

Course number and name	END 482 / Supply Chain Management
Credits, contact hours, categorization of credits	3 credits / 42 hours / Engineering topic
Instructor or course coordinator	Şeyda SERDAR ASAN
Text book and other supplemental materials	<ul style="list-style-type: none"> • Chopra, S., <i>Supply Chain Management: Strategy, Planning, and Operation</i>, Global Edition (7e), Prentice Hall. 2019 • Simchi-Levi, Kaminsky, Simchi-Levi, <i>Designing and Managing The Supply Chain</i>, McGraw-Hill (3rd ed. 2007). • Langlely, Coyle, Gibson, Novack, Bardi, <i>Managing Supply Chains A Logistics Approach</i>, Cengage Learning (2013).

Course information	
Content	This course focuses on the development and application of decision models in supply chains with emphasis on demand forecasting, inventory management, supply chain network design, transportation, warehousing, sourcing, IT systems, performance management and coordination.
Prerequisites	END 421E Production Planning and Control
Type	Selected elective

Course learning outcomes
<p>Students who pass the course will be able:</p> <ol style="list-style-type: none"> I. Define and explain supply chain management concepts. II. Define and explain supply chain management strategies. III. Define the decision areas for a successful supply chain strategy, analyze the benefits of implementing effective supply chain practices. IV. Define and explain supply chain management approaches and systems as well as their impacts on the performance of the company and its supply chain as a whole.

Student outcomes	Level of contribution
SO1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	High
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.	Partial
SO3. An ability to communicate effectively with a range of audiences.	Not applicable
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.	High
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.	Partial
SO7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	Little

Week	Topics	Learning outcome(s)
1	Understanding the Supply Chain	I, II
2	Demand Management in the Supply Chain	I, III
3	Inventory Management in the Supply Chain	I, III
4	Inventory Management in the Supply Chain	I, III
5	Transportation Management in the Supply Chain	I, III
6	Warehouse Management in the Supply Chain	I, III
7	Distribution Management	I, III
8	Introduction to Network Models	I, III
9	Advanced Supply Chain Network Design	I, III
10	Procurement and Supply Management	I, III
11	Supply Chain Performance Management	IV
12	Supply Chain Strategies	II
13	Coordination in the SC, Bullwhip effect	I, IV
14	Supply Chain IT Systems	III