

EMIS 7300 Systems Analysis Methods
F 8:00am-6:00pm, Caruth 179

Use of Actual FACE MASK is REQUIRED to attend the class.

Simple coverings such as Bandanas, Gaiters, etc. are NOT Acceptable forms of protection.

Catalog Description:

Introduction to modeling and analysis concepts, methods and techniques used in systems engineering, design of products and associated production, and logistics systems and analysis of operational system performance. Specific topics include probabilistic and statistical methods, decision analysis, forecasting, optimization, queuing, and Monte Carlo simulation.

Student Learning Outcomes: *An ability to identify, formulate, and solve optimization problems for decision-making in a variety of application domains from manufacturing/production and services.*

Instructor: Halit Uster E-mail: uster@smu.edu
 Caruth Hall 309 Phone: (214) 768 3575

Books:

Title: Quantitative Analysis for Management Authors: Render, Stair, Hanna & Hale Edition: 13 th Edition Publisher: Pearson ISBN: 978-0134543161 (13 th Edition)	Title: Competing on Analytics: The New Science of Winning Authors: Davenport & Harris Edition: 2017 (Updated with a new intro) Publisher: Harvard Business Review Press ISBN: 978-1633693722
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Topics:

Day	Will be covered in lectures, please come prepared	Please read beforehand, be ready to discuss
J 7	Ch 1: Introduction to Quantitative Analysis Ch 2: Probability Concepts and Applications Ch 3: Decision Analysis	
J 21	Ch 4: Regression Models Ch 5: Forecasting	1-The Nature of Analytical Competition 2-What makes an Analytical Competitor? 3-Analytics and Business Performance
F 4	Ch 7: Linear Programming Models Ch 8: Linear Programming Applications Ch 9: Transportation, Assignment, Network Models	4-CoA with Internal Processes 5-CoA with External Processes
F 8	Ch 9: Transportation, Assignment, Network Models Ch 10: Integer, Goal, and Nonlinear Programming	6-A roadmap to Enhanced Analytical Capabilities 7-Managing Analytical People
M 4	Ch 12: Waiting Lines & Queuing Theory Models Ch 13: Simulation Modeling	8-The Architecture of Analytics and Big Data 9-The Future of Analytical Competition

Virtual Office Hours: For this semester, office hours can be anytime but by appointment. This means **we just need to setup a time to meet and I will send you a zoom invite at that time.** I strongly encourage each one of you to ask any questions you might have on the material during the lecture. It is very much to your benefit to get these points cleared as soon as they occur. You are strongly encouraged to make an appointment to visit with me whenever you have problems.

Grading: There will be two components including Homework Assignments (65%) and In-Class Assignments (20% Answers to Questions posted and 15% Class Participation especially in book discussion).

[93-100] A [90-93) A- [87-90) B+ [78- 87) B [75-78) B- [72-75) C+
 [62- 72) C [59-62) C- [48- 59) D

If you must miss any part of the course, then I must be notified in advance and a sufficient proof of emergency must be provided (e.g., a doctor’s note). If your absence is not approved, then you receive a zero.

Online Course Management: Course materials will be posted on Canvas. Class notes and any other material used will be posted on Canvas. **Please check it regularly.**

All homework assignments will also be posted, submitted, and graded on Canvas. All grades will be posted on Canvas.

Please note that all class material is COPYRIGHTED. No part of the material posted on Canvas can be re-posted, shared, distributed by any means. It is available to you only for your personal use.

Software:

+ You can download the Add-in Excel QM from publisher’s website. Please contact me if you have any difficulties. Please also make sure that built-in Excel add-in including Analysis ToolPak and Excel Solver are activated through Options>Add-in menu in Excel.

Other Information:

Disability Accommodations	Students who need academic accommodations for a disability must first register with Disability Accommodations & Success Strategies (DASS). Students can call 214-768-1470 or visit http://www.smu.edu/Provost/SASP/DASS to begin the process. Once they are registered and approved, students then submit a DASS Accommodation Letter through the electronic portal, <i>DASS Link</i> , and then communicate directly with each of their instructors to make appropriate arrangements. Please note that accommodations are not retroactive, but rather require advance notice in order to implement.
Sexual Harassment	All forms of sexual harassment, including sexual assault, dating violence, domestic violence and stalking, are violations of SMU’s Title IX Sexual Harassment Policy and may also violate Texas law. Students who wish to file a complaint or to receive more information about the grievance process may contact Samantha Thomas, SMU’s Title IX Coordinator, at accessequity@smu.edu or 214-768-3601. Please note that faculty are mandatory reporters. If students notify faculty of sexual harassment, faculty must report it to the Title IX Coordinator. For more information about sexual harassment, including resources available to assist students, please visit www.smu.edu/sexualmisconduct .

Pregnant and Parenting Students	Under Title IX, students who are pregnant or parenting may request academic adjustments by contacting Elsie Johnson (elsiej@smu.edu) in the Office of the Dean of Students, or by calling 214-768-4564. Students seeking assistance must schedule an appointment with their professors as early as possible, present a letter from the Office of the Dean of Students, and make appropriate arrangements. Please note that academic adjustments are not retroactive and, when feasible, require advance notice to implement.
Religious Observance	Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. Click here for a list of holidays.
COVID-19 and Other Medical-Related Absences	Students who test positive for COVID-19 and need to isolate, or who are notified of potential exposure, must follow SMU's Contact Tracing Protocol . To ensure academic continuity and avoid any course penalties, students should follow the same procedures described by their instructors as they would for any other medical-related absence in order to be provided with appropriate modifications to assignments, deadlines, and exams.
Excused Absences for University Extracurricular Activities	Students participating in an officially sanctioned, scheduled university extracurricular activity should be given the opportunity to make up class assignments or other graded assignments that were missed as a result of their participation. It is the responsibility of the student to make arrangements for make-up work with the instructor prior to any missed scheduled examinations or other missed assignments. (See 2020-2021 SMU Undergraduate Catalog under "Enrollment and Academic Records/Excused Absences.")
Student Academic Success Programs	Students needing assistance with writing assignments for SMU courses may schedule an appointment with the Writing Center through Canvas. Students who would like support for subject-specific tutoring or success strategies should contact SASP, Loyd All Sports Center, Suite 202; 214-768-3648; https://www.smu.edu/sasp .
Caring Community Connections Program	CCC is a resource for anyone in the SMU community to refer students of concern to the Office of the Dean of Students. The online referral form can be found at smu.edu/deanofstudentsccc . After a referral form is submitted, students will be contacted to discuss the concern, strategize options, and be connected to appropriate resources. Anyone who is unclear about what steps to take if they have concerns about students should either consult the CCC Reference Guide or contact the Office of the Dean of Students at 214-768-4564.
Mental Health Resources: On-Call and On-going Counseling Services	Throughout the academic year, students may encounter different stressors or go through life experiences which impact their mental health and academic performance. Students who are in distress or have concerns about their mental health can schedule a same-day or next-day appointment to speak with a counselor by calling Counseling Services . Counselors are available at any time, day or night for students in crisis at this number: 214.768.2277 (then select option 2). They will be connected with a counselor immediately. Students seeking on-going counseling should call the same number: 214.768.2277 (then select option 1) during normal business hours to schedule an initial appointment.
Campus Carry Law	In accordance with Texas Senate Bill 11, also known as the 'campus carry' law, and following consultation with entire University community, SMU chooses to remain a weapons-free campus. Specifically, SMU prohibits possession of weapons (either openly or in a concealed manner) on campus. For more information, please see: http://www.smu.edu/BusinessFinance/Police/Weapons_Policy .