



ÇANKAYA UNIVERSITY
Faculty of Engineering
Graduate Program in Industrial Engineering

COURSE SYLLABUS

Course Code	: IE 428
Semester	: 2026-2027 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
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Course Schedule

Wednesday 12:20-14:10 (LB-05), Friday 12:20-13:10 (LB-05)

Office Hours

Thursday 09:20-10:10 (L-319)

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	General Review prior to Midterm & Detailed Presentation of Term Project(Case study)
8	Quality by Improvement and Control -1 (Process Focus, Kaizen, Process Control, Six Sigma, Variation, Capability, Cost of Quality, Loss Function)
9	Quality by Improvement and Control - 2 (Business Process Management)
10	Measuring and Decision Making for Quality -1 (Problem Solving and Decision-Making Tools)
11	Measuring and Decision Making for Quality -2 (Benchmarking, Performance Management)
12	Quality Management Systems (Standardization and Maturity Models, EFQM Excellence Model)
13	ISO 9001 Quality Management System's Key Concepts and requirements and basics of related standards i.e., ISO14001, ISO45001, ISO 15504, COBIT, ITIL
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
Term Project (Case study)	1	30
Midterm Exam	1	25
Final Exam	1	35

*Subject to change

POLICY

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). A make-up exam might contain different types of questions than the regular exam.

Attendance Requirement and Examination Policy

Attendance will be recorded manually at the start of each class session. Students are required to sign the attendance sheet to confirm their presence. Failure to sign the sheet will result in the student being marked absent for that session.

By the decision of the University Senate, a **minimum 60% attendance** is **mandatory** for the course.

In accordance with Article 24 of the Çankaya University Associate and Undergraduate Education and Examination Regulations, the following rules apply:

(4) For courses with a final examination, the examination procedure is as follows:

c) Students who fail to meet the attendance requirement are **not permitted to take the final exam**. If such a student takes the exam, the exam will be considered invalid.

(9) Medical reports and make-up examinations:

d) Days covered by **medical reports** are **counted** as **absences**.

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 **60%** of the lectures, they will not be allowed to take the final exam and will receive a grade of **NA**.
- If a student fails to take the **midterm exam** or the **final exam** without valid documentation, they will receive the letter grade **NA**.



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.

Audio or video recording, or taking photographs, during class is not permitted without the instructor's explicit permission.

Unauthorized recording or sharing of any class content, including lectures, slides, discussions, or images of the instructor or students, is strictly prohibited due to privacy and data protection considerations.

Any violation of this policy may result in the recording being deleted and the activity being treated as misconduct.

Use of Artificial Intelligence (AI) Tools

During exams, the use of electronic devices (mobile phones, tablets, smartwatches, or any internet-enabled devices) is strictly prohibited. Therefore, the use of AI tools is automatically not permitted during examinations.

For homework, the term project (case study), and any written or oral submission, limited use of AI tools is permitted only for support purposes such as brainstorming, language editing, or literature/source search. AI tools must not be used to generate the analysis, arguments, conclusions, or final written/oral content of the case study report or presentation. Any AI assistance must be clearly disclosed in a short statement at the end of the submission, specifying which tool was used and for what purpose.

Any AI assistance must be clearly disclosed. Undisclosed or excessive AI-generated work will be treated as academic dishonesty.

If unauthorized AI use is detected, the assignment or project will be considered invalid, receive a **grade of zero**, and may be subject to disciplinary action.

Honesty Policy

Academic integrity is expected of students of Cankaya 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 of your obligation as a student to uphold honesty 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 required by the University's rules, will also be taken.

Honor Code Agreement and Submission

All students must acknowledge and agree to the course rules and academic integrity policy by submitting a signed Honor Code form.

Students are required to:



1. Handwrite the Honor Code statement
2. Sign it using a blue-ink pen
3. Upload the file to WebOnline by the end of the Add-Drop week

Failure to submit the signed form may result in being considered non-compliant with course requirements.

Students involved in any dishonest act will receive a grade of zero for the relevant exam or assignment

Naming of Honor Code file: IE428_HonorCodeStatement_NameSurname_StudentID_2026F

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.