

University of Texas at Tyler - Department of Civil Engineering
CENG 4350/5359 Topics in Civil Engineering: Pavement Management Systems
Spring 2021

Instructor:	Dr. Mena Souliman RBS 1008 Tel: (903) 565-5892 msouliman@uttyler.edu	Office Hours: Tuesday&Thursday:2:00PM-3:00PM (via Zoom) Or by appointment
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Lectures:

Tuesday/Thursday: 3:30 PM-4:50PM: **Zoom synchronous and/or asynchronous sessions** as well as RBN 3039 (might be utilized for exam purposes and/or special meetings/sessions)

Laboratory:

None.

Course Website:

Canvas will be used to manage the course material for the semester. There you will find homework assignments, solutions, handouts and other material pertaining to the class. **Please check there regularly.** You will also submit all homework assignments via Canvas.

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/ltpp/reports/03031

Topics Covered and Schedule (Tentative and Subject to Change)

Date	Day	Materials Covered	
1/12/2021	T	Course Syllabus	Chapter
1/14/2021	TR	Introduction	1
1/19/2021	T	How do pavements fail?	1
1/21/2021	TR	Pavement management levels and functions	2
1/25/2021	M	Census Date	
1/26/2021	T	Overview of principals in PMS	2
1/28/2021	TR	PMS development and implementation	3
2/2/2021	T	Exam#1 Review	
2/4/2021	TR	Exam #1	
2/9/2021	T	Network-Level PMS	3
2/11/2021	TR	Functional versus structural performance	4
2/16/2021	T	Functional versus structural performance	4
2/18/2021	TR	Functional versus structural performance	4
2/23/2021	T	Functional versus structural performance	4
2/25/2021	TR	PMS databases	5
3/2/2021	T	PMS databases	5
3/4/2021	TR	PMS databases	5
Spring Break 3/8/2021-3/13/2021			
3/16/2021	T	Needs analysis	6
3/18/2021	TR	Needs analysis	6
3/23/2021	M	Exam #2 Review	
3/25/2021	TR	Exam #2	
3/29/2021	T	Last Day to Withdraw	3/27/2017
3/30/2021	T	Needs analysis	6
4/1/2021	TR	LCCA analysis	6
4/6/2021	T	LCCA analysis	6
4/8/2021	TR	MR&R prioritization	7
4/13/2021	T	MR&R prioritization	7
4/15/2021	TR	Class presentation	
4/20/2021	T	Class presentation	
4/22/2021	TR	Course and Final Exam Review	
Exam Week April 27 - April 30 Final Exam			

Exams:

There will be 2 midterm examinations and one final examination. The exams are **TENTATIVELY** scheduled and shown in page 3.

Exams dates may be moved up or pushed back depending on the progress of the lectures. You can use a calculator and instructor approved reference material. Solutions to exams will **NOT** be posted however, key answers will be demonstrated at class. No make-up exams 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.

Homework:

Homework will be assigned on regular basis. **Homework is due on the date assigned at the beginning of lecture.** No late homework will be accepted except when arrangements are made with the instructor ahead of time. Solutions will be posted on blackboard.

Term paper (For CENG 5359 students only):

Term paper topic will be assigned by the end of February.

Laboratory:

None.

Grades (For CENG 4350):

Professional Practice = 5%
 Midterm Exams (2) = 40%
 Final Exam = 25%
 Term Project = 15%
 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 = 5%
 Midterm Exams (2) = 40%
 Final Exam = 25%
 Term Paper = 15%
 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 29th.

Census dates:

The university requires that instructors to report the attendance to the register at various points in the semester. Therefore, on **January 25th** 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 ADDITIONAL INFORMATION

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 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.

Student Accessibility and Resources

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 \(SAR\)](#) 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

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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.

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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 SafeAssign™, available on Blackboard.

UT Tyler Resources for Students

- [UT Tyler Writing Center](mailto:writingcenter@uttyler.edu) (903.565.5995), writingcenter@uttyler.edu
- [UT Tyler Tutoring Center](mailto:tutoring@uttyler.edu) (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](tel:903.566.7254) (903.566.7254)

Important Covid-19 Information for Classrooms and Laboratories

Students are required to wear face masks covering their nose and mouth, and follow social distancing guidelines, at all times in public settings (including classrooms and laboratories), as specified by [Procedures for Fall 2020 Return to Normal Operations](#). The UT Tyler community of Patriots views adoption of these practices consistent with its [Honor Code](#) and a sign of good citizenship and respectful care of fellow classmates, faculty, and staff.

Students who are feeling ill or experiencing symptoms such as sneezing, coughing, or a higher than normal temperature will be excused from class and should stay at home and may join the class remotely. Students who have difficulty adhering to the Covid-19 safety policies for health reasons are also encouraged to join the class remotely. Students needing additional accommodations may contact the Office of Student Accessibility and Resources at University Center 3150, or call (903) 566-7079 or email saroffice@uttyler.edu.

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.

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