

University of Texas at Tyler - Department of Civil & Environmental Engineering  
CENG 4315: Construction Applications for Steel  
Spring 2025

**Instructor:** Shariful Huq                      Office Hours: TuTh 12:30 pm ~ 3:30 pm  
HEC A204    or By Appointment  
[shuq@uttyler.edu](mailto:shuq@uttyler.edu)

**Lectures, Projects and Exams:**

- (i) 28 Classes.
- (ii) 1 Project - Report Submission.
- (iii) 4 Exams – 3 Mid-term + 1 Final.

**Lecture - Day, Time and Location:** Tuesday/Thursday: 3:30 PM to 4:50 PM via zoom to Tyler RBS 1031

If you miss a scheduled class, you are still responsible for the material

**Note to Student about a Syllabus**

This syllabus is a statement of intent about how the course will be taught this semester. It outlines what we will cover, what you will need to do in the course, and it explains what and when you must do it to successfully complete the course and get a great final grade. This syllabus is intended to protect you from arbitrary or untimely changes in course requirements and due dates. But I reserve the right to make changes as necessary to the syllabus with announcement of changes. As we learned during 2020, there are many circumstances outside of our direct course control that may require changes to this syllabus in content and schedule. These will always be announced in advance and the syllabus will be updated on Canvas so all can be aware of the required changes.

**Important Artificial Intelligence (AI) Information**

*AI is not permitted in this course at all.* I expect all the work students submit for this course to be their own. I have carefully designed all assignments and class activities to support your learning. Doing your own work, without human or artificial intelligence assistance, is best for your efforts in mastering course learning objectives. **For this course, I expressly forbid using ChatGPT or any other artificial intelligence (AI) tools for any stages of the work process, including brainstorming.** *Deviations from these guidelines will be considered a violation of UT Tyler's Honor Code and academic honesty values.*

**Important Covid-19 Information for Classrooms and Laboratories**

*It is important to take the necessary precautions to ensure a healthy and successful year.* UT Tyler continues to urge you to protect yourselves against the flu, COVID and any new threats that may be developing. Be diligent about preventive measures such as washing hands, covering sneezes/coughs, social distancing and vaccinations, which have proven to be successful in slowing

*the spread of viruses. Encourage those who don't feel well to stay home, and if they show symptoms, ask them to get tested for the flu or COVID. Self-isolation is important to reduce exposure (CDC quarantine/isolation guidelines). Please work with your faculty members to maintain coursework and please consult [existing campus resources](#) for support.*

### **Recording of Class Sessions**

Class sessions will be recorded by the instructor for use by students enrolled in this course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in this course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.

### **Course Website:**

I will use both – text books and canvas to manage the course material for the semester. Within canvas you will find lecture notes, assigned reading, homework assignments, exams and other material pertaining to the class. **Please check canvas content daily.**

### **Course Description:**

CMGT 4315 focuses on the use of steel as a material in construction systems. During the upcoming semester you will find our study of construction systems to be interesting, challenging, and rewarding.

### **Course Objectives:**

- A. Understand the concepts of **load and resistance factor design (LRFD)** for steel structures.
- B. Know how to **prepare calculations to support steel design.**
- C. Understand the **mathematical concepts for choosing structural steel members.**
- D. Know how to **calculate the required sizes for structural steel columns, beams, and tension members.**
- E. Know how to **calculate weld and bolt sizes for steel connections.**

### **Course Competencies:**

1. **Skilled Communicator**—the student will exhibit mastery in communicating through exercises in explaining work results and assigned class exercises.
2. **Interpersonal Skills**—the student will display teamwork skills in assigned group exercises.
3. **Solving Problems (Critical Thinking)**—the student will use lectures and demonstration to foster conceptual thinking quantitative/statistical skills, in producing drawings according to specifications.
4. **Ethical Decision Making and Behavior**—the student will understand and exhibit ethical decision making in completing individual homework

assignments, and in working with other students as part of a team.

5. **Personal Accountability for Achievement**—the student will complete the assigned projects at the time designated by the instructor and will demonstrate on both exercises and exams that he has learned the material presented.
6. **Technology Competence** - Competence in structural systems and engineering principles learned and in the application to construction management processes and practices.

### **Classroom Procedures:**

- a. Students are expected to attend all class meetings.
- b. It is the student's responsibility to obtain any missed class notes, handouts, assignment due dates and any other information missed for any reason. Failure to attend class does not constitute withdrawal from class. All material covered in class lectures, in homework assignments, and in the text or in any additional material contained in class handouts (including the syllabus) is considered testable material.
- c. Bring study notes, note-taking material, and calculator to every class. Class preparation is your individual responsibility.
- d. Class begins with a presentation on the topics of the day.
- e. Students practice skills in class.
- f. In class assignments for the same day submittal will be given as we go through the material.
- g. Note: If you miss any in-class quiz, or exam (to include being late to start of class or ANY exam/quiz) without prior approval in advance of class will be a 0 for that class or assignment.

### **Required Text:**

1. **Steel Design (5<sup>th</sup> Ed.)** by William T. Segui (ISBN 978-1-111-57600-9)

### **Exams:**

There will be 2 midterm examinations and one final examination. The exams are **TENITATIVELY** scheduled for:

Exam 1: **Tuesday February 11<sup>th</sup>**

Exam 2: **Thursday February 27<sup>th</sup>**

Exam 3: **Tuesday March 25<sup>th</sup>**

Final Exam: **April 29<sup>th</sup> or May 1<sup>st</sup> TBD by Univ. Admin**

**Final Exam:** There is **no make-up or rescheduling.**

**Mid-term Exams:** In general midterm exam dates may be moved up or pushed back depending on the progress of the lectures. Each student is only allowed one make-up exam. That is, he/she can only make-up Exam 1 or Exam 2. Make-up for the Exams will only be arranged if you inform the instructor **prior to** or **on the day before** the exam, with a strong valid reason. **Examples of strong valid reasons (unexpected events and cannot be rescheduled) are** official UT Tyler travel, accident, illness, childbirth, passing of an immediate family member, jury duty, or court appearance. You will be required to show **documentary evidence for valid reasons** (e.g., official university letter, doctor's letter, letter from funeral home, police report, court letter etc.). Events that can be pre-scheduled or rescheduled are not considered valid reasons. **Examples of non-valid reasons** are traffic, wedding, driving test, sending car for service, clash with another course

schedule, etc. Job interviews will be considered on a case-by-case basis (again, with documentary evidence). If an emergency happens during the exam day, you should contact the instructor at the earliest possible time (or call the HEC Engineering office or contact one of your classmates or TA who will then inform the instructor). Any make-up exam will be given on the last day of classes **(April 25, 2025)**.

To compensate for the fact that you may apply what you learn in the entire course when answering make-up Exams 1 or 2, **the make-up exam will be more difficult than the original exam.**

### **Exam Rules**

**Mid-Term and the Final Exam are closed notes.** You are only allowed to use an NCEES approved calculator and instructor approved reference sheet(s).

Topics to be tested will be announced in class and on Canvas one week prior to the exam. The instructor will set questions from material taught in class. The meaning of “taught in class” includes verbal instructions or written notes on Canvas. It is very important that you attend the class activities and take additional notes.

To discourage students from focusing narrowly on only a few questions, **no practice exam will be given.** There are enough self-practice problems as well as in the textbook at the end of each chapter. **Solutions to midterm exams will NOT be posted on canvas.** Any other instruction specific to an exam will be posted on Canvas.

**Students who fail to show up for the make-up or final exam for an invalid reason will be given 0 points for that exam.** An incomplete “I” grade will be given for missing the final exam with properly documented strong valid reason. He/she must take the final exam the next time this course is being offered to have the “I” grade changed to a letter grade. All assessment components and marks will be retained for the calculation of the final letter grade. The letter grade will be benchmarked against the same class for the semester in which the exam had been missed.

**You are NOT allowed to work with anyone on the exam. You must work independently. No use of the internet, textbooks, notes or any other resources. Carry through all units in the problem. Any student found in violation of these rules and as such in violation of UT-Tyler student code of conduct will be subjected to penalties ranging from receiving a zero grade on the respective exam or suspension or expulsion from the university.**

### **Homework:**

You will find illustrations in the textbook to be very informative and the numerous examples very practical and straight forward. **Solving problems is the absolute key to success in this course!** The more problems and assignments you complete doing the work yourself, the better you will understand and master the principles of steel design. Records show that course material for each lesson can be easily referenced from an well-organized notebook. Keep good notebooks.

Homework will be assigned on a regular basis. Homework **will be collected and graded either for points or completion only.** **To receive a full grade - Homework must be uploaded only on**

**canvas by the due date and time.** No late homework will be accepted except for strong valid reasons (listed above) and arrangements are made with the instructor 24 hours ahead of time.

Homework solutions will be posted on canvas after the due date. Homework should be submitted on engineering paper. Solutions should be presented in a clear methodical manner. Follow the “homework submission guidelines” listed below when completing your assignment. Assignments which are not clearly presented may have 5 percentage points deducted from the overall grade of that assignment. Be sure that you use the correct edition/version of the textbook. Problems done from other edition/versions which do not match the assigned problems will not receive credit.

**Homework Submission Guidelines (Professionalism Requirements):**

1. Homework should be submitted using letter size (8 ½ x 11”) paper. Engineering paper is preferred but plain white paper is allowed if you have no access to engineering paper.
2. The header of the first page should include the following:
  - a. Name of Student
  - b. Student ID Number
  - c. Course Number and Name
  - d. Homework Number
3. There should be no more than 2 problems per page. This is to ensure that there is enough space on the paper for the grader to add comments.
4. Multiple sheets should have a page number labeled at the left corner of the page.
5. The submitted pdf file should show the pages free of frail edges, stains, smudges and wrinkles.
6. All problems should include:
  - a. Problem Number
  - b. A diagram of the problem (draw all free body diagrams when necessary)
  - c. A set of given quantities
  - d. A set of unknown quantities
  - e. A set of assumptions
7. All numbers and writing should be clear and readable.
8. When required to produce a graph, use a computer program such as excel or MATLAB or Mathcad to generate the plot. **Do not draw it by hand!**
9. The **final answer should be boxed** and placed at the bottom of the problem.

**Final Grade Contribution**

Three Mid-term Exams (3*10% =)	30%
Homework/Problem Sets	20%
Attendance / Professional Practice	10%
Project	20%
Final Exam	20%

Total = 100%

**“If necessary, I reserve the right to adjust the grade scale at the end of the semester to your benefit”.**

**\*\*NOTE:**

- There will be no makeup work or extra credit allowed/granted at the end of the semester. All assignments must be turned in at the appropriate due date and time to receive credit. *There is NO credit given for late assignments unless an extension was given by the instructor at least 24 hours prior to the due date.*
- *There is no way to ADD to your grade once an exercise is graded – the cumulative grade is the FINAL grade – there are NO adjustments made at the end of course*

**THERE ARE NO MAKE-UP EXAMS GIVEN WITHOUT AN EXCUSED ABSENCE DUE TO ILLNESS.** A note from a medical professional is required for any absence due to illness.

All Graded Events are **mandatory** and become part of your grade. Failure to submit any required work will result in **result in a zero for that assignment**. As an engineer your goal is to make a clear, logical, and professional presentation of your work, which is both accurate and correct. As such both your presentation and the accuracy of your work is important, and both will be graded. All submissions are due on the due date assigned through Canvas. **Assignments are due by 11:59 PM on their due date. No late submissions will be awarded credit unless an extension was given by the instructor at least 24 hours prior to the due date.**

**Professional Practice:**

Your professional practice grade will be computed based upon your attendance (35% of professional practice grade) plus participation in this course (35% of professional practice grade) plus ASCE, ITE, CMSA, IEEE, ASME, SAE, etc. student chapter or local branch meetings or when these student chapters host guest speakers. I will assign 30% percentage of the professional grade towards joining and attending a minimum of 3 meetings and submission of one mini report describing the meeting contents. A document template is posted on canvas within assignment module.

**Laptops/PDAs/MP3 players/Cell Phones or other electronic devices**

- The use of any electronic device, except an approved calculator, is not permitted during exams. Your exam will be collected, and your grade will be a zero if you are caught using a non-approved electronic device/calculators. Any instances of a calculator inappropriately used during an exam will be the basis of alleging Academic Misconduct and may result in Failing (F) of the course at the determination of the course's instructor or the basis for a recommendation for expulsion from the University. Any Calculator used during an exam in this course must meet the requirements stated within the policy below.

**Calculator Policy**

**Only NCEES approved calculators will be permitted during tests and your test will be collected and your grade will be a zero if you are using a non-approved calculator.**

The approved calculators include the following: (Please check the NCEES website for a complete listing, <https://ncees.org/exams/calculator/>). Below is an excerpt from the website:

## Calculator policy

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To protect the integrity of its exams, NCEES limits the types of calculators examinees may bring to exam sites. The list of approved calculators is reviewed annually. The approved calculators include the following: (Please check the NCEES website for a complete listing, <https://ncees.org/exams/calculator/>.)

The following calculator models are the only ones acceptable for use during the **2024 exams**:

- Casio: All fx-115 and fx-991 models (Any Casio calculator must have “fx-115” or “fx-991” in its model name.)
- Hewlett Packard: The HP 33s and HP 35s models, but no others
- Texas Instruments: All TI-30X and TI-36X models (Any Texas Instruments calculator must have “TI-30X” or “TI-36X” in its model name.)

### **Project Expectations:**

EVERY team member will be required to participate in the project tasks for a grade. You should:

- Give the project your best efforts and equally carry the load – don’t be the weak link!
- Express your ideas and thoughts clearly and openly but remember to keep the dialogue professional and focused on the issues of the course. These should be a learning/growth tool used for your professional development.

### **Final day to withdraw:**

The final day to withdraw from the course without penalty is **March 31<sup>st</sup>, 2025**.

### **Census dates:**

The university requires that instructors report the attendance to the register at various points in the semester. Therefore, on **January 27<sup>th</sup>, 2025**, I will be taking attendance. Please make sure you are there for class on that date or notify ahead of time if you will not be there. An unauthorized absence will impact your final grade.

**Academic Misconduct:** Plagiarism of homework, submitted written paper assignments and cheating on examinations will be interpreted as academic misconduct and will not be tolerated. Please refer to the University of Texas at Tyler current Undergraduate Catalog for academic policies and Manual of Policies and Procedures for Student Affairs (MOPPS, Chapter 8), regarding academic integrity, cheating and plagiarism. Allegations of academic dishonesty will be immediately referred to the office of Student Affairs and the UT Tyler Judicial Affairs. Ignorance of the rules and policies provides no protection from the consequences.

**UT Tyler Honor Code:**

*I embrace honor and integrity. Therefore, I choose not to lie, cheat or steal, nor to accept the actions of those who do.*

**Student Standards of Academic Conduct:** Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

- i. "Cheating" includes, but is not limited to:
  - copying from another student's test paper;
  - using, during a test, materials not authorized by the person giving the test;
  - failure to comply with instructions given by the person administering the test;
  - possession during a test of materials which are not authorized by the person giving the test, such as class notes or specifically designed "crib notes". The presence of textbooks constitutes a violation if they have been specifically prohibited by the person administering the test;
  - using, buying, stealing, transporting, or soliciting in whole or part the contents of an un-administered test, test key, homework solution, or computer program;
  - collaborating with or seeking aid from another student during a test or other assignment without authority;
  - discussing the contents of an examination with another student who will take the examination;
  - divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructor has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;
  - substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;
  - paying or offering money or other valuable thing to, or coercing another person to obtain an un-administered test, test key, homework solution, or computer program or information about an un-administered test, test key, home solution or computer program;
  - falsifying research data, laboratory reports, and/or other academic work offered for credit;
  - taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
  - misrepresenting facts, including providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.
- ii. "Plagiarism" includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another's work and the submission of it as one's own academic work offered for credit.
- iii. "Collusion" includes, but is not limited to, the unauthorized collaboration with



another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.

- iv. All written work that is submitted will be subject to review by plagiarism software.

#### **UT Tyler Resources for Students:**

- [UT Tyler Writing Center](http://www.uttyler.edu/writingcenter) (903.565.5995), [writingcenter@uttyler.edu](mailto:writingcenter@uttyler.edu)
- [UT Tyler Tutoring Center](http://www.uttyler.edu/tutoring) (903.565.5964), [tutoring@uttyler.edu](mailto:tutoring@uttyler.edu)
- The Mathematics Learning Center, RBN 4021, this is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- [UT Tyler Counseling Center](http://www.uttyler.edu/counseling) (903.566.7254)

#### **Collection of Student Work:**

Throughout the semester I will collect student work (best, average, and worst) for the ABET outcomes notebooks. This will require me to make a copy of your work, keep your original and return a copy of the graded work to you. I will not draw attention as to what level of work you accomplished. **NOTE: On certain assignments, if your work is deemed to be unsatisfactory you may be asked to resubmit the assignment until it becomes satisfactory.**

**Students Rights and Responsibilities:** To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link:

<http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html> .

**Grade Replacement/Forgiveness and Census Date Polices:** Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at <http://www.uttyler.edu/registrar>. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date is the deadline for many forms and enrollment actions that students need to be aware of. These include:

- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- Being reinstated or re-enrolled in classes after being dropped for non-payment

- Completing the process for tuition exemptions or waivers through Financial Aid

**State-Mandated Course Drop Policy:** Texas law prohibits a student who began college for the first time in fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).

Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Petitions for exemptions must be submitted to the Registrar's Office and must be accompanied by documentation of the extenuating circumstance. Please contact the Registrar's Office if you have any questions.

**Disability Services:** In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychiatric disabilities. If you have a disability, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to [cstaples@uttyler.edu](mailto:cstaples@uttyler.edu)

**Student Absence due to Religious Observance:** Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

**Student Absence for University-Sponsored Events and Activities:** If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

**Social Security and FERPA Statement:** It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

**Emergency Exits and Evacuation:** Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do Not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Prepared by: Shariful Huq  
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 Department of Civil Engineering and Construction Mgmt.

<b>CMGT4315 Course Schedule (Subject to change as needed throughout the semester)</b>				
<b>TENSION MEMBER</b>				
<i>Date</i>	<i>Lesson</i>	<i>Topic for Class</i>	<i>Reading Assignment</i>	<i>HW Assignment</i>
1/14	1	Syllabus and Intro/Project	TEXT Chapter 1	1.5-1, 1.5-3 & 1.5-4 (p. 17)
1/16	2	Steel Design Concepts	TEXT Chapter 2	2-1, 2-2, 2-3, 2-4 & 2-4 (p. 38-39)
<b>1/20</b>		<b>Martin Luther King, Jr. Holiday</b>		
1/21	3	Tensile Strength	TEXT Chapter 3: Section 3.1 & 3.2	3.2-1a, 3.2-4a, 3.2-6a & 3.2-7a (p. 90-92)
1/23	4	Effective Area	TEXT Chapter 3: Section 3.3	3.3-1 & 3.3-2 (p. 92-93)
<b>1/27</b>		<b>Census Date</b>		
1/28	5	Staggered Fasteners	TEXT Chapter 3: Section 3.4	3.4-1, 3.4-2a & 3.4-5a (p. 96-98)
1/30	6	Block Shear	TEXT Chapter 3: Section 3.5 & 3.6	3.5-1, 3.5-3 & 3.5-5ab LRFD (p. 99-101)
2/4	7	Design of Tension Member	TEXT Chapter 3: Section 3.6	3.6-1a & 3.6-2a (p. 102)
2/6	8	Exam # 1 Review of Tension Member AND Project Discussion	-	-
<b>2/11</b>	<b>9</b>	<b>Exam # 1 – Tension Member</b>	<b>TEXT Chapters 1 (p. 3-19), 2 (p. 21-39) &amp; 3 (p. 41-76, 90-103)</b>	
<b>COMPRESSION MEMBER</b>				
2/13	10	introduction, Column Theory, Effective Length More Effective Length	TEXT Chapter 4: Sections 4.1 to 4.3 (p. 109-121) Section 4.7 (p. 138-155)	Work in Progress
2/18	11	Local Stability & Tables for Compression Members	TEXT Chapter 4: Sections 4.4 & 4.5 (p. 121-132)	
2/20	12	Design of Compression Member	TEXT Chapter 4: Sections 4.6 (p. 132-138)	
2/25	13	Exam # 2 Review of Compression Member AND Project Discussion	-	-
<b>2/27</b>	<b>14</b>	<b>Exam # 2 – Compression Member</b>	<b>TEXT Chapter 4</b>	
<b>BEAM MEMBER</b>				
3/4	15	Introduction, Bending Stress and the Plastic Moment, Stability	TEXT Chapter 5: Sections 5.1 to 5.3 (p. 189-198)	
3/6	16	Classification of Shapes, Bending Strength of Compact Shapes	TEXT Chapter 5: Sections 5.4 & 5.5 (p. 198-211)	
3/11	17	Beam Member	TEXT Chapter 5: Sections 5.8 (p. 216-224) TEXT Chapter 5: Sections 5.9 (p. 224-226)	-
3/13	18	Holes in Beams Members	TEXT Chapter 5: Sections 5.12 (p. 245-248) AND Exam 3 Review/Project Discussion	-
<b>3/17 ~ 3/21</b>	-	<b>SPRING BREAK</b>		

3/25	19	Exam # 3 – Beam Member	TEXT Chapter 5	
<b>BOLTED CONNECTION</b>				
3/27	20	Bolted Connection Design	-	
3/31	-	Last day to withdraw from one or more courses	-	Deadline for Submitting Census Work via Canvas
4/1	21	Bolted Connection Design (Cont'd)	-	
4/3	22	Bolted Connection Design (Cont'd)		
4/8	23	Bolted Connection Design Review		
<b>WELDED CONNECTION</b>				
4/10	24	Weld Connection Design		
4/15	25	Weld Connection Design (Cont'd)	-	
4/17	26	Weld Connection Design (Cont'd)		
<b>PROJECT DISCUSSION AND MISC</b>				
4/22	27	Project Discussion		
4/24	28	Course Wrap-up and Final Review		