

CEEN 5856 - Steel Design

Fall 2026 Syllabus, Section 01, CRN 40884,

Credit hours: 3

Instructor

Anwarul Islam

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Public Instructor Information

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Course Description

5856. Steel Design. An introduction to the behavior and design of steel structures. Included is the design of rolled and built-up tension members, beams, columns, beam-columns, welded and bolted connections. Prereq.: CEEN 3749. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Structural Steel Design, 7th Edition	Jack C. McCormac, Stephen F. Csernak	9780137998821
Required	AISC Steel Construction Manual, 16th Edition	AISC	9781564241160

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Day	Date	Reading(s)	Proposed Topic	Due/To Prepare for Class
Tue	8/25	Syllabus, Chapter 1, Chapter 2	Ch. 1: Introduction to Structural Steel Design Ch. 2: Specifications, Loads, and Methods of Design	Read the chapters carefully.
Thu	8/27	Chapter 3	Ch. 3: Analysis of Tension Members	Read the chapter carefully and solve problems.
Tue	9/1	Chapter 3	Ch. 3: Analysis of Tension Members	Read the chapter carefully and solve problems.
Thu	9/3	Chapter 3	Ch. 3: Analysis of Tension Members	Read the chapter carefully and solve problems.
Tue	9/8	Chapter 4	Ch. 4: Design of Tension Members	Read the chapter carefully and solve problems.
Thu	9/10	Chapter 4	Ch. 4: Design of Tension Members	Read the chapter carefully and solve problems.
Tue	9/15	Chapter 4	Ch. 4: Design of Tension Members	Read the chapter carefully and solve problems.
Thu	9/17	Chapter 4	Ch. 4: Design of Tension Members	Read the chapter carefully and solve problems.

Tue	9/22	Chapter 5	Ch. 5: Introduction to Axially Loaded Compression Members	Read the chapter carefully and solve problems.
Thu	9/24	Chapter 5	Ch. 5: Introduction to Axially Loaded Compression Members	Read the chapter carefully and solve problems.
Tue	9/29	Chapter 5	Ch. 5: Introduction to Axially Loaded Compression Members	Read the chapter carefully and solve problems.
Thu	10/1	Chapters 1, 2, 3, 4	Test on Chapters 1, 2, 3, 4	Test 1
Tue	10/6	Chapter 6	Ch. 6: Design of Axially Loaded Compression Members	Read the chapter carefully and solve problems.
Thu	10/8	Chapter 6	Ch. 6: Design of Axially Loaded Compression Members	Read the chapter carefully and solve problems.
Tue	10/13	Chapter 6	Ch. 6: Design of Axially Loaded Compression Members	Read the chapter carefully and solve problems.
Thu	10/15	Chapter 7	Ch. 7: Design of Axially Loaded Compression Members	Read the chapter carefully and solve problems.
Tue	10/20	Chapter 7	Ch. 7: Design of Axially Loaded Compression Members	Read the chapter carefully and solve problems.
Thu	10/22	Chapter 7	Ch. 7: Design of Axially Loaded Compression Members	Read the chapter carefully and solve problems.
Tue	10/27	Chapter 8	Ch. 8: Introduction to Beams	Read the chapter carefully and solve problems.
Thu	10/29	Chapter 9	Ch. 9: Design of Beams for Moments	Read the chapter carefully and solve problems.
Tue	11/3	Chapter 9	Ch. 9: Design of Beams for Moments	Read the chapter carefully and solve problems.
Thu	11/5	Chapters 5, 6, 7	Test on Chapters 5, 6, 7	Test 2
Tue	11/10	Chapter 9	Ch. 9: Design of Beams for Moments	Read the chapter carefully and solve problems.
Thu	11/12	Chapter 9	Ch. 9: Design of Beams for Moments	Read the chapter carefully and solve problems.
Tue	11/17	Chapter 10	Ch. 10: Design of Beams: Miscellaneous Topics	Read the chapter carefully and solve problems.
Thu	11/19	Chapter 10	Ch. 10: Design of Beams: Miscellaneous Topics	Read the chapter carefully and solve problems.
Tue	11/24	Chapter 10	Ch. 10: Design of Beams: Miscellaneous Topics	Read the chapter carefully and solve problems.
Thu	11/26	No Class		
Tue	12/1	Chapter 11	Ch. 11: Bending and Axial Force	Read the chapter carefully and solve problems.
Thu	12/3	Chapter 11	Ch. 11: Bending and Axial Force	Read the chapter carefully and solve problems.
Tue	12/8	Chapters 9, 10, 11	Final Exam on Chapters 9, 10, 11; in class, 15:15-17:15	Final Exam
Thu	12/10	No Class		

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