

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

CET 2113 STRENGTH OF MATERIALS

Students learn and apply concepts of stress, strain and deformation of bodies in tension, compression, shear, bending, and torsion. It also includes the study of mechanical properties of engineering materials, pressure vessels and buckling theory.

Type of course: *Theory*

Credit Hours: 4; Total hours of theory per semester: 60;

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

Class length - Full Semester

Class days and times: *TR 10:00 – 11:25am*

Prerequisites: *CET 2323*

Instructor Name: Adrian Lee

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

Office:

Instructor email:

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:

Division Name: Engineering Technologies

Division's Main Phone: 918-293-5150

REQUIRED TEXT, REFERENCES, AND MATERIALS

Texts:	<i>Applied Statics and Strength of Materials</i> , 5 th edition, Spiegel/Limbrunner, Prentice Hall, 2009, ISBN #0131946846	Approx. \$158.70
References:	None	
Materials:	Engineering paper, Scientific Calculator, pens, notebook Notebook, Pen or pencils.	
Uniform/Tools:	NA	
Estimated Cost for Materials:		\$50.00
Estimated Cost for Uniform/Tools:		\$ 0.00

Upon completion of the course, students should:

Course Objectives	Assessment of Objectives
Define and calculate stress and strain	Class Activity
Analyze and design beams and columns	Homework
Specify the appropriate method to solve for slope and deflection in a beam.	Quiz, Exam*
Differentiate between various material properties (hardness, ductility, etc.).	Homework

COURSE ACTIVITIES

In this course students will:

- *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:

Class Quizzes.....20%
Homework.....20%
Class Activities...10%
Unit Exams..... 20%
Final Exam.....*20%
Notebook.....10%
Optional Exam....**

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

*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.

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.

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 and exams are to be completed independently; no collaboration with classmates is permitted and any instance of such will be considered academic dishonesty.

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

Test references will vary. Some tests are closed book and closed notes, with only certain references will be provided. **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.

UNIVERSITY & COURSE EXPECTATIONS

It is the responsibility of each OSUIT student to read, abide by and maintain a copy of the syllabus for this course. Syllabi are available on the OSUIT website.

Students understand that excerpts or portions of their work may be utilized for institutional assessment purposes. The purpose of institutional assessment is for verification of student learning and program improvement. Every effort will be made to keep this information confidential.

AMERICANS WITH DISABILITIES ACT (ADA)

According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need special accommodations, you should notify the instructor and request verification of eligibility for accommodations from the Office of Academic Accommodations/LASSO Center. Please advise the instructor of your disability as soon as possible, and contact The LASSO Center, located in the Noble Center for Advancing Technology – NCAT, top floor, and 918-293-4855 to ensure timely implementation of appropriate accommodations. Faculty have an obligation to respond when they receive official notice of a disability but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process during which the existence of a qualified disability is verified and reasonable accommodations are identified. (Fall 2013)

ACADEMIC DISHONESTY

Academic dishonesty or misconduct is neither condoned nor tolerated at OSUIT. Any student found guilty of academic dishonesty or misconduct shall be subject to disciplinary action. Academic dishonesty and/or misconduct includes, but is not limited to, the following actions: (1) Plagiarism: the representation of previously written, published, or creative work as one's own; (2) Unauthorized collaboration on projects; (3) Cheating on examinations; (4) Unauthorized advance access to exams; (5) Fraudulent alteration of academic materials; (6) Knowing cooperation with another person in an academically dishonest undertaking. Students are required to actively protect their work against misuse by others. For details, refer to The OSUIT Student Handbook (Student Rights and Responsibilities Governing Student Behavior) available online at http://www.osuit.edu/academics/forms/student_rights_responsibility.pdf.

ATTENDANCE POLICY FOR FACE-TO-FACE COURSES

A primary component of OSUIT's Mission is "to prepare and sustain a diverse student body as competitive members of a world-class workforce." Regular and consistent attendance not only aids in academic success, dependable attendance is a requirement in today's real-world employment; therefore, regular and consistent attendance is a requirement in all OSUIT courses.

Definitions: Absent: Failing to attend all or a significant portion of a class or lab session.

- A. Students may not be marked as absent if missing class for situations such as, but not limited to
1. participating in a required university activity such as a field trip;
 2. fulfilling a military obligation;
 3. a mandatory court appearance;
 4. death in the immediate family;
 5. extreme illness or accident to oneself or immediate family. Instructors, at their discretion, may require proof of such events.
- B. It is the responsibility of the student to contact and inform the instructor and/or department in advance of such excused absences whenever possible.
- Tardy: Arriving late to class as defined by the individual class instructor. Faculty, at their discretion, may equate three tardies to equal one absence.

Procedures:

Early Intervention

- A. Any student who misses 10% of an individual course (or earlier at faculty discretion) during a regular fifteen-week semester, or the equivalent portion of time in a shorter session, will have their name submitted by that course instructor to the OSUIT Early Alert System for retention intervention.
- B. At the point the Early Alert is issued, the student *must* meet with their assigned faculty advisor or designated faculty/staff member within seven (7) academic calendar days for counseling on how to improve their attendance and academic success.

Excessive Absences

- A. The University reserves the right to administratively withdraw any student from an individual course who misses 20% of that course, whether excused or unexcused, and, in the opinion of the instructor, the student does not have a reasonable opportunity to be successful in the course.
- B. Students should be aware any of the following may impact their financial aid:
1. being administratively withdrawn from a course
 2. dropping a course
 3. their last date of attendance in a course

Please see OSUIT Policy 2-021 for full details and procedures.

	TR Classes		
DATE	DATE	Strength of Materials	Assignment
	January 3, 2017		
Week 1	January 5, 2017	Syllabus review - expectations, statics review, CH 8	Ch 8 - 30, 32
Week 2	January 10, 2017	Ch 8 quiz Ch 13 - Shear and Moment diagrams	Ch 13 - 17a and b (write equations for part a then draw diagrams, for b just draw diagrams)
Week 2	January 12, 2017	Ch 8 homework due, Ch 13 quiz Ch 10 - Material Properties	Ch 10 - 6, 22
Week 3	January 17, 2017	Ch 13 homework due, Ch 10 quiz, Ch 9 Stresses and Strains	Ch 9 - 6, 10, 28
Week 3	January 19, 2017	Ch 10 homework due Ch 9 - quiz, Ch 9/10 Activity	
Week 4	January 24, 2017	Ch 9 HW due Ch 11 - Stress concentrations	Ch 11 - 2, 6, 18
Week 4	January 26, 2017	Ch 11 quiz	
Week 5	January 31, 2017	Ch 11 homework due EOC	
Week 5	February 2, 2017	Test #1 Review	
Week 6	February 7, 2017	Test #1	
Week 6	February 9, 2017	Ch 12 Torsion	Ch 12 - 2, 23, 40
Week 7	February 14, 2017	Ch 12 quiz , Ch 12 Activity	
Week 7	February 16, 2017	Ch 12 homework due, Ch 14 Beam Stresses	Ch 14 - 4, 50 a, Ch 16 - 1, (21 bonus)
Week 8	February 21, 2017	Ch 14 quiz Ch 16 Notes	
Week 8	February 23, 2017	Ch 16 quiz, 14/16 Activity	
Week 9	February 28, 2017	14/16 Activity continued (if needed)	
Week 9	March 2, 2017	Ch 14/16 homework due Ch 17 Mohr's Circle	Ch 17 - 18a
Week 10	March 7, 2017	Ch 17 quiz	
Week 10	March 9, 2017	Ch 17 hw due EOC	
Week 11	March 14, 2017	No Class - Spring Break	
Week 11	March 16, 2017	No Class - Spring Break	
Week 12	March 21, 2017	Ch 18 – Columns	Ch 18 - 4, 38
Week 12	March 23, 2017	Ch 18 Column quiz, Ch 18 Activity	
Week 13	March 28, 2017	Ch 18 HW due Ch 20 Pressure Vessels	Ch 20 – 3, 10
Week 13	March 30, 2017	Ch 20 Quiz	
Week 14	April 4, 2017	Ch 20 HW due (EOC)	
Week 14	April 6, 2017		
Week 15	April 11, 2017	Test 2 Review	
Week 15	April 13, 2017	Test #2	
Week 16	April 18, 2017	Optional Exam	
Week 16	April 20, 2017		
	April 21, 2017	GRADUATION	

Schedule is subject to change at instructor discretion.