

**Modul: Quality Management**

Responsible for module:	Prof. Dr. Kerstin Herrmann
Topic:	Business Administration
Language:	English
ECTS-Credits:	6
Workload:	150 hours  16 hours of lectures (in person, contact hours) 4 hours of video conferences (mandatory) 42 hours of online units and related workings 8 hours of preparation of case studies and tests 80 hours of exam preparation
Term of module:	One semester
Prerequisites:	None
Usability:	Compulsory module
Didactic concept:	In-class units [PE] and online units [OE]
Test format/duration:	Presentation of own examples and written exam (60 min.)
Requirements to obtain credits:	Pass all required assignments
Contribution of module to final grade:	acc. credits 6 of 20 = 30%

**Course description**

The lecture addresses concepts, methods and tools for managing and improving product, service and process quality. Quantitative analysis methods are applied on practical issues. Furthermore, a comprehensive perspective of corporate quality is developed through Total Quality Management. In the context of digitalization, data quality is highlighted to generate quality reports.

**Learning objectives**

Having completed this course, participants should be able to:

- ✓ have a comprehensive knowledge on tools for quality improvement and methods of quality management.
- ✓ apply quantitative analysis methods on practical examples.
- ✓ know the basics on quality management systems with the relevant ISO standards.
- ✓ derive Total Quality Management as a corporate quality perspective.
- ✓ understand the importance of data quality to develop quality reports in the context of digitalization.

**Contributions of this module to the objectives of the program**

Program Intended Learning Outcomes		Course Intended Learning Outcomes	Assessment Methods	
After completion of the program the students will be able...		After completion of the course the students will be able to...	Project Work	Written Exam
			20%	80%
			Choose an element	Choose an element
<b>1 Expert Knowledge</b>				
1.1	...to demonstrate their distinguished and sound competencies in General Business Administration.	... understand the concepts, methods and tools for measuring, planning, controlling and managing product, service and process quality.	x	x
1.2	...to demonstrate their distinguished and sound competencies in Economics.	-		
1.3	...to have command of legal methodology for case solutions on basis of claims.	-		
1.4	...to solve business problems based on profound data research skills and by applying quantitative methods.	... understand the concept of statistical process control (SPC) and are able to calculate practical examples. ... apply Six Sigma to achieve a structured problem solving process in their own business context.	x	x
1.5	...to demonstrate profound expert knowledge in their field of specialization.	... develop total quality management (TQM) as a transition from product quality to corporate quality.		x
<b>2 Digital Skills</b>				
2.1	...to know and understand relevant IT software tools used in business and their features and have a solid understanding of digital technologies.	-		
2.2	...to effectively use and apply information systems to develop solutions in business settings.	... identify quality data to derive KPIs for measuring quality.		x
2.3	...to effectively use digital technologies to interact, to collaborate and to communicate.	... integrate various data sources to conduct quality reports.	x	x
2.4	...to handle the professional use of digital technologies in a responsible manner.	... understand the importance of big data and data quality in the context of digitalization.		x
<b>3 Critical Thinking and Analytical Competence</b>				
3.1	...to implement adequate methods in a competent manner and to apply them to complex problems.	... know how to apply quality management methods to address material and energy efficiency aspects in a company.	x	x
3.2	...to critically reflect and interpret findings and to develop comprehensive solutions for complex problems.	... critical assessment of the application of quality management methods and tools in a practical application (esp. with respect to cost-benefit considerations).	x	x
<b>4 Ethical Awareness</b>				
	...to develop sound strategies in the areas of ethics, sustainable development and social responsibility and are able to apply them to typical economic decision-making problems.	... identification of ethical questions and conflicts when addressing target conflicts in quality management (e.g. quality vs. time vs. costs / company interest vs. supplier interest, company interest vs. customer interest).		x
<b>5 Communication and Collaboration Skills</b>				

5.1	...to express complex issues effectively in writing.	... learn how to communicate with technical experts on quality management and other management issues.		x
5.2	...to demonstrate their oral communication skills in presentations.	... present and defend own solutions	x	
5.3	...to work successfully in a team by performing practical tasks.	... work together in small teams on practical examples in the lecture, present results in the lecture, discuss with students and instructor.		x
<b>6 Internationalization</b>				
6.1	...to understand and explain business challenges in an international context.	-		
6.2	...to articulate themselves in a professional manner in international business.	... know English terminology in the context of quality management and use them confidently.	x	x
6.3	...to successfully demonstrate awareness of cross-cultural differences.	-		

### Test forms

The certificate of achievement is provided by two presentations during the midterm events and a written exam (60 minutes) at the end of the semester. The presentations count for 20% of the overall grade, the written exam for 80%.

### Structure / Content

	Module unit	Didactic concept
1.	Introduction to quality management	PE
2.	Excursus: Presentation techniques	
3.	Problem solving	
4.	Basic tools for quality improvement	OE 1
5.	Methods of quality management	OE 2
6.	Presentation & discussion: Conducting a survey in every student's individual business context	VC
7.	Quality through Lean Management	OE 3
8.	Quality control – Statistical Process Control	OE4
9.	Presentation & discussion: Applying Six Sigma in every student's individual business context	VC
10.	Quality control – Process Capability	OE 5
11.	Quality management systems and standards	OE 6
12.	Total Quality Management	PE
13.	Quality data and reports in the context of digitalization	
PE	In-class unit	OE Online unit
		VC Video conference

### Teaching concept

The module pursues the approach of blended learning. For this purpose, in-class phases and online phases are combined to use the advantages of both methods and to increase the flexibility for the participants. By means of online content, the transfer of knowledge is based on video and text (with the possibility of interaction). The participants can work through the content with their own speed and remain flexible. In addition, the online phases are supplemented by online assignments to apply and deepen the acquired knowledge, as well as getting direct feedback. The in-class phases and the mid-term video conference further allow the application of knowledge and personal interaction with the lecturer and other participants.

**Recommended readings (always latest edition)**

Brüggemann, H.; Bremer, P. (2020) – Grundlagen Qualitätsmanagement - Von den Werkzeugen über Methoden zum TQM. 3. Auflage, Springer Vieweg, Wiesbaden

Herrmann, J.; Fritz, H. (2021) – Qualitätsmanagement – Lehrbuch für Studium und Praxis. 3., aktualisierte und erweiterte Auflage, Hanser Verlag, München

Kamiske, G. F. Hrsg. (2015) – Handbuch QM-Methoden – Die richtige Methode auswählen und erfolgreich umsetzen. 3., aktualisierte und erweiterte Auflage, Hanser Verlag, München

Pfeifer, T.; Schmitt, R. (2021) – Masing Handbuch Qualitätsmanagement. 7., überarbeitete Auflage, Hanser Verlag, München

Seghezzi, H. D.; Fahrni, F.; Friedli, T. (2013) – Integriertes Qualitätsmanagement - Der St.Galler Ansatz. 4., vollständig, überarbeitete Auflage, Hanser Verlag, München

Sower, V. E. (2011) – Essentials of Quality with Cases and Experiential Exercises. Wiley, New York