



# STARK STATE COLLEGE

## GENERAL SYLLABUS

### Course Information

**Course Name:** Structural Design I  
**Course Number:** CET223

### Required Materials

**Textbook(s):** Online examples  
**Required Readings:** None  
**Additional Materials:** Calculator, Engineering Paper, OPTIONAL: AISC Steel Manual, Beginners Guide to Steel Construction by Quimby (online), Applied Statics and Strength of Materials by Limbrunner

### Course Outline/Calendar

The date of coverage and order of coverage may be modified based on the faculty member and events beyond the control of faculty members that interfere with class times and teaching.

| Week | Chapter/Topic/Lab                                    |
|------|--|
| 1    | Structural Steel and Statics Review                  |
| 2    | Print Reading, Structural Loads and Load Paths       |
| 3    | Structural Specs, Codes, and Commercial Construction |
| 4    | Steel Beam Design & Analysis                         |
| 5    | Steel Beam Design                                    |
| 6    | Steel Column Analysis & Design                       |
| 7    | EXAM #1 (20%)  |
| 8    | Trusses and Bridges                                  |
| 9    | Steel Tension Member Analysis                        |
| 10   | Steel Tension Member Design                          |
| 11   | Exam #2 (20%)  |
| 12   | Reinforced Concrete / Beam Preliminaries             |
| 13   | Shear Reinforcement                                  |
| 14   | Reinforced Columns                                   |
| 15   | Review and EXAM #3 released                          |
| 16   | EXAM #3 Deadline (20%)                               |