

Module Description, available in: EN

Quality Management Systems

General Information

Number of ECTS Credits

3

Module code

CM_QualMgmtSyst

Valid for academic year

2019-20

Last modification

2018-11-06

Coordinator of the module

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Explanations regarding the language definitions for each location:

- Instruction is given in the language defined below for each location/each time the module is held.
- Documentation is available in the languages defined below. Where documents are in several languages, the percentage distribution is shown (100% = all the documentation).
- The examination is available 100% in the languages shown for each location/each time it is held.

	Berne	Lausanne	Lugano	Zurich
Instruction			X E 100%	
Documentation			X E 100%	
Examination			X E 100%	

Module Category

CM Context module

Lessons

2 lecture periods and 1 tutorial period per week

Entry level competences

Prerequisites, previous knowledge

None

Brief course description of module objectives and content

Companies are always in search for opportunities to continuously improve their operations and enhance their competitive position. The path towards excellence has to be carefully planned and proper tools should be in place. This course is aimed at analyzing the role of a quality management system within this context. Contents range from the analysis of innovative approaches for the management of both process and product quality to the introduction of quantitative techniques supporting the quality management system deployment. Final goal is to provide students with the knowledge needed to introduce a quality system in a company and manage the continuous improvement of operations.

Aims, content, methods

Learning objectives and competencies to be acquired

The quality management is dealt with from different perspectives in the course.

Quality is first analyzed from an historical perspective to make participants understand how the concept has evolved over time and allow them to better appreciate the current relevance of quality in a company. The quality management system organization is analyzed based on main current reference frameworks, namely the standard ISO 9000 and the EFQM model.

The course then moves to the analysis of a set of tools and techniques among the ones introduced by the Six Sigma approach for the management of quality of products and processes. Attention is paid to manage the quality within the production systems, to ensure the design quality, to improve quality of supplies and to manage customers.

At the end of the course, participants will acquire the competence of:

- Identifying and evaluating the quality aspects of an organization
- Designing a holistic continuous improvement plan of a company
- Dealing with the analysis and implementation of quality management systems reference frameworks
- Mastering the use of tools and techniques for the quality management

Module content with weighting of different components

Introduction to the quality management:

- Introduction to quality: definitions and historical evolution
- Structure of a quality management system
- The ISO 9000 standard and the EFQM model
- Introduction to the Six Sigma philosophy

Statistical quality control: tools and technique

- Tools for the design for quality (QFD, FMECA, process reliability, process capability..)
- Tools to manage customers (service quality, customer satisfaction)
- Tools for supplier management (acceptance sampling)

Teaching and learning methods

Theoretical classes, case studies discussion and exercises.

Literature

- John S. Oakland, Total Quality Management and Operational Excellence. Text with cases, Fourth edition, Routledge
- James R. Evans and William M. Lindsay, The Management and Control of Quality, Edited by Thomson South-Western
- Steve Tanner and Mike Bailey, The Business Improvement Handbook. From ISO9001 to World-Class Performance, Fourth edition, BSI
- ISO 9000:2015 Quality management requirements

Assessment

Certification requirements

Module uses certification requirements

Certification requirements for final examinations (conditions for attestation)

Positive evaluation in written examination.

Basic principle for exams

As a rule, all standard final exams are conducted in written form. For resit exams, lecturers will communicate the exam format (written/oral) together with the exam schedule.

Standard final exam for a module and written resit exam

Kind of exam

Written exam

Duration of exam

120 minutes

Permissible aids

Aids permitted as specified below:

Permissible electronic aids

Non-programmable calculators.

Other permissible aids

N/A

Special case: Resit exam as oral exam

Kind of exam

Oral exam

Duration of exam

30 minutes

Permissible aids

Aids permitted as specified below:

Permissible electronic aids

Non-programmable calculators.

Other permissible aids

N/A