

University of Texas at Tyler - Department of Civil Engineering
CENG 4359/5359: Pavement Management Systems
Spring 2026

Instructor: Dr. Mena Souliman
RBS 1008

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Office Hours:
Wednesday & Thursday: 11:00AM-
12:00PM
Or by appointment

Lectures:

Online. Expect to attend few face to face meetings such as exams and check-in progress meetings of your term project/paper.

Laboratory:

None.

Course Website:

Canvas will be used to manage the course material for the semester. There you will find quiz assignments, handouts and other material pertaining to the class. **Please check there regularly.**

Catalog Description:

Conducts the project and network-level pavement management processes. Identifies the data to be collected and how to define and predict the conditions of the pavement.

Learning Objectives:

1. Explain the philosophy and the background of pavement management systems.
2. Analyze different pavement management levels and functions.
3. Explain the development process, development, and management of databases.
4. Analyze pavement management systems databases.
5. Explain different maintenance, rehabilitation, and reconstruction pavement techniques.
6. Develop needs analysis

Prerequisites:

CENG 3351

Required Texts:

None.

Supplemental Textbooks/References:

- Pavement Management Guide, American Association of State Highway and Transportation Officials, AASHTO, ISBN: 1-56051-155-9, 2001.
- Modern Pavement Management. Haas R., Hudson W. R., and Zaniewski J. Krieger Publishing Company, ISBN: 0894645889, 1994.
- Download the LTPP Distress Identification Manual from:
www.fhwa.dot.gov/publications/research/infrastructure/pavements/ltp/reports/03031

Topics Covered and Schedule (Tentative and Subject to Change)

Date	Materials Covered
Week 1 and Week 2	Module 1
Week 3 and Week 4	Module 2
Week 5 and Week 6	Module 3
Week 7 and Week 8	Module 4
Week 9 and Week 10	Module 5
Week 11 and Week 12	Module 6
Week 13 and Week 14	Module 7
4/20/2023	Course and Final Exam Review

Quizzes:

There will be a multiple-choice quiz at the end of each module. Each module will account of 3% of the total grade. This indicates that quizzes will account for 21% of the total grade.

Exams:

There will be one face-to-face final examination that will account for 35% of the total grade.

Exams dates may be moved up or pushed back depending on the progress of the lectures. You can use a calculator. No make-up exams or quizzes will be given except for medical or other similar hardships where advanced arrangements are made with the instructor; or in case of non-selective medical emergencies with appropriate physician's note or documentation. Other than circumstances described above, failure to take the exam at the scheduled time will constitute a grade of zero in the exam.

Term paper (For CENG 5359 students only):

Term paper topic will be assigned by the mid-February.

Grades (For CENG 4359):

Professional Practice = 9%
Quizzes (one quiz per module (3%) *7 = 21%
Final Exam = 35%
Term Project = 20%
Lyceum Poster = 15%

Grade Scale:

A: 90-100
B: 80-89
C: 70-79
D: 60-69
F: <60

Grades (For CENG 5359):

Professional Practice = 9%
Quizzes (one quiz per module (3%) *7 = 21%
Final Exam = 35%
Term Paper = 20%
Lyceum Poster = 15%

Grade Scale:

A: 90-100
B: 80-89
C: 70-79
D: 60-69
F: <60

****NOTE:** There will be no makeup work or extra credit allowed/granted at the end of or during the semester unless allowed/granted to everyone by the instructor. All assignments must be turned in at the appropriate time to receive credit.

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/. 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.
- If you are unsure about your calculator, it is your responsibility to check with the instructor for approval.

At the discretion of the course instructor, any calculator not meeting the requirements stated (especially in the case of a graphing calculator) may be used but only after an inspection of the device and a clearing of all the memory within the device, performed for the instructor at a time immediately prior to the exam. At any time during the exam your calculator is subject to a random search by the instructor. Failure or refusal to clear all

memory or to surrender your calculator to search will disqualify you from the exam immediately, unless you can produce a calculator meeting the requirements as stated above.

-Laptops/PDAs/MP3 players/Cell Phones or other electronic devices:

The use of any electronic device, except an approved calculator, is not permitted during 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.

Professional Practice:

Your professional practice grade will be computed based upon your attendance and the number of assignments you turn in that are completed in a professional manner.

Final day to withdraw:

The final day to withdraw from the course without penalty is March 23rd.

Census dates:

The university requires that instructors to report the attendance to the register at various points in the semester. Therefore, on **January 26th** I will be taking attendance. Please make sure you are there for class on that date or notify ahead if you will not be there.

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.

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.

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>

Grade Replacement/Forgiveness: If you are repeating this course for a grade replacement, you must file 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.

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.

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.

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.

Prepared by: Mena Souliman, Ph.D.

UNIVERSITY POLICIES AND INFORMATION

Check your Canvas!

Thanks,

Mena Souliman, Ph.D., P.E.

Chair and Professor

Civil and Construction Engineering and Management (CCEM) Department

msouliman@uttyler.edu