

MEMORANDUM FOR STUDENTS ENROLLED IN CMGT 3310

CMGT 3310

Spring 2021

1. Welcome to CMGT 3310 Intro to Construction Systems (Statics) -- During the upcoming semester you will find our study of Statics and Construction Systems to be **challenging** *and* it will give you the **basic engineering and design critical skills** you will use for the remainder of your professional careers in engineering and construction.
2. We will meet according to the course schedule shown on last page which also includes the course topics.
3. The following are course competencies you will be evaluated on your **knowledge and practice** of key:
 - a. **Communication Skills**—the student will help develop their communication skills by presenting homework and test solutions.
 - b. **Problem Solving (Critical Thinking)**—the student will use lecture and demonstration to foster conceptual thinking skills, drawings, bid proposals and learning project standards and specifications.
 - c. **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.
 - d. **Competence in Engineering and Technology Principles** Competence in construction and engineering principles and in the application to construction management processes and practices.

Course Objectives:

1. Understand the basic principles of engineering mechanics.
2. Apply these mechanics (statics) to building systems problems
3. Be able to use Free Body Diagrams in analysis of problems.
4. Understand the concepts of Stress, Strain ,and Thermal Changes on the strength of materials.
5. Understand and solve for the centroid and Moment of Inertia at any point in any structural element.
6. Understand the concept of the Radius of Gyration in a structural member.
7. Determine the internal forces in a structural element under loads (axial, shear, moment, torque)

1. We will meet *every Mon , Tuesday, and Friday*

Section 1 from 11:15 to 12:10 in Room RBN 3039

Section 2 from 12:20 to 1:15 PM Room RBN 3039

-- IAW the course schedule (see Encl 1). There are 28 lessons this semester – and they are an **hour and 20 min long** – a lot of material each lesson –staying up on reading and homework is critical –we make big jumps each class in knowledge and practice!

- a. I will teach based on the schedule in Enclosure 1. If you will miss a scheduled class, you are still responsible for turning in the homework assigned for that day (send to me by email) and the material covered in class and **you will not get the participation points (Quiz) for the lesson** if one is given unless I have given an authorized absence.
- b. I am in my office every day -- always feel free to come by to see me in my office – BEST PRACTICE is to **email me ahead of time** to set up an appointment for when you would like to meet. My office hours are posted on my office door, RBS 1037.

2. Class Room Procedures:

- a. Bring study notes, **textbook**, note-taking material, and calculator **to every class**. Class preparation is your individual responsibility.

In engineering we use the professional learning model – self read, study, apply –THEN discuss details and review items of concern (what you did not understand properly in practice) –***WE DO NOT Lecture the lessons!***

Note: I will often pick someone at random at the start of class to show how they accomplished any homework problems due that day – so be ready and be prepared.

- b. **NO ELECTROIC DEVICES are to be used in class EXCEPT your calculator** – no exceptions –**that means no cell phones, no computers, no ipads, no smart watches, etc** – there is no material and tasks covered in this class that will require technology to accomplish them. **ALL DEVICES are to be off and stowed away at start of class.**

- 3. **Mandatory Textbook:** *Statics and Structural Strength of Materials for Architecture and Building Construction* (4th Ed.) by Barry Onouye and Kevin Kane (ISBN 978-0-13-507925-6)

DO NOT GET INDIA VERSION ON AMAZON -- I will check for the text during an upcoming class!!

- 4. Final Grade Weighting Scale:

Course Points	Grade Scale
Hour Exams (4 at 100 each)	(70 %)
Team Project	(15%)
Homework/Quizzes	(5 %)
Professional Practice Grade	<u>(10 %)</u>
	100%

Note: Your final grade is made up according to this weighting scale.

Note: I reserve 10% of the grade for Professional Practice Grade *participation grades*. This is **purposefully large enough** to impact (help or hurt) your total course grade by one letter. Students are expected to:

1. **Attend ALL** classes and **BE ON TIME**
2. **Participate** in discussions,
3. **Answer questions** presented in class (to include in class board exercises)
4. **Seek help** (if necessary) outside the class – attend any tutorials or test prep classes
4. **Be responsible** for all material and announcements discussed in class.

Note: **If you get less than 65% as your final combined grade you will fail the course.**

Remember **you need a C or better** in a core major class to move on to the next course.

Note: Your final grades **are only A, B, C, D, F --** We DO NOT “up” a grade if you are close to a B or an A! Your final average IS your final weighted average and is a result of the weighted grade not the raw average.

You will always know where you stand for your grade. **I will return all graded exercise to you quickly – keep track of them – I will also post grades in Canvas so can see what your cumulative grade looks like. If you do not agree with a posted grade see me ASAP –right after they are posted. DO NOT bring a disputed grade to me if that grade has been posted for more than 14 days. DO NOT wait till the last week of the course to talk about how to improve or salvage a poor grade. This is a cumulative process – not a single event.**

Note: 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 end of course

5. Exams:

- a. The dates for Exams are included in the course schedule. Official reasons for missing an exam include official University participation, family emergency or other unforeseen circumstance. Regardless of the reason you are required to notify the instructor **prior to the exam** and as early as feasible. **IF you are not present at the start of the exam you will receive a 0 –there are no late starters for an exam –the class room is closed once an exam starts!**
- b. All the Exams and the Final are **closed book**. I may depending on the exam allow a single 3 by 5 inch note card for an exam –I will let you know in advance if this applicable to an exam –**assume none is allowed unless I direct otherwise.**
- c. There are **NO hallway/bathroom/stress breaks** allowed during exams.
- d. **The ONLY electronic device allowed in an exam is an approved calculator. Your exam will be collected and your grade will be a zero AND you will be given an F for the course if you are caught cheating, walk out of the classroom without handing in your exam or using a non-approved electronic device/calculators, or use non authorized note material during the exam!**

7. Homework: Homework problems when assigned are **due at the start of class**. There is no such thing as late homework. I pick up the homework assignments at the start of class. **I may grade** various homework assignments.

Homework is an assessment of your ability to self-learn and study the material. As a construction engineer you have an on-going responsibility to the profession to continually learn. The lecture model you are most familiar with is not how professionals learn. We are capable of self-study and learning. Your homework is a measurement of your ability to learn key principles on your own. It is a vital skill to master. You cannot rely on the lecture and classroom to learn the material. It is a good tool to help get over specific principles that are stumping you. But this should be the exception. **You should be able to read and solve the material BEFORE you come to class.**

All homework is **mandatory** and **if graded** becomes part of your grade and failure to submit any required homework will result in a 0 for that exercise.

Note: Just like a real job –showing up to class on time is a real world obligation – there are no free missed classes. Just like the real jobs that many of you have -- **We expect you to be on time and ready when class starts.** If you come late you must see me the end of class and explain why you were late. If you are more late (**come into class after we start for any reason**) I may ask you to not enter the class and disrupt the quiz, project, or lecture. You will get a ZERO for that class and exercise if you do not have a valid excuse for your tardiness. Normally an excuse for being late would be death in family, validated urgent emergency, or some validated significant act of nature or God like a car accident. Anything not turned in by start of class is late. It is possible in extenuating circumstances to have A “COORDINATED LATE” submission that can occur when you contact me in advance. (That means 24 hours in advance except for real emergencies). In this case I will set up another time for you and I to review the class material missed. If you are late more than 2 times without a coordinated late we will meet with Dept Head and design a personalized system to help you be on time for class. You will get a zero for class participation also.

8. 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:

9. Grade Replacement/Forgiveness. If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to do so will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates will receive grade forgiveness (grade replacement) for only three course repeats; graduates, for two course repeats during his/her career at UT Tyler.

10. 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 12th day of class (See Schedule of Classes for the specific date). Exceptions to the 6-drop rule include, but are not limited to, the following: totally withdrawing from the university; being administratively dropped from a course; dropping a course for a personal emergency; dropping a course for documented change of work schedule; or dropping a course for active duty service with the U.S. armed forces or Texas National Guard. 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.

11. Disability Services. In accordance with federal law, a student requesting accommodation must provide documentation of his/her disability to the Disability Support Services counselor. If you have a disability, including a learning disability, for which you request an accommodation, please contact Ida MacDonald in the Disability Support Services office in UC 282, or call (903) 566-7079. **You MUST contact me for accommodation needs. I will not contact you first.**

12. Student Absence due to Religious Observance. Students who anticipate being absent from class due to a religious observance are requested to inform the instructor in advance for an excused absence and late submission of work.

13. Student Absence for University-Sponsored Events and Activities. If you intend to be absent for a university-sponsored event or activity, you and the event sponsor request must notify me at least two weeks prior to the date of the planned absence.

14. 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.

15. 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.

Encls 1 Joe Boylan CMGT 3310
Attachment 1

2021 Initial Course Schedule *(Subject to change as needed throughout the semester)*

Date	Lesson	Materials Covered	Assigned Reading	PS/Project Assignments
1/11/2021	1	Course Syllabus and Course Objectives & Truss Analysis by Joint and Sections	Pg 113 - 137	Prob 3.8 -3.10 3.12, 3.13
1/13	2	Truss Analysis by Sections	Pg 138 - 145	3.15,3.16,3.18, 3.19
1/15	3	"	"	3.20, 3.21
1/20/	4	Stress and Strain/ Thermal	251 -262	5.1 – 5.4
1/22	5	Stress and Strain/ Thermal		
1/25	6	Deformation and Strain	264 - 266	5.7 5.8
1/27	7	Thermal Effects on materials	289 - 293	5.16, 5.18
1/29	8	Retaining Walls	Pg 175-183	
2/1	9	Retaining Walls		
2/3	0	Retaining Walls		
2/5	11	Centroids	p300-309	6.1, .3, .4
2/8	12	Centroids		
2/10	13	Centroids		
2/12	14	MOI	P 311-323 skip p 317	6.6 .7, .12,.13
2/15	15	MOI		
2/17	16	MOI		
2/19	17	Radius of Gyration and Review	P329-330	Know example 6.12
2/22	Test 1			
2/24	18	Moment and Shear in a Beam	CH 7 p332-345	7.1,.2,.3,.4
2/26	19	Moment and Shear in a Beam	"	7.5,.6,.10,.12
3/1	20	Moment and Shear in a Beam		
3/3	21			
3/5	22	TEST 2	CH 7	
3/8-3/12	Spring Break			

3/15	23	Stress in a Beam	8.1 and 8.2	8.1 p 371
3/17	24	"		
3/19	25	"		
3/22	26	"		
3/24	27	Section Modulus	P375-379	
3/26	28	Section Modulus		8.2
3/29	29	Test chapter 3		
4/2	30	Load tracing	P195-205	
4/5	31	Foundation Systems and Loads	P206-219	
4/7	32	Lateral stability	P231-242	
4/9	33	Shear walls and wall stability	P243-247	
4/12	34	TEST 4		
4/14	35	Course Team Design and Build Project		
4/16	36	"		
4/19	37	"		
4/21	38	Project Presentation		
4/23	39	Course Wrap Up and Survey		

