Course number and name	END 449 / Endüstri Mühendisliği Uygulamaları Seminer Dersi
Credits, contact hours, categorization of credits	0 credits / 14 hours / Engineering topic
Instructor or course coordinator	Ayberk SOYER
Text book and other supplemental materials	-

Course information	
Content	This course examines the topics listed below: • Operation Research Applications (Decision making/Group Decision Making, Statistics, Statistical Quality Control, Optimization Theory, Simulation, Heuristics, Modeling and System Analysis) • Manufacturing Engineering Applications (Computer Integrated Manufacturing Systems, Work Study, Ergonomics, Materials Management, Engineering Economics, Supply Chain Management, Facility Planning, Production Planning and Control, Quality Control on Manufacturing, Lean Manufacturing) • Management Engineering Applications (Behavioral Sciences, Human Resource Management, Quality Management, Project Management, Strategic Management, Management and Organization, Planning and Control) • Knowledge Engineering Applications (Data Mining, Management Information Systems, R&D Management, Information Management and Technologies, E- commerce Applications, Technology Management, Data Processing)
Prerequisites	4th class, 3rd class
Type	Required

Course learning outcomes
Students who pass the course will be able to: I. Learn how to implement the learnings from operations research, production engineering, management engineering, and knowledge engineering areas in different sectors II. Comprehend the significance of the concepts they learned during industrial engineering education

Student outcomes	Level of contribution
SO1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	Not Applicable
SO2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	Not Applicable
SO3. An ability to communicate effectively with a range of audiences.	Partial
SO4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	Not Applicable
SO5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	Not Applicable
SO6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	Not Applicable
SO7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	Not Applicable

Week	Topics	Learning outcome(s)
1	Introduction to Course Scope and Content	-
2	Operations Research Applications-I	I, II
3	Operations Research Applications-II	I, II
4	Operations Research Applications-III	I, II
5	Operations Research Applications-IV	I, II
6	Manufacturing Engineering Applications-I	I, II
7	Manufacturing Engineering Applications-II	I, II
8	Manufacturing Engineering Applications-III	I, II
9	Management Engineering Applications-I	I, II
10	Management Engineering Applications-II	I, II
11	Management Engineering Applications-III	I, II
12	Knowledge Engineering Applications-I	I, II
13	Knowledge Engineering Applications-II	I, II
14	Knowledge Engineering Applications-III	I, II