

MEMORANDUM FOR STUDENTS ENROLLED IN CENG 5312 – Section 060

SUBJECT: CENG 5312 Administrative Instructions

1. Welcome to CENG 5312, Advanced Concrete Design. This course provides an overview of several advanced topics concerning concrete structures. The course is presented from an LRFD perspective. Topics covered include: reinforced concrete beams, slender concrete columns, one way and two way slabs, torsion, anchorage and development of reinforcement, deep beams, and prestressed concrete. The course is an on-line educational experience, which has some interesting consequences, as noted below.
2. Assignments in this course will include individual problem sets and a technical research report. At several points during the semester you will be required to demonstrate your ability to perform independent learning, i.e., you will be required to teach yourself new concepts. This course has 12 specific objectives (see Enclosure 2).
3. In this on-line class, all of the lessons for the semester are already posted. The lessons include several portions and will cover the material that is necessary to do the associated assignment (with the exception of material that is to be self-taught, see above). Each homework assignment covers two weeks of course material and is due the Monday following the second week by 10PM. Assignments are to be turned in electronically via Canvas. Assignments should be one file each week, either a PDF or WORD document – NOT a collection of files that cover portions of the assignment.
4. I teach 10AM-1PM AM MWF.
5. You are encouraged to seek additional instruction (AI, office hours MWF 1-2 PM or simply arrange a mutually agreeable time to meet with me). Take advantage of AI, it's FREE and really will help! My goal is to be commonly available to you for assistance, so feel free to stop by my office any time. However, for your satisfaction, I would advise calling first to ensure that I am physically here before you drop by. My office number is RBS 1006. My office phone number is 903-565-5870. My cell phone number is 903-245-7065. Please feel free to call my cell phone before 9 PM. My email address is mmcginnis@uttyler.edu. The best way to contact me is to simply drop by – I am almost always here!
6. Class Room Procedures:
 - a. Bring study notes, (**ACI Code**), note-taking material, and calculator to every class. Class preparation is your individual responsibility.
 - b. Textbooks:
 - i. ACI Building Code Requirements for Structural Concrete and Commentary 318-19
 - ii. Reinforced Concrete: Mechanics and Design (7th Edition), James K. Wight, Prentice Hall; ISBN-13: 978-0133485967The Wight text book is strongly recommended – while it is written from the ACI 318-14 perspective, the code changes from 2014 to 2019 are not strongly significant for this course and the book is a good one.
 - c. You are not required to use colored pencils or a straight edge, but colors and straight lines can help with emphasis and clarity in your notes.

- d. I will have announced and unannounced reading quizzes.
 - e. **ACADEMIC DISHONESTY:** Representation of other’s work as your own will not be tolerated. Cheating on examinations, quizzes, and homework and the false representation of work 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.
7. Exams and Grading:

- a. Grade Breakout and Cutoffs:

<u>Course Points</u>		<u>Grade Scale</u>
Mid-term Exams (1 at 300)	400 (13%)	A+ 96.67%..1933
Weekly HW (15 at 100 each)	1500 (50%)	A 93.33%..1866
Engineering Design Project	300 (10%)	A- 90.00%..1800
Instructor Grade / Reading Quizzes	100 (3%)	B+ 86.67%..1733
		B 83.33%..1666
Final Examination	<u>700 (23%)</u>	B- 80.00%..1600
	Total 3000 (100%)	C+ 76.67%..1533
		C 73.33%..1466
		C- 70.00%..1400
		D 65.00%..1300
		F <65.00%<1300

If you earn less than 65% on all Exams or if you fail to earn at least 50% on the Final you may fail the course, **regardless of your course grade**. Of course, final grades are only A, B, C, D, F. Therefore, a C- is a C for a final grade. This distribution is to graphically remind you of how well you are doing.

- b. Mid-Term Exam and Final Exam:

- 1) The date for Mid-Term Exam is included in the course schedule. It is a take-home exam and should be completed on your own without help from other students. Official reasons for missing an exam are outlined in the “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. The Final Exam is similar.

- c. Collection of Student Work:

Throughout the semester I will collect student work (best, average, and worst) for the ABET course and 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.

- d. Embedded indicators of accomplishment of program outcomes:

At times throughout the semester, portions of student work will be analyzed to determine if our program is accomplishing stated program outcomes based on established metrics. **If your work is below the minimum established metric, you will be required to repeat the assignment or that**

portion of the assignment until you achieve the minimum acceptable standard based on the metric.

8. Homework:

All homework is mandatory and becomes part of your grade, failure to submit any required homework will result in an incomplete. 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. It is critical that you show all of your work and leave “foot prints” so that it can be easily followed. No guess work should be required to see what you did. All submissions are due at the beginning of the class on the due date. Submissions should be turned in on-line. Additional guidance:

a. Problem Sets (PS)

- 1) Include a title sheet if your work constitutes more than 2 pages (and usually, it will☺) .
- 2) **Use Engineer paper only or full-page printouts from Mathcad, Excel, Visual Analysis, etc.** You may neatly tape or glue short computer printouts onto Engineer paper at the appropriate place in the logical flow of the problem. Only use one side of a page. 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 due date for a graded homework assignment and you contact me in advance. Notification immediately before the submission will not suffice. Point cuts up to the amounts below may be assessed for a “COORDINATED LATE” submission:

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|----------------------------|---|
| 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. <u>Assignments must still be submitted.</u> |

Obviously there are circumstances that will occur and 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 with one exception. If an equation from your AISC Manual is used, please provide the equation no. and page no. in brackets [] beside its first use. This will help you as you study from your homework at a later date. **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. Engineering Design Problem:

This course includes a semester long design problem which includes construction and testing of a concrete structure.

c. 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. To help motivate you to do the reading there will be quizzes that you are required to complete prior to class on many readings, and/or announced and unannounced quizzes during class.

9. There will be several opportunities to earn bonus points for outstanding work on problem sets and for completion of other optional assignments. Opportunities for bonus points will be clearly identified by me and announced in class. Make use of these opportunities to extend your learning!

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. 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

12. 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 Schedule of Classes for the specific date, this semester this is September 11). 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.

13. 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.
14. 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.
15. 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.
16. 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.
17. 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

Regards and Welcome!
Dr. Michael McGinnis

CENG 5312 Advanced Concrete Design: Course Objectives

1. Analyze and design singly reinforced concrete beams under the limit states of bending, bearing, shear and deflection.
2. Discuss the advantages and disadvantages of doubly reinforced concrete beams.
3. Analyze and design doubly reinforced concrete beams.
4. Identify appropriate limit states, analyze and design reinforced concrete members subject to torsion.
5. Analyze and design two way reinforced concrete slabs.
6. Detail reinforcement in common concrete applications to meet appropriate anchorage and development concerns.
7. Identify, analyze and design deep reinforced concrete beams using the strut and tie method.
8. Analyze and design concrete walls.
9. Analyze and design prestressed concrete beams,
10. Use modern engineering software to solve problems.