MEMORANDUM FOR STUDENTS ENROLLED IN CMGT 2303.001L

SUBJECT: CMGT 2303 Construction Materials and Methods, Fall 2021

University COVID Requirements:
Please check with the university COVID Guidelines as they change. Go to https://www.uttyler.edu/coronavirus/ for more information.
Note: Face coverings are not required. Per CDC guidelines, they are strongly encouraged for those who are not vaccinated. Vaccination is free for everyone. You can get one at your local pharmacy. The university also has vaccination clinics. See the above website for more information.

Recording of Class Sessions
Class sessions may 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.

1. **Welcome to CMGT 2303 – Construction Materials and Methods.** In this course, we will explore the fundamental materials, methods and sequences of the construction process; with emphasis on design, specification, purchase and use of concrete, steel, masonry and wood. You will also gain an understanding of the uses of construction materials. I am confident that you will find this course to be interesting, challenging, and rewarding. A tentative course schedule and introduction to instructor are provided in Attachments 1 and 2. In the course laboratory, you will gain some hands on experience in construction methods. Specific course objectives are provided in Attachment 3. **Prerequisites:** None. **Credit Hours:** 3.

2. **Attendance:** You are expected to attend all laboratory meetings. If you miss a lab you will get a zero for that lab but still must make up the work as it will be on the exams. All lectures will be online. You will take a quiz after each lecture which will count towards your attendance/participation for the class. It is important that you keep up with the online work as the information learned will be used in the labs and will be on exams.

3. **Extra Help:** You are encouraged to seek additional instruction during my office hours, before/after class, or by appointment. Take advantage of this opportunity, its FREE and really will help!

4. Class Room Procedures:

a. Bring study notes, textbook, note-taking material, and calculator to every Lab. You may not borrow or exchange calculators during graded events. If your calculator fails during a graded exercise, I am not responsible to furnish a substitute. Class preparation is your individual responsibility. Please refer to Calculator Policy below.

b. You may be required to use colored pencils, highlighters, or a straight edge on assignment, in addition, colors and straight lines can help with emphasis and clarity in your notes.

c. There will be a lab quiz given at the beginning of each lab to insure students are on time to lab. Missed lab quizzes due to tardiness may not be made up. It is your responsibility to come to Lab prepared. Check Canvas for all preparation requirements.

5. Course Materials:

a. **Textbooks:**
Fundamentals of Building Construction, Materials & Methods, 6th Edition by Allen and Iano, 2014 or later, Wiley, ISBN 978-1-118-82020-9. Older editions are acceptable.

b. I will post additional course materials on Canvas. Canvas enrollment is now automatic with course registration, but you should ensure that you can access the class Canvas page.

c. All assignments and labs will be posted on Canvas. It is your responsibility to check the site for announcements, changes, and addendums.

d. I may also on occasion place homework tips or points of clarification on Canvas. When I do so I will make a Canvas announcement which should send you an email alert. Therefore, check your Patriot email account often.

6. Exams and Grading:

a. Grade Breakout and Cutoffs:

Course Points

Assignments / Lab Quizzes	490	(24.5%)
Laboratory Experience	500	(25%)
Professional Practice/ online lecture quizzes	200	(10%)
Midterm Exams (3 at 170 each)	510	(25.5%)
Final Exam	300	(15%)
	2,000	(100%)

University Guidelines for Grading will be used to determine your letter grade.

If you earn a cumulative average of less than 65% on all exams, or if you fail to earn at least 50% on the final exam you may fail the course, **regardless of your course grade**.

b. Mid-term Exams and Final Exam:

1) The dates for all exams are included in the course schedule. Official reasons for missing an exam are outlined in the UT Student Handbook. You are required to take a make-up Exam, regardless of your reason for missing the scheduled Exam. Report any conflict to me as soon as possible prior to the Exam.

2) The mid-term exams and final exam are closed book. Calculators are required for all exams. All reference materials will be provided with the exam.

3) The University is planning for all course work after the Thanksgiving break to be online. Therefor Exam 3 and the final will be online. Exams 1 and 2 will be face to face during a lab period.

c. Calculator Policy
   1) 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.
   2) The approved calculators include the following: (Please check the NCEES website for a complete listing, www.ncees.org/exams/calculator-policy/
   3) Examples include but are not limited to:
      Hewlett Packard – HP 33s, HP 35s, and no others
      Casio – All FX 115 models
      Texas Instruments – All TI 30X or TI-36X models.
   4) If you are unsure about your calculator, it is your responsibility to check with the instructor for approval.

d. Cell Phones: Please remember to turn off sound to phones prior to class.

e. Collection of Student Work: Throughout the semester I will collect student work (best, average, and worst) for the accreditation and outcomes notebooks. Selected materials will be scanned and use for this purpose. I will not draw attention as to what level of work you accomplished.

7. **Assignments:** Assignments will typically be made on a daily basis. Students may *discuss* their solutions with one another, but each student must submit their own, **independent** solutions (i.e. you may not just copy someone else's work. The assignment due date and due times will be clearly given in Canvas. Most assignments will be turned in on Canvas which time/date stamps your work.

   ASSIGNMENT FORMAT: The production of a neat, organized, high-quality homework assignment cannot be overestimated nor can its importance to your course grade be overstated. A homework assignment should be something you are proud of and not something hastily "slapped together". Toward this end, considerable emphasis will be placed on not only getting the correct answer but also on how the solution is presented.

   All homework is mandatory and becomes part of your grade. As a construction manager, 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 are important, and both will be graded. It is critical that you show all of your work and leave "footprints" so that it can be easily followed. This means that equation numbers, figures, or other tools used should be clearly identified.

a. PROBLEM SETS AND LAB REPORTS:

1) All paper Submittals should have a cover sheet with your name, course number, Asgn # or Project #, and Title of work.

2) **Use professional looking paper only or full-page printouts from Mathcad, Excel, etc.** You may neatly tape or glue short computer printouts onto the submittal at the appropriate

place in the logical flow of the problem. Clearly present **a brief problem statement and a sketch** with your solution. Clearly and concisely explain each step. For narratives of more than a line or two, use your word processor or the text capability if you are using MathCAD or Excel. If you are writing out a paragraph or more, you must type it.

3) Late Submissions. It is a basic principle of professionalism that **"Professionals are not late."** A "COORDINATED LATE" submission occurs when you will miss the deadline for a graded homework assignment and you contact me in advance. Notification immediately before the submission will not suffice. Deductions to your assignment grade for late submissions will be given as follows:

1. 0-24 hours late ---- a deduction of 25% of the earned grade
2. 24-48 hours late ----- a deduction of 50% of the earned grade
3. More than 48 hours late ---- No credit. **Assignments must still be submitted.**

Obviously, there are circumstances that can occur that make a timely submission impossible and I will work with you when and if they occur.

4) All homework in this course must be properly documented. As you are having your work reviewed it is likely that you might receive help from your classmates, just simply document it. Information from the course textbooks (equations and outlines of procedures), class notes, or me is considered immediately available to all students and need not be acknowledged or documented. **YOU ARE REQUIRED TO ACKNOWLEDGE AND DOCUMENT ALL OTHER ASSISTANCE AND REFERENCES USED.** Documentation will be accomplished in accordance with any manual for writing, footnote or endnote, for papers, but for written homework, just place the documentation right at the point you received help using who and what assistance.

b. 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. Reading the assignment prior to attending class will enhance your ability to learn!

8. **Grading Timeline:** I will endeavor to return graded papers by the next lab period. On-line work will be graded within one week of the assignment due date. Paper assignments will be returned during the next face to face meeting after they are graded. Projects take a little longer to grade and typically are graded and returned within two weeks of submittal.

All grades will be posted on Canvas. It is your responsibility to monitor your grades to determine if you are achieving the grade you desire.

9. **Extra credit**: There is none. Students who keep up with their assignments, and prepare for the exams will do well in this class.

10. **Professional Practice**. During this semester, a portion of your grade in this course (10%) will be derived from a level of professional practice expectations. These expectations include a professional demeanor and work ethic (attitude), consistent daily preparation (assignment reading, appropriate materials brought to class, completion of online quizzes,

etc.), commitment to learning and fulfilling obligations (attendance, on time), and being engaged in class activities (participation).

11. **Academic Misconduct**: Plagiarism of homework 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. Academic dishonesty will not be tolerated. Ignorance of the rules and policies provides no protection from the consequences.

UNIVERSITY POLICIES AND ADDITIONAL INFORMATION THAT MUST APPEAR IN EACH COURSE SYLLABUS

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.

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/rightsresponsibilities.php

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

UT Tyler a Tobacco-Free University

All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors.

Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products.

There are several cessation programs available to students looking to quit smoking, including counseling, quitlines, and group support. For more information on cessation programs please visit www.uttyler.edu/tobacco-free.

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.

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

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.

Disability/Accessibility Services

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University of Texas at Tyler offers accommodations to students with learning,

physical and/or psychological disabilities. If you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or you have a history of modifications or accommodations in a previous educational environment, you are encouraged to visit https://hood.accessiblelearning.com/UTTyler and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with Cynthia Lowery, Assistant Director of Student Services/ADA Coordinator. For more information, including filling out an application for services, please visit the SAR webpage at http://www.uttyler.edu/disabilityservices, the SAR office located in the University Center, # 3150 or call 903.566.7079.

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.

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 unadministered 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 unadministered test, test key, homework solution, or computer program or information about an unadministered 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 (903.565.5995), writingcenter@uttyler.edu
- UT Tyler Tutoring Center (903.565.5964), 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 (903.566.7254)

Attachment 1 Tentative Course Schedule

(Next three pages)

CMGT 2303.001L Construction Materials and Methods			
Lab: Face to Face; Lecture: On-line			Fall 21 aarnold@uttyler.edu
Module 1 -- Introduction, Codes & Foundations			
Lesson/Lab #	**Topic**	**Reading**	**Assignments**
Week 1	Making Buildings / Safety	Ch 1	Chapter 1 Key Terms Chapter 1 Making Buildings Quiz Assign 1: Building Codes Quiz
Lab 1	Tool Safety Practical Demo Storage Shed Roof		Online Safety Test Pre-Lab Safety Contract Quiz Assign 2: Class Introductions Wiki
Week 2	Foundations/Plan Reading	Ch 2	Chapter 2 Key Terms Chapter 2 Quiz Assign 3: Foundations
Lab 2	Build Batter Boards		Lab 2 Report
3-Sep	*Census Date*	*Last day to Withdraw Without Penalty*	
Module 2 -- Wood Construction			
Lesson/Lab #	**Topic**	**Reading**	**Assignments**
Week 3	Wood Light Frame Construction	Chs 3 & 5	Chapter 3 & 5 Key Terms Chapter 3 Quiz Assign 4: Wood Labels Assign 5: Wood Properties Chapter 5A Quiz: Walls
Lab 3	Light Frame Wood Construction for		Pre-Lab Lab Report
Week 4	2-Hour House Video Roofs Heavy Timber	Ch 4	Chapter 4 Key Terms Chapter 5B Quiz: Roofs Assign 7: Roof Calculations Chapter 4 Quiz Asgn 6: Heavy Timber
Lab 4	Design/Build Shed Roof		Pre-Lab: Framing Square Post-Lab: Drawings
Week 5	Exterior Finishes for Wood LFC	Ch 6	Chapter 6 Key Terms Chapter 6 Quiz 2-Hour House Quiz
Lab 5	Continue Shed Roof Build - Install wall sheething		Pre-Lab 5 Drawings Post-Lab 5 Report
Week 6	Interior Finishes for Wood LFC	Ch 7	Chapter 7 Key Terms Assign 8: Stairs Chapter 7 Quiz
Lab 6	**Exam 1** (2 parts--written and practical) Drawing / Begin Table Design		

Attachment 1 Tentative Course Schedule (Continued)

Module 3 -- Concrete, Masonry & Steel			
Lesson/Lab #	**Topic**	**Reading**	**Assignments**
Week 7	Brick Masonry	Ch 8	Chapter 8 Key Terms Chapter 8 Quiz Assign 9: Bricks
Lab 7	Build CMU Walls / Form Concrete Wall Cap		Work Table Design in Lab Lab 7 Report - Concrete
Week 8	Stone & Concrete Masonry, Brick Construction	Chs 9 & 10	Chapter 9 & 10 Key Terms Chapter 9 Quiz Chapter 10 Quiz Assign 10: Brick Walls
Lab 8	Mix concrete / Pour Wall Caps		Assign 11: Steel Lab 8 Report Masonry
Week 9	Hot Rolled Steel & Light Gauge Steel Frame	Chs 11 & 12	Chapter11 & 12 Key Terms Chapters 11 Quiz Chapter 12 Quiz
Lab 9	Steel Frame Constr. / Light Gage Steel Lab / Review Table Designs 7 day concrete tests		Lab 9 Report Steel
Week 10	Concrete construcion / Precast Concrete & Low Slope Roofs	Chs 13, 14 & 15	Chapter13, 14, & 15 Key Terms Chapter 13 Quiz Chapter 14 Quiz Chapter 15 Quiz Assign 12: Concrete Reinforcement
Lab 10	**Exam 2 -** Complete Table design		

Attachment 1 Tentative Course Schedule (Continued)

Module 4 -- Cladding			
Lesson/Lab #	**Topics**	**Reading**	**Assignments**
Week 11	Roofing, Glazing, & Windows and Doors	Chp 16 & 17	Chapter16 & 17 Key Terms
			Chapter 16A Quiz
			Chapter 16B Quiz
			Chapter 17 Quiz
			Asgn 14 Roofs
Lab 11	Build table / Install Doors/ Shingle Roof		Pre-Lab
			Lab Report
Week 12	Cladding Masonry, Concrete, Metal & Glass	Chp 18, 20 & 21	Chapter 18, 20, & 21 Key Terms
			Chapter 18 Quiz
			Chapter 20 Quiz
			Chapter 21 Quiz
			Asgn 15 Win & Doors
Module 5 -- Interior Finishes			
Lesson/Lab #	**Topics**	**Reading**	**Assignments**
Lab 12	Complete Table Build 28 day concrete test		Drawings and Materials list
Week 13	Interior Finishes	Chp 23 & 24	Chapter 23 & 24 Key Terms
			Chapter 23 Quiz
			Chapter 24 Quiz
Lab 13	**Exam 3**- Holiday Ornament/Table Lab Report Due		
Nov 22-27		**Thanksgiving Holidays**	
Week 14	Selecting Interior Finishes	Chp 22	Chapter 22 Key Terms
			Chapter 22 Quiz
Lab 14	**Review Final**		Bonus Lab Due Today
Week 15	Study Day		
		Scheduled Final Exam (double check) On line	

Attachment 2 Introduction to Instructor

Instructor: Althea Arnold, PE, PhD
Office: RBS 1035
Office Hours: "Office hours" will be scheduled on an as-need basis. Email me and include your name and three optional meeting times. I will respond to email within 24 hours, except on weekends.
Phone: 903-566-7002
Email: aarnold@uttyler.edu
Zoom Help: A zoom help session will be scheduled as needed for students who cannot meet in person.

Fall 2021
Time: Lectures are On-line;
Lab: Tuesday or Thursday 2:30 – 5:15 pm
Meeting Place: RBS 1024 & RBS 1029

I enjoy teaching Construction Materials and Methods here at UT Tyler. I have worked hard to build the construction lab with new tools, materials, and projects I know you will love to do. This year we will be building a Legacy project that will give you both practical experience and result in a new storage building for Construction Management.

I have worked in and around construction most of my life. My first experience in construction was when I was in high school and I helped my dad build our house. Since that time, I have built my own home and remodeled several houses. However, my experience is not limited to home building. I have been project engineer for a 10 million dollar grade separation project and have been involved in many projects from commercial building to roadway construction.

Additional personal achievements which qualify me to teach here at UT Tyler are as follows. I am a Registered Professional Civil Engineer and have over 20 years' experience in the field, working in design and construction management. I have experience in residential, commercial, and heavy civil construction. I have worked in Texas, California, and Maryland. I have also performed research for Texas Transportation Institute in crash testing of highway hardware.

I have a BS and MS in Civil Engineering specializing in structures and a PhD in Construction Management all from Texas A&M. My specialties are in Building Information Modeling (BIM) and Green Building. And I am also involved in a construction robotics project.

I enjoy teaching and like to challenge students to reach their full potential by involving them in the latest construction technologies. I expect students to be engaged in their own learning. I believe that the information, procedures, and techniques I provide students during the courses I teach will help them in the future to obtain and sustain professional and rewarding employment meeting their lifetime goals.

In this course, you will learn how to read drawings and interpret building code requirements. You will learn many construction methods and the use of common materials. We will cover a lot of material, but it should be fun and rewarding for those who keep up. I look forward to being your instructor this semester.

A. Arnold

CMGT 2303 Course Objectives:

1. Demonstrate tool safety and explain why it is important.
2. Develop an organized approach to building construction.
3. Interpret and apply building codes.
4. Explain the principles of wood construction.
5. Explain the principles of concrete, stone & masonry construction.
6. Explain the principles of steel construction.
7. Calculate material sizes from drawings.