consist of prerequisites as defined in chapter 5 and specific examinations according to section 7.2.

Additionally, the candidate shall sign a Code of Professional Conduct as specified in section 9, **Annex A: EOQ PRU Code of Professional Conduct**.

7.2 Examination requirements and procedures

7.2.1 Basic conditions for the examination

An examination shall be composed of written part and optionally in addition of an oral part as appropriate for assessing the specific competence requirements. The examination shall be designed to comply with PRU 14: EOQ Harmonized Examination System – Framework.

The examination shall be consistent with the requirements of the CoS by each personnel certification body, specifying the components of the examination. The design of the examination shall ensure the comparability of results of each single examination, including the validity of fail/pass scores set by the PCB. The pass score shall be set to a minimum of **60%**.

The results of each part of the examination, if more than one, shall be evaluated separately. The examination is considered as passed, when the pass score of each component of the examination has been achieved. Candidates failing any part of an examination can repeat this part of the examination without limitations.

An evaluation system shall be implemented which defines the evaluation criteria for each part of the examination.

For oral and written examination tasks the examiners shall be provided with:

- advice for possible correct solutions for each task and
- a marking/scoring scheme according to the evaluation criteria as tool for the evaluation of the candidate.

7.2.2 Requirements for examination questions

Each certification body shall keep a collection of examination questions/ case studies/ scenarios for each part (written and oral) of the examination. The structure and content of the collection shall be referenced to the knowledge and skills as defined in the corresponding CoS.

For written exams based on multiple choice questions, the questions shall be clustered. For each type of examination, the certification body shall define how many questions shall be selected out of each cluster. Cluster requirements specified in the following sections for specific examinations are mandatory.
For each written exam the threefold number of questions as selected for an examination shall be available. Questions shall be chosen such as to ensure independence of single examinations.

Examination questions shall be evaluated for validity and adequacy at least every second year.

7.2.3 Requirements for examiners

Examiners and personnel involved in certification decisions shall fulfil the competence requirements defined in "EOQ23 EOQ guideline for nomination of examiners and persons involved in the certification decision".

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7.2.4 Quality Engineering Professional (QEP) Examination

Candidates shall pass a written or written and in addition an oral examination as per the personnel certification body decision. The examination shall be designed to comply with PRU 14: EOQ Harmonized Examination System – Framework. The minimum sum of ERP for the written examination or both written and oral examination shall be **160**.

Written exam

The written examination shall comprise one or more question types as described in PRU 14. When multiple choice questions are used, most of the questions shall be selected according to the following topics clusters; additional questions can be selected from the COS QE topics that are not mentioned in the table.

Nr. in CoS	**Clusters of Topics** related to the task description and related knowledge and skills in EOQ CoS **QE**	**Weighting in %**
a	Quality movement history, understanding modern quality philosophies, approach, quality control and quality assurance up to total quality management and leadership	10
b c d	Apply quality engineering (QE) Rules, Methods and Tools. Analyse quality-related data arising from monitoring and measurement Recognize and understand the conformity, effectiveness, efficiency, and sustainability of the quality management system	25
e f	Process adherence and performance (e.g., time aspects, defect rates, etc.) Conformity of products and services to requirements and expectations	20
g	Improvement opportunities and methodologies	10
h	Apply quantitative methods and tools	10
i	Address risks and opportunities	15
j k	Be an internal QE service provider/consultant for all levels of the company Be able to act as internal trainer/instructor for QE topics and tools relevant to company Quality System	10

Oral exam (optional, if used)

The type of oral exam shall be selected from PRU 14: EOQ Harmonized Examination System – Framework. The evaluation in the oral examination shall comprise the candidate's personal behaviour, the ability to solve a typical job-related task correctly and sufficient and to present the result in a convincing manner.

7.3 Certification decisions

7.3.1 Decision making process

The decision about certification follows the rules defined above. The decision about certification is made when evidence concerning all requirements is provided.

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7.3.2 Certificate duration

Each certificate for Quality Engineering Professional (QEP) is valid for a defined period of three years. The validity date is specified on the certificate and follows the date of the certification decision. A new certificate is issued after re-certification process has been positively completed. Certificate text and use of EOQ logo and mark is specified in "EOQ25 - EOQ contract frame for PCBs and Training organizations".

7.3.3 Criteria for suspending and withdrawing of EOQ certification

The certification body shall define and communicate the procedure for the suspension and withdrawal of certification. Suspension or withdrawal shall be considered for the following cases:

- Certified persons fail to comply with the re-certification criteria
- Persons perform not-competent professional work in the area of their certification
- The person does not comply with the code of conduct
- The client has voluntarily requested a suspension
- An inadmissible use of the certificate and/or those of the accreditation body are not corrected
- Invoices are not paid even after appropriate reminders

The Certification Body shall investigate such occurrences and take the appropriate action.

8 Surveillance and Re-Certification

Considering the three years re-certification period surveillance activities are not necessary.

EOQ Quality Engineering Professionals shall provide evidence of maintaining their competence periodically by recertification. Certification and recertification period is three years. The main target of recertification is to provide evidence that the candidates have maintained their competence.

8.1 Quality Engineering Professional (QEP) Re-Certification

The competence of a Quality Engineering Professional (QEP) shall be reconfirmed using at least two of the below described re-certification methods:

1) Professional development by task-specific/related training of at least one day a year which may include a knowledge evaluation (covering e.g. new developments on standards and/or relevant laws/new methods and instruments) and/or participation at quality related seminars, conferences and workshops.
2) Examination: The examination shall be designed to comply with PRU 14: EOQ Harmonized Examination System – Framework. The minimum sum of ERP for the examination shall be 20.
3) Providing evidence regarding professional practice:
    a. Declaration by the employer or by contractor(s) on at least two full years of work-experience in a function that includes tasks related to the "EOQ Quality Engineering Professional (QEP)" task description in the period of recertification.
    b. Declaration by the certified person that no relevant legal action regarding his person and relating to his work has been filed.

The obtained information regarding professional practice shall be reviewed by the certification body and verified with the employer or contractor using a sampling mechanism based on a risk-based approach.

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Annex A: **EOQ PRU Code of Professional Conduct for EOQ Professionals**

Note:

The certification body shall be required to produce the Code in the local language(s), especially with regard to comprehensibility by the Auditor candidates and also according to the requirements of the various courts of law.

The EOQ further recognizes that adaptations to the source may be necessary when translating into the target languages, due to cultural, social and legal considerations. It may, for example, be abbreviated in accordance with local custom.

Therefore, the following Code in English language shall be considered as a guide to the certification body. The EOQ only requires that the elements of the Code be adopted wherever possible and that no major alterations to its fundamental message or additions are made in the translated versions.

Introduction

This Code and Disciplinary Procedure have been formulated to promote ethically sound professional conduct within all areas of management systems. Whilst its wording does not refer specifically to a certain kind of management system, the topics covered have been carefully selected as those, especially relevant to this professional field. Care has also been taken to avoid weighting it toward any type of industry or any specific professional role, but to be generally applicable to EOQ Professionals who occupy many and widely varied positions in a broad spectrum of sectors and organizations.

As experience is gained in applying the Code to real life situations and as the Auditors raise questions with the EOQ on ethical matters, other areas may warrant elaboration, either in interpretative or elaborative notes or as modifications to the Code itself.

General professionalism

• EOQ Professionals shall apply their professional skill and judgement to the best of their ability at all times, legally and with honesty and integrity, holding the valid interest of parties to whom they are contracted, whether employers, customers or clients, above personal considerations.

• EOQ Professionals shall take all reasonable steps to develop their own professional competence and maintain themselves abreast of current thinking and developments in their professional field.

EOQ Professionals shall lay claim only to such memberships and qualifications which are valid at the time.

Responsibilities to the general public

• EOQ Professionals shall take all reasonable precautions to safeguard the public interest in matters of health, safety and environmental impact.

Responsibilities to the profession

• EOQ Professionals shall act at all times so as to maintain the dignity and reputation of their profession.

• All advertising shall be decent, legal, honest and factual and shall not make comparisons with other professional services.

Responsibilities to clients, customers and employers

• EOQ Professionals shall avoid professional employment or assignments which may give rise to conflict of interest without prior written notification of an agreement by all parties to the potential conflict.

• EOQ Professionals shall not knowingly undertake work for which they do not have sufficient and appropriate competence or authority.

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• EOQ Professionals shall maintain strict confidentiality with regard to information acquired in the course of their professional work, unless disclosure either is with the consent of the employer/client from whom the information was acquired or is required by law.

• EOQ Professionals shall avoid any improper use for their own advantage, or that of a third party, of information acquired in the course of professional work.

• EOQ Professionals shall not take unfair advantage of an employer's or client's lack of knowledge or expertise.

• EOQ Professionals shall at all-time give advice to clients and employers that is professionally objective, relevant and timely, along with any pertinent caveats, reservations or cautionary observations.

• EOQ Professionals shall behave at all times with the utmost financial probity, ensuring that, so far as possible, contracts and financial arrangements are unambiguous and protect the valid interests of all parties concerned.

Responsibilities to subordinates

• EOQ Professionals shall maintain adequate supervision over persons working under their professional authority or supervision and shall encourage them to develop their professional competence.

Responsibilities to fellow Professionals

• EOQ Professionals shall take care not to publish or otherwise communicate unjustified and unreasonable criticism of another member's professional work.

• An EOQ Professional shall not knowingly place a fellow professional in a position in which he or she may unwittingly breach any part of this Code of Professional Conduct.

Declaration

I have read the above EOQ Code of Professional Conduct and hereby declare that I will entirely abide by its clauses:

Place and date .....
Name and signature .....

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