MEMORANDUM FOR STUDENTS ENROLLED IN CMGT 3365

SUBJECT: Electrical and Mechanical Systems Administrative Instructions

1. Welcome to CMGT 3365 (Electrical and Mechanical Systems), a course in critical construction building "design" focused on mechanical, electrical, water, and power systems for buildings. This course focuses on:
   a. The proper application of water, electrical, heating, ventilation and cooling systems,
   b. The use of acoustic, water, wastewater and fire protection systems.
   c. You will also be introduced to the principles of sustainable building design and construction
   d. the basic principles associated with high performance ("green") building design and construction. These principles include energy efficient building envelope design; optimum use of passive heating, cooling and daylighting; and the installation of the most energy efficient mechanical and electrical systems.
   e. You will learn how to properly site and orient a building to optimize the impact of the sun on heating, cooling and lighting.
   f. You will become familiar with the concept of "cost of ownership and maintenance" for systems in your structures and you will develop a skill on minimizing the life cycle costs for these systems.
   g. You will learn about many types of heating, cooling, and ventilation (HVAC) systems.
   h. You will acquire a basic level of "professional practice" thru the 13 or so labs in the course
   i. You will be required to build a "TINY HOUSE" for Habitat for Humanity as a practicum for the course.

   Taken in combination these basic building blocks will broaden your construction management knowledge into the domain of the architect and engineer.

2. We will meet *every Monday and Wen (8:00 a.m. to 8.55a.m.) and there is a lab time scheduled for Friday as needed (8:00a.m. to 10:45a.m.)* IAW the course schedule (see Encl 1).

   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 and the material and you will not get the participation points available for each lesson unless I have given an authorized absence.

   b. I teach every day in general -- always feel free to come by to see me IF I am 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, A 221.

3. Class Room Procedures:

   a. Bring study notes, textbook, note-taking material, and calculator to every class. Class preparation is your individual responsibility. NOTE: *Home work is mandatory and 25% of your final grade* – it will help your final grade!

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

4. Mandatory Textbook: *Mechanical and Electrical Systems for Construction Managers - 3rd Edition (ISBN 978-0-8269-9663-2)*

5. Grade Breakout and Cutoffs:

Course Points	**Grade Scale**
Midterm Exam	(25 %)
Labs/ Semester Project	(20 %)
Final Exam	(45 %)
Professional Practice Grade	(10 %)
	100%

Note: I reserve 10% of the grade for Professional Practice Grade *participation grades*. Students are expected to:

1. Attend class,
2. Participate in discussions,
3. Answer questions presented in class (to include in class board exercises)
4. be responsible for all material and announcements discussed in class.

Grades Scale: A = 90% of more
B = 80 to 89%
C = 70 to 79%
D = 65 to 69%
F = anything less than 65%

If you get less than 65% as your final combined grade ***you will fail the course***. Note that final grades are only A, B, C, D, F. ***I will return all graded exercise to you – keep track of them – with them you know what your cumulative grade looks like.***

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 – you worked hard for the grade and will honor that by making sure you get the grade you worked very hard for.

6. Exams:

a. The dates for Exams are included in the course schedule. (Usually in lab period on Friday) 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. 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.

b. All the Exams and the Final are closed book and notes.

c. The ONLY electronic device allowed in an exam is an approved calculator. Your exam will be collected and your grade will be a zero if you are caught using a non-approved electronic device/calculators.

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.

All homework is mandatory and becomes part of your grade and failure to submit any required homework will result in a 0 for that exercise. **ALL** assistance you receive on your homework MUST be documented and attributed to the source from where you received the assistance (see below).

Note: Just like a real job –showing up to class is a real world obligation – there are no free classes. 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).

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

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/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 Tyler at Texas offers accommodations to students with learning, physical and/or psychological disabilities. If you have a disability, including non-visible a 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 an Accessibility Case Manager. 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.

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

Sk Amjad Hossain,M.A.Sc.,P.E.

CMGT 3365
Attachment 1

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

Date	Materials Covered	Assigned Reading	PS/Project Assignments
1/14/2019	Course Syllabus		
1/16/2019	Plumbing Materials LAB	CH 1 & 2	
1/18/2019	Lab and Tool Safety Class		
1/23/2019	Sanitary Drainage	CH 3	
1/25/2019	Safety and Tool Safety LAB		
1/28/2019	Design & Sizing Sanitary Drainage	CH 4	
1/30/2019	Design & Sizing Water Supply Systems	CH 5	
2/1/2019	Water Supply Systems LAB		
2/4/2019	Fixtures and Testing	CH 6 & 7	
2/6/2019	EXAM 1 – Water Systems		
2/8/2019	Paint prep and Paint C of E Tower		
2/11/2019	Comfort	Ch 8	
2/13/2019	Psychrometrics	CH9	
2/15/2019	Digital Controls and Swamp Cooler LAB		
2/18/2019	Psychrometrics	CH 9	
2/20/2019	Heating Systems	CH 10 &11	
2/22/2019	Heat Pump Lab		
2/25/2019	Refrigeration Principles	CH 12	
2/27/2019	AC Systems and Heat Pumps	CH 13 & 14	
3/1/2019	Framing – Traditional/Advanced/Light Steel		
3/4/2019	Automated Control Systems	CH 15	
3/6/2019	Heating and Cooling Loads	CH 16	
3/8/2019	Electricity/Solar/ Wind Power		
3/18/2019	Load Calculations	CH 17	
3/20/2019	Forced Air System Design	CH 18/19	
3/20/2019	Exam #2	CH 19	
3/22/2019	AC/DC, Power. Transfomer, Storage LAB		
3/25/2019	Electrical Principles	CH 20	

3/27/2019	Basic Electrical Quantities	CH 21/22	
3/29/2019	Solar Power on C of E Tower LAB	CH 22	
4/1/2019	Ohm's Law - Series and Parallel Circuits	CH 23	
4/3/2019	Electrical Plans	CH 24	
4/5/2019	Tiny House Trailer		
4/8/2019	Cables and Conduit	CH 26	
4/10/2019	Solar and Wind Power	CH 26	
4/12/2019	Tiny House Trailer	CH 27	
4/15/2019	Transformers	CH 28	
4/17/2019	Resistance, Inductance and Capacitance Lab	CH 29	
4/19/2019	Tiny House Trailer	CH 30	
4/22/2019	Exam 3		
4/24/2019	Tiny House Trailer		
4/26/2019	Course Evaluation		

CMGT 3365 WMEP Systems

Course Objectives:

1. List and define the major components of the electrical and mechanical systems of a building.
2. Explain how Indoor Environmental Quality is affected by the electrical and mechanical systems
3. Identify the fundamental considerations for building illumination
4. Analyze an illumination plan for adequacy and feasibility
5. Describe the basic consideration of building acoustics
6. Apply proper design considerations to the control of noise in a building
7. Prepare a plan for water use and recovery for a residential and commercial building
8. Organize water resources into a priority for efficient building design and construction
9. Describe basic fire control measures in a building
10. Describe the electrical systems and service for a building
11. Apply design specifications to the overall electrical system
12. Identify new technologies for the reduction of energy usage (energy efficiency) for a building
13. Describe devices for providing thermal control within a building
14. Describe and illustrate the heat flow within and throughout a building
15. Describe the necessary mechanical equipment for thermal control of an occupied space