



ÇANKAYA UNIVERSITY
Faculty of Engineering
Graduate Program in Industrial Engineering

COURSE SYLLABUS

Course Code	: IE 428
Semester	: 2025-2026 Fall
Course Title	: Quality Management Systems
Sections	: 01
Credit	: (3 0 3), 5 ECTS
Type of Course	: Graduate Elective Course
Website	: http://ie428.cankaya.edu.tr/

Instructor

Assist. Prof. Dr. Çiğdem Sıcakyüz
E-mail: csicakyuz@cankaya.edu.tr
Office: L-309

Course Schedule

Mondays 13:20-16:10 (LB-05)

Office Hours

(Will be announced)

Textbook:

Leland Blank, Anthony Tarquin, Engineering Economy, 8th Ed., McGraw-Hill, 2018.

COURSE DESCRIPTION

This course introduces fundamental concepts and paradigms of quality, Total Quality Management, and quality planning, design, improvement, and control. It covers measurement and decision-making tools, quality management systems, and international standards, including ISO 9001, ISO 14001, ISO 45001, ISO 15504, COBIT, and ITIL, with emphasis on practical implementation of quality management systems.

COURSE OBJECTIVES

The main objectives of this course are to provide students with a comprehensive understanding of quality management principles and related concepts. The course aims to introduce international quality management system standards and certifications, emphasize the role of quality engineering methods in achieving organizational excellence, and develop students' capacity to apply systems thinking in addressing quality-related issues and challenges.

COURSE TEXT BOOK

David L. Goetsch, Stanley Davis, Quality Management for Organizational Excellence: Introduction to Total Quality, 8/E, Prentice Hall, 2015, ISBN 9780133791853.

This textbook provides a comprehensive introduction to quality management principles and total quality approaches. It covers foundational concepts, continuous improvement methodologies, strategic quality



planning, and the application of quality tools in organizations. The book serves as the primary reference for lectures, assignments, and case studies throughout the semester.

Reference Books:

1. J.M. Juran and J.A. De Feo Juran's Quality Handbook: The Complete Guide to Performance Excellence (6th Ed), McGraw-Hill, 2010, ISBN: 9780071629737.
2. W.J. Kolarik, Creating Quality: Concepts, Systems, Strategies, and Tools, McGraw-Hill, 1995, ISBN: 9780070352179.
3. Rao, Carr, Dambolena, Kopp, Martin, Rafii, Schlesinger, Total Quality Management: A Cross-Functional Perspective, John Wiley & Sons, Inc., 1996, ISBN: 9780471108047.
4. D. Hoyle, Quality Management Essentials, Elsevier, 2007, ISBN: 9780750667869.
5. International Organization for Standardization, ISO 14001, International Organization for Standardization, 2015.
6. International Organization for Standardization, ISO 45001, International Organization for Standardization, 2017.

TENTATIVE COURSE SCHEDULE

Students should regularly access this page for updates on class announcements, lecture notes, and assignments. Lecture slides may not cover all in-class discussions and problem solutions, so students are encouraged to attend classes and take detailed notes.

Week	Lecture (Topic)
1	Introduction to Quality
2	Quality Concepts and Quality Paradigms (Deming, Juran, Crosby)
3	Total Quality Management (Productivity Approaches)
4	Quality by Planning (Strategic Management, Strategy Maps)
5	Organizing by Architecture (Systems Thinking, Business Architecture)
6	Quality by Design (Customer Focus, Design Thinking)
7	Quality by Improvement and Control -1
8	(Process Focus, Kaizen, Process Control, Six Sigma, Variation, Capability, Cost of Quality, Loss Function)
9	General Review prior to Midterm & Detailed Presentation of Term Project
10	Quality by Improvement and Control - 2 (Business Process Management)
11	Measuring and Decision Making for Quality -1 (Problem Solving and Decision-Making Tools)
12	Measuring and Decision Making for Quality -2 (Benchmarking, Performance Management)
13	Quality Management Systems (Standardization and Maturity Models, EFQM Excellence Model)
14	Implementing Quality Management Systems (Organizational Change, Excellence, Learning and Transformation)



COURSE WEB PAGE:

A course web page will be available at <https://webonline.cankaya.edu.tr>. Students should regularly access this page for updates on class announcements, lecture notes, and assignments. Lecture slides may not cover all in-class discussions and problem solutions, so students are encouraged to attend classes and take detailed notes.

TENTATIVE GRADING (*)

Assessment Tool	Quantity	Percentage
Homework	3	10
Case study	1	30
Midterm Exam	1	25
Final Exam	1	35

POLICY

Classroom Policy:

Students are expected to maintain a professional and respectful environment in class. Disruptive behavior, including the use of mobile devices for non-course-related purposes, will not be tolerated. Participation in discussions and problem-solving exercises is highly encouraged to enhance learning. You are responsible for all announcements made in class and on the class web page, as well as printing the lecture notes and other cited materials from the class web page and other sources.

Honesty Policy:

Academic integrity is expected of students of Çankaya University at all times, whether in the presence or absence of the faculty. All students should declare their understanding and belief in the Honor Code for the examinations and assignments. This statement is a reminder to uphold your obligation as a student and to be honest in all work submitted and exams taken in this course and all others.

If you conduct any dishonest act during an examination or for the completion of an assignment (i.e., cheating on an exam, using any extra material that you are not allowed to use during an exam, copying material off of someone else's homework or assignment, using solution keys from previous years, copying material from published and electronic sources without paraphrasing and/or citing appropriately), you will get a credit of zero on that particular exam or assignment. Necessary disciplinary action, as dictated by the rules of the University, will also be taken.

Make-up Policy:

A make-up examination for the midterm or final exam will only be given under exceptional circumstances (such as serious health problems). The student must contact the instructor as early as possible and provide proper documentation (e.g., a medical report certified by Çankaya University's Health Center).

**Attendance:**

Attendance will be recorded through in-class signature sheets. Students are expected to attend **at least 50% of the lecture hours** during the semester. If this minimum requirement is not met, students may receive the letter grade **NA (Not Attended)**, which means the course cannot be successfully completed.

While the official minimum is 50%, regular attendance is highly recommended. Because the topics build on each other, missing classes can make it harder to follow new material. Attending all lectures will help students better understand the subject, perform well in exams and assignments, and actively benefit from class discussions.

Conditions that Lead to an "NA" Grade:

Any of the following may lead to receiving the letter grade NA (Not Attended):

- If a student fails to attend at least 50% of the lectures,
- If a student fails to take the midterm exam or the final exam without valid documentation, they will receive the letter grade NA.

If a student achieves a grade of **DD** or **higher** after completing all exams, assignments, and projects but has less than the required attendance, they may still pass the course conditionally, depending on their overall GPA, as per university regulations.

Changes to the Syllabus:

The instructor reserves the right to make changes to the syllabus as necessary. Any changes will be announced on the course website.