

MEMORANDUM FOR STUDENTS ENROLLED IN CMGT 4315

Spring 2022

SUBJECT: Introduction to Construction Structural Systems

1. Welcome to CMGT 4315 (Construction Systems) 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. We will meet every Tues and Thur from 9.30 am to 10.50 am in room #0A217 (HEC). Reading and homework will be according to the course schedule attached.

2. **Course Objectives:**

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

The following are course competencies:

- a. **Skilled Communicator**—the student will exhibit mastery in communicating thru exercises in explaining work results and assigned class exercises.
  - b. **Interpersonal Skills**—the student will display team work skills in assigned group exercises.
  - c. **Solving Problems (Critical Thinking)**—the student will use lecture and demonstration to foster conceptual thinking quantitative/statistical skills, in making drawings according to specifications.
  - d. **Issues in Ethical Decision Making and Behavior**—the student will understand and exhibit the ethical decision making in the completing individual homework assignments, and in working with other students as part of a team.
  - e. **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.
  - f. **Technology Competence** - Competence in structural systems and engineering principles learned and in the application to construction management processes and practices.
4. ***Students are expected to attend all class meetings.*** 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 to be testable material.
5. You are encouraged to seek additional instruction before, during, and after class or by one on one help set up by appointment. My office is in room HEC A0221. My email is [shossain@uttyler.edu](mailto:shossain@uttyler.edu). Email is the best way to get a hold of me. You can also call my office. My office hours is posted outside of my office. Feel free to drop by. Making an appointment will help ensure your get the time you need. Communicating in a timely manner is a key professional skill. Note: If you miss any 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. **There is no makeup process** –

6. Classroom Procedures:

- a. Bring study notes, note-taking material, and calculator to every class. Class preparation is your individual responsibility.
- b. Class begins with a presentation on the topics of the day.
- c. Students practice skills in class.
- d. In class assignments for same day submittal will be given as we go thru the material.
- e. Textbook: *Steel Design* (5<sup>th</sup> Ed.) by William T. Segui (ISBN 978-1-111-57600-9)

g. **Electronic Devices Policy –**

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

- ***The use of any electronic device, except an approved calculator, is not permitted during class and 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, [www.ncees.org/exams/calculator-policy/](http://www.ncees.org/exams/calculator-policy/)).

6. Exams and Grading:

**Course Points**

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Midterm Exams (02 nos)	25%
Homework/Problem Sets	15%
Professional Practice Grade	10 %
Final Exam	30%
Semester Project	20%

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Total = 100%

7. How You Should Prepare for Lessons:

**DO the HOMEWORK assigned!**

- b. The Course Text: You will find the illustrations in the optional text to be very informative

- and the numerous examples very practical and straight forward.
- c. **Solve Problems:** This 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 principals involved. Problem sets are assigned throughout the course and must be completed and turned in for grade.
  - d. **Your Notebook:** The record shows that the best students keep the best notebooks. You should organize your notebook so that all material for each lesson can be easily referenced.

e. Homework - Problem Sets (PS)

- 1) Your homework should be completed in a neat, orderly fashion. Clearly present a **brief problem statement or a sketch** with your solution. Clearly and concisely explain each step.
- f. Assigned readings. Doing the assigned reading prior to class will help you to understand the material presented during the instruction and will fill in gaps for things we do not cover (***I will not cover everything***). It will also make you more familiar with terms and concepts to be covered. There may be **unannounced quizzes** that cover assigned sections of the text.

- 8. Graded Events:** All Graded Events are mandatory and become part of your grade. Note that failure to submit any required work will **result in a 0 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 will both be graded.

- a. **IN CLASS WORK:** work assigned should be submitted individually.
- c. **HOMEWORK ASSIGNMENTS:** These exercises allow you to demonstrate you have mastered the topics that you have studied. These problems will present you with relevant problems requiring application of the topics and principles learned in the classroom, and computing skills. Collaboration is NOT ALLOWED on homework assignments.

**9. Late Submissions.** It is a basic principle of professionalism that **“Professionals are not late.”** A “COORDINATED LATE” submission occurs when you will miss the required date for an assignment and you contact me at least 24 hours in advance. Coordinated late submissions means you contacted me at least 24 hours **before** the due date for approval of the absence from the assignment.

\* An approved absence from the class does not have any grade impacts. Make up work will be developed for an approved absence.

**10. 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>

**11. UT Tyler Honor Code**

Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

Representation of other’s work as your own work will not be tolerated. Cheating on examinations,

quizzes, and homework and the false representation of any class work as being done by you will be interpreted as academic dishonesty. Academic dishonesty will be subject to disciplinary action as outlined by the UT Tyler Student Guide on Conduct and Discipline

### **12. Campus Carry**

We respect the right and privacy of students 21 and over who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>

### **13. Grade Replacement/Forgiveness and Census Date Policies**

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. (For Fall, the Census Date is Sept. 12.) 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.

**14. The Census Date** (Sept. 12th) is the deadline for many forms and enrollment actions of which students need to be aware. 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

### **15. 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.

### **16. 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 apply 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)

### **17. 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.

### **18. 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.

### **19. 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.

### **20. 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.

**21. 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 instructors 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 SafeAssign™, available on Blackboard.

## 22. UT Tyler Resources for Students:

- UT Tyler Writing Center (903.565.5995), [writingcenter@uttyler.edu](mailto:writingcenter@uttyler.edu), <http://www.uttyler.edu/writingcenter/>
- UT Tyler Tutoring Center (903.565.5964), [tutoring@uttyler.edu](mailto:tutoring@uttyler.edu), <https://www.uttyler.edu/tutoring/>
- 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 (903.566.7254) <https://www.uttyler.edu/counseling/>

**23. 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.

**24. Tobacco-Free Campus** To promote the health, well-being and safety of university students, faculty, staff and visitors, UT Tyler will become a tobacco-free campus. Beginning Aug. 15, 2016, all forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This includes, but is not limited to: cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco and all other tobacco products. This policy applies to all members of the university community, including students, faculty, staff, university affiliates, contractors and visitors. Adherence to the policy will be the responsibility of all members of the university community. All students, faculty, staff, university affiliates, contractors and visitors to campus will be expected to comply with the policy. For more information about UT Tyler becoming a tobacco-free campus, see the [Tobacco-Free FAQ page](#).

Instructor:  
Amjad Hossain, PE  
(903) 566-6288  
shossain@uttyler.edu

### CMGT 4315 Course Schedule (Subject to changes during semester)

Date	Lesson	Material Covered	Reading	Assignment
	1	Syllabus & Guest	CH1	1.5-1,-3,-4
	2	Steel Design Concepts	CH 2	2-1 to -5
	3	Tensile Strength	3.1 & 3.2	3.2-1,-4,-6,-7
	4	Effective Area	3.3	3.3-1,-2
	5	Staggered Fasteners	3.4	3.4-1,-2,-5
	6	Block Shear	3.5	3.5-1,-3,-5
	7	Tension Members TEST #1	CH3	
	8	Compression Members	Pg 109-121	4.3-1,-2,-3
	9	Compression Members	4.4 to EX 4.3 then 4.5, SKIP 4.6, then 4.7 to EX	4.3-5,-6,-7 4.4-1,-2,-7
	10	Test 2 Compression Members	CH4	
	11	Beams Member	CH5.1 to 5.2	5.2-1,-3,-4
	12	Beam Member	CH5.4, 5.5	5.4-1,-2 5.5-1,-2,8-1,-3
	13	Beam Member	5.8 p216-218 5.9 to pg 224 EX 5.9	
	14	Holes in Beams Members	5.12	5.12-1,-2,-3
	15	Test #3 Beams	CH 4	
	16	Bolted Connectors	CH 7.1 to 7.3	7.3-1,-2 7.4-2,-3
	17	"	7.4-7.5	7.6-5
	18	"	7.6	
	19	Bolts	CH 7	
	20	Welds	CH 7.10 to EX 7.12	7.11-1,-2
	21	Welds	Pg 453 to	7.11-3,-4
	22	Welds		
	23	Welds	CH7	
	24	Lab Bolts		
	25	"		
	26	LAB Welds		
	27	LAB Welds		
	28	Course Wrap Up/Final Exam		



