ÇANKAYA UNIVERSITY
Faculty of Engineering
Department of Industrial Engineering
Eskişehir Yolu 29. km., Ankara, Turkey
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COURSE SYLLABUS

Course Code	**IE 505**	Semester	**Fall' 2024**
Course Title	**Production Planning and Scheduling**	Groups	01
Pre-requisites	Consent of the Instructor	Type of Course:	Elective
Credit	3	ECTS	7.5

Instructor	Ertan Yakıcı Assoc. Professor	Lecture Hours	Friday 18:00- 18:50 19:00- 19:50 20:00 - 20:50
Office	Dept. of Ind. Eng., Faculty of Engineering Main Campus, Block L, 3rd Floor, Room 329	Classroom	Balgat Campus, A-307
Office Tel	+90 - 312 - 233 13 66	Office Hour	To be announced later; Appointments are also accepted.
E-mail	eyakici@cankaya.edu.tr		

Catalog Data: Analysis of production activities. Aggregate production planning. Lot sizing. Material requirements planning. Line balancing. Scheduling.

Textbook: Parts of the following book and some other references will be used.

- Nahmias, Steven, Production and Operations Analysis, McGraw-Hill Irwin, 2009.

Course Web Site: Course related materials including the lecture notes, term project study and homework assignments, exam evaluation results, and announcements will be uploaded to the webonline site of the course on the link http://webonline.cankaya.edu.tr so that they can be reached at any time.

Lectures: Lectures will be held face-to-face in the classroom. In lectures, the instructor will discuss only selected important concepts and points. To be familiar with the material presented in lectures and participate in class discussions, students are expected to read the material covered in the previous lectures prior to the new class meeting. If the students come prepared, then they will find the lectures more interesting, and will benefit from the discussion.

Lecture Notes: Lecture notes and some extra material will be uploaded to the course webonline site within one day before the lectures to give the chance to the students to take extra notes on the lecture notes.

Assignments: There will be two types of assignments: Homework, and Term Project.

Homework Assignments: In this course, homework assignments play crucial role in ensuring students from understanding of the material that they have learned in lectures. Some details are as follows:

- There will be two homework assignments containing some discussion questions, problems, and computer exercises based on lecture notes.
- Each student should study individually.
- The assignment reports should be as professional in appearance.
- There will be no makeup for the homework assignments.
- It is expected that each student will submit an original report, which reflects only his/her effort. Homework assignments and the Term Project study should be the student's independent work which requires independent thought. If some students work together or one student derives the answer and then share that answer with other students is not an independent work. Likewise, if two students work alone to derive their answers, compare them and find their mistakes, and then correct them together is not an independent work.

Term Project: There will be a term project study, which involves the detail investigation of a problem. Some details are as follows:

- The term project topic will be assigned by the instructor.
- Each student should study individually.
- Each student should prepare a written report on his/her project study in accordance with the technical report writing specifications, and submit it in both electronic and printed format to the instructor.
- Late submissions of homework and term project reports will not be accepted.
- Other details regarding the term project study will be given later.

Exams: There will be one midterm exam and the final exam.

- Both exams will be held in a classroom at Balgat Campus.
- Final exam will be scheduled for a day and time in the designated final exams week.
- In both exams, students may need a hand-calculator.

Computer Usage: Homework assignments and the term project assignment may require the use of

- the computer software package GAMS for solving linear or integer programming models and
- some tools of Microsoft Office such as Word and Excel.

It is the students' responsibility to learn how to use these software packages.

Announcements & Uploads: It is the students' responsibility to regularly check their university e-mail accounts and the webonline site of the course for announcements and updates.

Attendance: Students are expected to attend all lectures. Regular class attendance is not a sufficient condition for effective learning and success in this course. However, those students who attend lectures and study regularly are likely to benefit greatly and receive marks accordingly. Attendance will be taken every lecture hour, due to the requirement of the University's rules and regulations. During every lecture hour, students are responsible to remind the instructor for taking the attendance.

Class participation: Class participation does not mean class attendance. Students are expected to intelligently participate in class discussions.

Academic Misconduct: Academic integrity is expected of all students of Çankaya University at all times, whether in the presence or absence of members of the faculty. No collaboration of any kind is permitted during any of the examinations and homework assignments. All suspected cases will be treated according to the University's rules and regulations.

Grading Policy: Although the student's overall grade will be based on the general assessment of the instructor, the following percentages may give an idea about the relative importance of various assessment tools.

Assessment Item	*Marked Out of*	*Weight (%)*
2 Homework Assignments	100	20
Term Project	100	20
Midterm Exam	100	30
Final Exam	100	30

Note that the instructor reserves the right to modify these percentages in case he deems it necessary. In general, overall grades will be assigned using the standard scales for the letter grades. Depending on the difficulty of the exams and the performance of the class, they may be curved accordingly.

Grade Improvement: The grade for the course will only be based on the required work listed above and cannot be improved with additional work.

Objections: Any form of document concerning work, which is to be used by the instructor as the basis of grading, will be shown to the student upon request. Students, who feel strongly that they have received grades that are improper, have the right of formal appeal. The objection to any grade must be made to the instructor within 10 days following the announcement of the grades.

Course Evaluations: Çankaya University is committed to continuous improvement, and seeks students' input to that process through their participation in course evaluation process. Your response will be processed so that, unless you wish otherwise, the course instructor will not be aware of your identity. Please help us to help our future students by providing feedback on your experiences in this course.

Course Outline	
Week	Topic(s)
1	Overview of Production and Operations Strategy
2	Forecasting
3	Aggregate Planning
4	Inventory Control (Deterministic Demand)
5	Inventory Control (Uncertain Demand)
6	Inventory Control (Uncertain Demand)
7	Midterm Exam
8	Material Requirements Planning
9	Capacity Planning
10	Operations Scheduling
11	Line Balancing
12	Project Scheduling
13	Recent Advances in Production Planning and Scheduling
14	Oral Presentations of Project Studies