Department of Civil Engineering

Course Name:

Design of Industrial Buildings

Course Number: 20-246	**Credit:** 3
Program: Graduate	**Course Type:** Technical Selective
Prerequisite: -	**Corequisite:** -

Course Description (Objectives):

In this course, students become familiar with the principles of designing various structures used in industry.

Course Content (outline):

- Chapter 1: Concepts and Basics
- Chapter 2: Systemic Approach in Industrial Structure Design
- Chapter 3: Industrial Architectural Topics
- Chapter 4: Principles of Designing Industrial Halls without Cranes
- Chapter 5: Fatigue in Industrial Structures
- Chapter 6: Principles of Designing Industrial Halls with Cranes
- Chapter 7: Space Trusses
- Chapter 8: Corrosion and Methods of Prevention
- Chapter 9: Industrial Foundation and Principles of Dynamic Foundation Analysis
- Chapter 10: Silo Design
- Chapter 11: Steel Tank Design
- Chapter 12: Chimney Design
- Chapter 13: Drafting and Documentation
- Chapter 14: Project

References:

- ASCE, Industrial buildings, Roof to column Anchorage, Steel design guide series No. 7, 2003.
- AISE, Guide for the design and construction of mill buildings, AISE report no. 13, 1991.
- Gaylord and Gaylord, Structural Engineering Handbook, McGraw-Hill, 1979.
- Chen, Structural Engineering Handbook, McGraw-Hill, 1999.
- Standard handbook for Civil Engineers, F. Merrit, McGrawHill, 1999.