



ÇANKAYA UNIVERSITY
Department of Industrial Engineering

IE 101– Industrial Engineering Orientation

Spring 2025

Instructor

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Course Schedule

Friday 15:15- 17:15 (AMFI-2)

Office Hours

(Will be announced)

Textbook:

Textbook. There is no specific textbook for this course. There is no specific textbook for this course. Lectures are based on a variety of external materials, reference books, and supplementary reading materials.

Additional Resources:

1. **Turner, W.C., Mize, J.H., Case, K.E., & Nazemetz, J.W.** (1993). *Introduction to Industrial & Systems Engineering* (3rd ed.). Prentice Hall. ISBN: 978-0134817897.
2. **Taylor, J.R.** (1996). *An Introduction to Error Analysis* (2nd ed.). University Science Books. ISBN: 978-0935702750.
3. **Salvendy, G.** (2007). *Handbook of Industrial Engineering* (2nd ed.). John Wiley & Sons, Inc. ISBN: 978-0470172339.
4. **Zandin, K.** (2001). *Maynard's Handbook of Industrial Engineering* (5th ed.). McGraw-Hill. ISBN: 978-0070411029.
5. **Gass, S.I., & Assad, A.A.** (2006). *An Annotated Timeline of Operations Research*. Springer-Verlag US. ISBN: 978-1402081163.
6. **Harris Jr., C.E., Pritchard, M.S., Rabins, M.J., James, R.W., & Englehardt, E.E.** (2019). *Engineering Ethics: Concepts and Cases* (6th ed.). Cengage Learning. ISBN: 978-1337554503.

Course Description:

This course introduces the fundamental concepts and scope of industrial engineering. It covers the history, methodologies, and applications of industrial engineering in solving real-world problems. Additionally, it provides insights into university life, academic expectations, and institutional rules and regulations to enhance student engagement and facilitate adaptation to the academic environment.

Course Objectives:

This course is designed to establish an overall and coherent view of industrial engineering concepts in relation to engineering profession in general and the industrial engineering curriculum.

Course Learning Outcomes:

Upon successful completion of this course, students will have developed:

- ✓ an awareness of basic concepts in engineering and industrial engineering discipline,
- ✓ an understanding of the academic and university life, rules, and regulations.
- ✓ aware of ethical issues.

Tentative Course Topics:

A tentative outline of the topics is provided below. Please note that the instructors reserve the right to make changes to the topics and schedule as necessary:

Week	Topic	Description
1	A Brief History of Engineering and Industrial Engineering	Overview of engineering evolution and the origins of industrial engineering.
2	Introduction to Çankaya University's Department of Industrial Engineering	Familiarization with the department's programs, resources, and faculty.
3	University Life, Academic Requirements, and Expectations	Academic integrity, study habits, and strategies for success at university.
4	Written and Oral Communication	Key skills for professional and academic communication.
5	Software Usage in Communication and Calculation	Introduction to essential tools such as Microsoft Office.
6	Preparing for Professional Work Life as an Industrial Engineer	Career planning, job opportunities, and networking strategies.
7	Ethical Conduct, Rules, and Regulations	Principles of engineering ethics and adherence to institutional policies.
8	Introduction to Error Analysis, Dimensions, and Units	Understanding measurement systems, accuracy, and precision in engineering.
9	Introduction to Work Study and Ergonomics	Fundamentals of work analysis and designing for human well-being.
10	Deterministic Models in Operations Research	Basic optimization models and applications in decision-making.
11	Risk, Uncertainty, and Data Analysis	Tools and techniques to analyze risks and interpret data effectively.
12	Simulation Models	Introduction to simulation techniques for system analysis and improvement.
13	Supply Chains and Logistics	Basics of supply chain management and logistics in industrial systems.
14	Production Planning and Scheduling	Principles and methods for efficient production management.

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.

Grading:

Midterm and final exams will be held according to the university policies. Please follow the university web page for any update/change on how exams will be held.

<i>Method</i>	<i>Number</i>	<i>Contribution (%)</i>
Midterm	1	35%
Final Exam	1	40%
Assignments	2	25%

Details:

Assignments and Quizzes:

Assignments are designed to assess students' understanding of key industrial engineering principles. This component will contribute 25% of the total course grade. The assignment score will include **homework (%10) and one quiz (15%)**.

Teamwork is essential for the homework, and students will be responsible for collaborating on problem-solving and report writing.

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 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 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 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.

Students are required to attend **at least 70% of the lecture hours** to be eligible to take the final exam. Failure to meet this requirement will result in the letter grade **NA (Not Attended)**, meaning the student will not be allowed to take the final exam and will not receive a passing grade for the course.

Although the minimum requirement is 70% attendance, students are strongly encouraged to attend all classes to fully understand the material and perform well in class activities and quizzes.

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 **70%** 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**.

If a student achieves a grade of **DD** or higher after completing all exams, and assignments 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.