

**Oklahoma State University Institute of Technology**  
**Face-to-Face Common Syllabus**  
*Fall 2017*

**CET 3213 STEEL STRUCTURES**

*Students learn and apply principles of steel design to analyze and design structural steel members loaded with various types of forces.*

**Course Purpose:**

This class is about how to use the steel code and other programs, which will assist you in working in an engineering firm. There are many calculations done to insure a building or structure will not fail under a set guild line of scenarios.

**Type of course:** *Theory*

**Credit Hours:** 3; Total hours of theory per semester: 45;

Total hours of lab for the semester: 0; Total hours of clinical per semester: 0.

**Class length - Full Semester**

**Class days and times:** *TR 12:30 – 1:55pm times are CST*

**Prerequisites:** *CET 3113*

**Instructor Name:** Adrian Lee

**Instructor Phone:** (918) 293- 5073(office)

**Office:** Bld 300 Rm 146

**Instructor email:** [Adrian.lee@okstate.edu](mailto:Adrian.lee@okstate.edu)

**Contact:** My preferred method of contact is email. Please allow 24-48 hours to return your correspondence during the normal work week.

**Instructor's Office Hours:** *See chart at end of syllabus or by appointment*

**School Name:** School of Engineering Technologies    **Division's Main Phone:** 918-293-5150

**REQUIRED TEXT, REFERENCES, AND MATERIALS**

<b>Texts:</b>	<i>Structural Steel Design, 5<sup>th</sup> edition, McCormac,</i> Prentice Hall, 2012, ISBN-10 # 0136079482	Approx.	\$172.90
<b>References:</b>	AISC 14 <sup>th</sup> Ed. Steel Code (see instructor, not at bookstore)		\$135.00
<b>Materials:</b>	Ampad Engineer's Computation Pad, Scientific Calculator, Notebook, Pen or pencils.		
<b>Uniform/Tools:</b>	None		
<b>Estimated Cost for Materials:</b>			\$ 50.00
<b>Estimated Cost for Uniform/Tools:</b>			None

**Upon completion of the course, students should:**

<b>Course Objectives</b>	<b>Assessment of Objectives</b>
Calculate the required size and/or thickness for base plates.	Exam
Design the lightest beam size for a given load.	Homework, Exam*
Construct virtual models with computer programs to produce calculation results.	Homework
Analyze and design tension members.	Homework
Analyze and design compression members.	Homework
Validate a beam-column with combined loading.	Homework
Analyze the safety factor on a bolted connection.	Homework
Analyze and design welded connections.	Homework

Aspects of the course objective assessments may be used in the university's assessment of student learning. If applicable, an asterisk (\*) above indicates this assignment is used in the university assessment program.

*(Please asterisk the assignment above if utilized for the assessment assignment.)*

**COURSE ACTIVITIES**

In this course students will:

*(Please list the specific activities in the course)*

- *Participate in class discussions and activities.*
- *View videos that depict the various concepts.*
- *Compile a portfolio of work produced.*
- *Take examinations.*
- *Complete reading assignments.*
- *Complete quizzes and homework assignments.*
- *Use D2L to view assignments and grades.*

**EVALUATION - GRADES WILL BE BASED ON THE QUALITY AND COMPLETION**

**OF THESE TASKS:** *(NOTE-Please indicate the course specific evaluations. List assignment(s) used in the university's assessment of student learning as separate line items and marked with an asterisk.)*

Homework..... 20%  
 Quizzes.....20%  
 Midterm..... 20%  
 Final Exam ..... \*20%  
 Class Notebook...10%  
 Computers.....10%  
 Total.....100%

<b>OSUIT Grading Scale</b>
A = 90% -100%
B = 80% -89%
C = 70% -79%
D = 60% -69%
F = 59% & below

Optional Exam....\*\*

\*The student's grade for this assignment will be used in the university's assessment of student learning. A 70% competency or higher receives a Pass rating. This Pass/Fail rating is independent of the student's course grade. \*\* See testing

Daily and/or weekly quizzes, small weekly assignments and similar type projects: Normal return time to student by next class meeting or no later than one (1) week.

Extensive assignments, large lab projects, extensive quizzes, exams and similar type projects: Normal return time to students in one (1) to two (2) weeks.

### **RECOMMENDED STUDENT COMPETENCIES/SKILLS**

*List any competencies/skills recommended for student success in the course, e.g., reading placement level, PowerPoint, etc.*

### **AUTHORIZED TOOLS**

*Scientific and/or graphing calculator, textbook and notebook.*

*Students may use any/all course materials, including books and notes, while participating in classroom activities and homework. All quizzes are to be completed with no references; exams will be open AISC code only with no access to any tools other than a calculator; no collaboration with classmates is permitted and any instance of such will be considered academic dishonesty. Unauthorized collaboration on homework is also prohibited.*

### **LATE WORK**

A tentative course schedule is provided with this syllabus. **Homework will be dropboxed before the start of class and hard copies** are due at the beginning of class as assigned unless otherwise noted. Quizzes will take place at the beginning of class when they occur unless noted otherwise. It is important that you plan to attend every scheduled class. Should you be sick or have an excused absence you **MUST** contact the instructor or make arrangements before the class period begins on that day. Excused absences include but are not limited to: participating in a required university activity such as a field trip, fulfilling a military obligations, mandatory court appearances, death in the immediate family, extreme illness or accident to oneself or immediate family. Instructors, at their discretion, may require proof of such events. Emails, texts, and phone messages will be time stamped. If you let me know you will be absent the work due that day is to be made up the next day that you attend class. Otherwise, **LATE WORK IS NOT ACCEPTED.**

### **TESTING**

Tests will be open AISC code but closed notes. \*\*In addition to the final I offer an optional exam at the end of the semester. This is the only comprehensive exam and serves several purposes. This will be a replacement for any missed unit exam. Also, should a student be unhappy with any unit exam or the final exam, you may take the optional exam to replace a lower grade. This option will NEVER hurt or lower your grade. This is only an option to help you. Should your optional exam grade not help your overall score it will not be used.

**OTHER LAB AND CLASSROOM POLICIES**

N/A

**SYLLABUS ATTACHMENT**

View the Syllabus Attachment, which contains other important information, by visiting [http://osuit.edu/center/student\\_syllabus\\_information](http://osuit.edu/center/student_syllabus_information)

**ADRIAN LEE**

**FALL 2017**

	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30
M			OFFICE HOURS		OFFICE HOURS		OFFICE HOURS		LUNCH		ENGINEERING MATH (CET 3533 ) ONLINE				OFFICE HOURS				
T			STATICS (CET 2323) DWRC 226			OFFICE HOURS			LUNCH		STEEL (CET 3213) DWRC 153			CONCRETE (CET4213) DWRC 153					
W			OFFICE HOURS		OFFICE HOURS		OFFICE HOURS		LUNCH		ENGINEERING MATH (CET 3533 ) ONLINE				OFFICE HOURS				
R			STATICS (CET 2323) DWRC 226			OFFICE HOURS			LUNCH		STEEL (CET 3213) DWRC 153			CONCRETE (CET4213) DWRC 153					
F			OFFICE HOURS		OFFICE HOURS		OFFICE HOURS		LUNCH										

	DATE	STEEL	Assignments	Assignment Due
Week 1	Tuesday, September 05, 2017			
	Thursday, September 07, 2017	Intro, Ch 1, Ch 2	Ch 2 - 2, 4, 6, 8	
Week 2	Tuesday, September 12, 2017	Excel		
	Thursday, September 14, 2017	Ch 1/ 2 quiz, Load Path		
Week 3	Tuesday, September 19, 2017	Light gage design, joists, decks, etc	Joist, Deck, Load Path homework	<b>Ch 2 HW</b>
	Thursday, September 21, 2017	Structural Modeling Software		
Week 4	Tuesday, September 26, 2017	Structural Modeling Software		<b>Light gage HW</b>
	Thursday, September 28, 2017	Enercalc		
Week 5	Tuesday, October 03, 2017	Ch 3 and 4	Ch 3 - 2, 12, 24 and Ch 4- 2, 4	
	Thursday, October 05, 2017	Ch 3 & 4 quiz, Ch 3 and 4		
Week 6	Tuesday, October 10, 2017	Ch 5 and 6	Ch 5 - 6 and Ch 6-8	<b>Ch 3 &amp; 4 HW</b>
	Thursday, October 12, 2017	Ch 5 & 6 quiz, Ch 5 and 6		<b>Ch 5 &amp; 6 HW EOC</b>
Week 7	Tuesday, October 17, 2017	<b>Test Review</b>		
	Thursday, October 19, 2017	<b>Test #1</b>		
Week 8	Tuesday, October 24, 2017	Ch 7	Ch 7 - 4 and 14	
	Thursday, October 26, 2017	No Class		
Week 9	Tuesday, October 31, 2017	<b>Ch 7 quiz</b> , Ch 8, 9, and 10	<i>Ch 9 - 2 (by hand and verify with enercalc), 4, 24 Ch 10 - 20 (by hand and verify with enercalc), 22</i>	<b>Ch 7 HW due</b>
	Thursday, November 02, 2017	Ch 8, 9, and 10		
Week 10	Tuesday, November 07, 2017	Ch 8/9/10 quiz, Ch 8, 9, and 10		
	Thursday, November 09, 2017			<b>Ch 8, 9, and 10, HW EOC</b>
Week 11	Tuesday, November 14, 2017	Ch 11	Ch 11 - 2, 11	
	Thursday, November 16, 2017	Ch 11 quiz, Ch 12 and 13	Ch 12 - 2, 20, Ch 13 - 15 (bonus)	
Week 12	Tuesday, November 21, 2017	Ch 12 and 13		<b>Ch 11 HW</b>
	Thursday, November 23, 2017	No Class - Break		
Week 13	Tuesday, November 28, 2017	Ch 12/13 quiz, Ch 14	Ch 14 - 2, 10	
	Thursday, November 30, 2017	Ch 14 quiz		<b>Ch 14 HW EOC</b>
Week 14	Tuesday, December 05, 2017	<b>Review for Exam #2</b>		
	Thursday, December 07, 2017	<b>Final Exam</b>		
Week 15	Tuesday, December 12, 2017	<b>Optional Exam</b>		
	Thursday, December 14, 2017			
	Friday, December 15, 2017	<b>Graduation</b>		
All quizzes and homework are due at the beginning of class unless noted end of class (EOC) Schedule is subject to change at instructor discretion.				