

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

**ETDG 2623 – BUILDING STRUCTURES**

Students create construction documents of structural steel framework and support systems of commercial and industrial buildings using their own design for beam-to-girder and beam-to-column connections. Students calculate dimensional and design information using the Manual of Steel Construction as a reference. Students create fabrication drawings of the individual components of framework and support systems of buildings for manufacturing and delivery to the construction site.

**Course Purpose:**

The purpose of this class is to learn 2D and 3D Computer Aided Drafting (CAD) using AutoCAD & SDS2 for structural drafting. This will be accomplished by creating steel shapes, steel building frames & drawings by using proven techniques.

**Type of Course:** Theory/Lab

**Credit Hours:** 3; Total clock hours of theory per semester: 30;

Total clock hours of lab per semester: 45; Total clock hours of clinical per semester: N/A.

**Class Length:** Full Semester

**Class Days and Times:** MWF 10:00 – 11:25AM CST

**Prerequisite:** ETDG 1253

**Instructor Name:** Michael Freeman

**Instructor Phone:** (918) 293-5052

**Office:** DWRTC Room #115

**Instructor email:** [michael.freeman@okstate.edu](mailto:michael.freeman@okstate.edu)

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

**Instructor's Office Hours:** Classroom 150 MWF 11:25 – 11:45AM, TR 11:00 – 11:45AM and F 8:00-9:25AM CST

**School Name:** Engineering Technologies

**School Main Phone:** 918-293-5150

**REQUIRED TEXT, REFERENCES, AND MATERIALS**

**Texts:** Structural Steel Drafting, MacLaughlin, Delmar, ISBN #1401890326

**References:** Manual of Steel Construction

**Materials:** Notebook, writing utensil, & data storage device

**Uniform/Tools:** N/A

**Estimated Cost for Materials:** \$235.00

**Estimated Cost for Uniform/Tools:** N/A

**Optional Resources:** N/A

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

<b>COURSE OBJECTIVES</b>	<b>ASSESSMENT OF COMPETENCY</b>
*Use the Manual of Steel Construction to: <ul style="list-style-type: none"> <li>• Draw steel shapes.</li> <li>• Identify common steel shape characteristics.</li> </ul>	Steel Shapes exercises 1A, 1B, & 1C
Understand the symbols used in structural steel plans and details. Understand the history of Structural Steel.	Quiz #1 & Quiz #2
*Create a steel framing plan.	AutoCAD Project
*Draw common connection details.	AutoCAD Project
*Use 3D structural steel software to create a steel frame building.	SDS2 First Project
*Size beams and K-series joists based on information found in the manual.	Chapter 5 problem #7, #8 & Test #1
Extract the necessary information from design drawings to create column fabrication drawings.	SDS2 Final Project & Test #2
Extract the necessary information from design drawings to create beam/girder fabrication drawings.	SDS2 Final Project & Test #3
Create industry standard mark numbers for each fabricated steel member to be used for erection purposes.	Test #3

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.

**COURSE ACTIVITIES**

In this course students will:

- Participate in class discussions and activities.
- Take examinations.
- May be required to do quizzes / in class assignments.

**EVALUATION - GRADES WILL BE BASED ON THE QUALITY AND COMPLETION OF THESE TASKS: )**

Projects.....25%  
\*AutoCAD Project  
Homework.....20%  
Quizzes (2) Exams (3)...40%  
\*Final Project.....15%

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.

**Remember!** All technical classes require a 70% or better for graduation.

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**

A good working knowledge of file management i.e. save files, create folders & keep track of assignments.

**AUTHORIZED TOOLS**

N/A

**LATE WORK**

All assignments will have specific due dates and are expected to be completed by that date. However, I know life gets in the way and grace may be given with a 10% penalty applied to the graded work. The student must contact me ASAP and work out a time to turn in the late work. If a test is missed it is up to the student to work out a time when it can be made up. The penalty will be the same as late work if done in an orderly manner.

**TESTING**

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

**OTHER LAB AND CLASSROOM POLICIES**

**INSTRUCTOR’S POLICY ON ABSENCES**

**Class lectures will not be repeated.** However, percentage point can be earned for perfect attendance i.e. 0 absences = 2%, 1 absence = 1%, 2 absences = 0.5% and 3 or more absences = 0%.

## **STUDENT CONDUCT**

Students are expected to cooperate in maintaining a classroom environment conducive to learning. Courteous and respectful behavior will be expected from all students each day. All pagers, cellular phones, and CD and MP3 players should be turned off. The use of tobacco in any form in University buildings is prohibited.

## **INSTRUCTIONS FOR SPECIFIC TASKS AND ASSIGNMENTS**

Drawing Projects:

- A. Drawings will be evaluated according to the following:
1. Solution to problem
  2. Following of instructions and completeness
  3. Appearance, including neatness, spacing and uniformity
  4. Placement of dimensions
  5. Accuracy
- B. Class time will be allotted to work on drawing projects, but may not be enough to complete assignments. **The student will have to schedule time outside of class to work on assignments.**
- C. Work can be redone if a grade is not desirable but the markup has to be handed in with the corrections and the average of the two grades will be final grade.

### **ETD LAB RULES**

1. **Video Games:** The playing of video games on division computers **at any time is prohibited.** Students found playing video games on division computers will not only be asked to cease playing the game, but also remove any unauthorized software from the computer or network drive.
2. **Music Files:** Downloading of music files from the Internet to **any media is prohibited.** In many cases, this is illegal and may result in liability for the university as well as the individual(s) involved. Listening to music in the computer labs is allowed only if **legal** copies of compact music discs are used. Students must use their own headphones when listening to music. Listening to music during class is at the discretion of the instructor and at **no time** will listening to music be allowed during class discussions or lectures.
3. **Movies:** Downloading and/or playing of movie files from the internet (or any other source) are **prohibited.** In many cases, this is illegal and may result in liability for the university as well as the individual(s) involved.
4. **Pornography:** Downloading and/or display of pornographic materials on division computers and equipment are **prohibited.** Any such material found by faculty or staff will be **immediately** deleted or removed. The use of vulgar or suggestive names for computer files or folders will not be tolerated. Any such material, if found by faculty or staff, will be immediately deleted.

Division computers and equipment are for **educational use only.** It is the intent of the faculty and staff of the ET division to display a positive and professional environment, including the atmosphere of the classroom. It reflects negatively on our division when guests see games, movies, or hear loud or offensive music permeating from our classrooms.

**Note: An official copy of the syllabus will be posted on the Online Class Room site and any changes being made to the syllabus in the future will be on this official syllabus.**

## **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)

It will also be in the Online Classroom (D2L/Brightspace) in the Content – Start Here.

## **COURSE SCHEDULE**

DATE	Building Structures Topics
Wednesday, September 06, 2017	Introductions, Syllabus & Module 1 - Chp.'s 1 - 4
Friday, September 08, 2017	Module 1
Monday, September 11, 2017	Review & Module 1
Wednesday, September 13, 2017	Quiz #1 & Module 1 - Chapter 1 <i>Due</i>
Friday, September 15, 2017	Module 1 - <i>Due</i> & Module 2 - AutoCAD Proj. - <i>Start</i>
Monday, September 18, 2017	Module 2

Wednesday, September 20, 2017	Module 2
Friday, September 22, 2017	Module 2
Monday, September 25, 2017	Module 2
Wednesday, September 27, 2017	Module 2 - <i>Due</i>
Friday, September 29, 2017	Quiz #2 & Module 3 -SDS2 Proj. - <i>Start</i>
Monday, October 02, 2017	Module 3
Wednesday, October 04, 2017	Module 3
Friday, October 06, 2017	Module 3
Monday, October 09, 2017	Module 3 - <i>Due 10/13</i>
Wednesday, October 11, 2017	Module 4 - Chapters 2 & 5
Friday, October 13, 2017	Review & Module 4 - <i>Chapter 2 Due 10/16</i>
Monday, October 16, 2017	Test #1
Wednesday, October 18, 2017	Module 4
Friday, October 20, 2017	Module 4
Monday, October 23, 2017	Module 5 - Chapters 8, 9 & 10
Wednesday, October 25, 2017	Module 5 & Module 7 Final Proj. - <i>Start</i>
Friday, October 27, 2017	Module 5 & 7
Monday, October 30, 2017	Module 5 & 7
Wednesday, November 01, 2017	Review & Module 5 - <i>Due 11/3</i>
Friday, November 03, 2017	Test #2
Monday, November 06, 2017	Module 6 - Chapters 11, 12 & 13
Wednesday, November 08, 2017	Module 6 & 7
Friday, November 10, 2017	Module 7
Monday, November 13, 2017	Module 6 & 7
Wednesday, November 15, 2017	Module 6 - <i>Due 11/20</i>
Friday, November 17, 2017	Module 7
Monday, November 20, 2017	Test #3
Wednesday, November 22, 2017	No Class Thanksgiving
Friday, November 24, 2017	No Class Thanksgiving
Monday, November 27, 2017	Module 7
Wednesday, November 29, 2017	Module 7
Friday, December 01, 2017	Module 7
Monday, December 04, 2017	Module 7
Wednesday, December 06, 2017	Module 7
Friday, December 08, 2017	Module 7
Monday, December 11, 2017	Module 7
Wednesday, December 13, 2017	Module 7 - <i>Due</i>
Friday, December 15, 2017	Catch up day if needed

Schedule is subject to change at instructor discretion.