



## IE 486 Service Systems Analysis COURSE SYLLABUS: SPRING 2025

### INSTRUCTOR INFORMATION



**Instructor:** Dr. Paul McCright, Instructor, College of Science and Engineering

**Office Location:** Room 213B, Charles J. Austin Engineering & Technology Building

**Office Hours:** Monday & Wednesday: 2:00-4:00 p.m.  
Tuesday & Thursday: 10:30-11:30 a.m.  
Thursday: 1:30-2:30 p.m.

**University E-mail Address:** Paul.Mccright@Tamuc.edu

**E&T Department Phone:** 903-886-5474

**E&T Office Fax:** 903-886-5960

**Preferred Form of Communication:** E-mail Communication Response Time: 24 hours

### COURSE INFORMATION

#### Materials – Textbooks, Readings, Supplementary Readings



**Textbook Required:** Bordoloi, S., Fitzsimmons, J., & Fitzsimmons, M. (2023) Service management: Operations, strategy, information technology. 10th Edition. McGraw-Hill Higher Education, ISBN-13: 9781264098354.

Instructor will provide lecture slides/ handouts as references too.

**Course Description:** This course focuses on analyses and visualization of engineering issues faced by service industries contrasted against production and manufacturing industries.

Emphasis is on service business models and technological tools that are used in serving various business including metrics to measure quality of services.

**Co-Requisite:** IE 495 Industrial Systems Design

**Course Location and Times:** Room 215; TTh 3:00 – 4:15 p.m.

### **Student Learning Outcomes**

Upon completion of this course, the student will be able to:

1. Analyze the various roles of service in our economy and define and apply a service strategy.
2. Apply techniques for ensuring service quality and evaluating long-term strategy planning.
3. New service development.
4. Utilize statistics, data analytics, operations research, and queuing theory techniques for optimizing service systems.

### **ABET Learning Outcome**

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**Outcome (4): An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts**

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## **COURSE REQUIREMENTS**

### **Instructional / Methods / Activities Assessments**

This course utilizes lectures and assignments to assist students in achieving the course learning outcomes. The assessment criteria for the stated student learning outcomes will include assignments, two exams, and a term paper.

Problems will be assigned to support the instructional material (either in-class assignment or homework assignment). Students will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice. Students will have an ability to communicate effectively through written essays and papers.

### **Student Responsibilities or Tips for Success in the Course**

1. Students are responsible to know the contents of the syllabus, including amendments that may be made during the semester.
2. Students are responsible for knowing all deadlines and meeting them throughout the semester.
3. Nothing contributes to success like good attendance and personal involvement in the course throughout the semester.

4. Whenever you have difficulty understanding concepts, techniques, or assignments, do not be shy about asking the instructor for help. (That's one of the instructor's key responsibilities.)
5. Maintain a professional attitude whenever interacting with the instructor, classmates, or visitors to the course.
6. Pay particular attention to any written work submitted on assignments or exams as spelling, punctuation, and grammar are always considered in assigning grades.

## Grading

Final grades in this course will be based on the following scale:

A = 90%-100%  
 B = 80%-89%  
 C = 70%-79%  
 D = 60%-69%  
 F = 59% or Below

### Point Distribution

Assessment Type:

Exam 1	25 %
Exam 2	25 %
Term Paper	25 %
Assignments	25 %
Total	100 %

## TECHNOLOGY REQUIREMENTS

The following technologies will be required for this class.

- A scientific calculator for exams.
- Microsoft Word, Excel, PowerPoint.
- Excel Solver
- LINGO

### LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements.

#### LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

#### LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

#### YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

## ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

## COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

### Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

### Interaction with Instructor Statement

The instructor will response to your questions on D2L tools within 24 hours if possible. For urgent questions, and for questions that are not answered within 24 hours, please use e-mail correspondence.

## COURSE AND UNIVERSITY PROCEDURES/POLICIES

### Course Specific Procedures/Policies

1. Assignments will be solved as assignments' feedback. Additionally, the solutions will be posted in the D2L system. One day late assignment is accepted with a 20% grade deduction; after this, no assignment will be accepted as the solutions will be posted online.
2. You will be expected to do all the readings and assignments throughout the semester. Understanding the assignments and learning from your mistakes will help in preparing you for the exams. Exams will test your understanding of the course lecture notes.
3. Each exam will be given during only a specified time that is published in the syllabus. Students will need a scientific calculator for exams.
4. No make-up exams will be permitted unless official documentation for absences is provided (e.g., death in the family, car accident with a police report, or illness with a doctor or hospital note).

5. There will be a term paper assignment made approximately halfway through the semester and due near the end of the semester. Details will be made available at the time of the assignment. Note that a significant portion of the grade for this assignment will be based on the professional quality of the writing, formatting, referencing, and general professional appearance of the document submitted. This paper will be 25% of the course grade.

## **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

## **University Specific Procedures**

### **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

<http://www.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette

<http://www.albion.com/netiquette/corerules.html>

### **TAMUC Attendance**

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

### **Academic Integrity**

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03>

UndergraduateAcademicDishonesty.pdf Graduate Student Academic Dishonesty 13.99.99.R0.10

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

## **Students with Disabilities – ADA Statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

**Office of Student Disability Resources and Services**

**East Texas A&M University**

Gee Library- Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [StudentDisabilityServices@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu) Website: Office of Student Disability Resources and Services

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

### **Nondiscrimination Notice**

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

### **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and ETAMU Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer. Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all ETAMU campuses. Report violations to the University Police Department at 903- 886-5868 or 9-1-1.

### **ETAMU Supports Students' Mental Health**

The Counseling Center at ETAMU, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit [www.tamuc.edu/counsel](http://www.tamuc.edu/counsel)

## **AI Use in Courses**

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

13.99.99.R0.10 Graduate Student Academic Dishonesty

## **Department or Accrediting Agency Required Content**

This course addresses ABET Student Learning Outcome 4: An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

# COURSE OUTLINE / CALENDAR

## TENTATIVE COURSE SCHEDULE & OUTLINE, Version 1 (Nov. 24)

Week	Day	Date	Topic	Source/Reading
1	Tu	1/14	Course Overview & Expectations	Syllabus
	Th	1/16	Introduction to the Service Economy	Ch. 1, pp. 3-22
2	Tu	1/21	Introduction to the Service Economy Village Volvo	Ch. 1, pp. 23-25 Case 1.1, 23-24
	Th	1/23	Due 1/28: <b>Assignment #1:</b> Xpresso Lube Service Strategy	Case 1.2, pp. 24-25 Ch. 2, pp. 27-38
3	Tu	1/28	Service Strategy	Ch. 2, pp. 38-52
	Th	1/30	Due 2/4: <b>Assignment #2:</b> The Alamo Drafthouse; New Service Development	Case 2.2, pp. 56-57 Ch. 3, pp. 58-72
4	Tu	2/4	New Service Development 100 Yen Sushi House	Ch. 3, pp. 73-81 Case 3.1, pp. 82-83
	Th	2/6	Due 2/11: <b>Assignment #3:</b> Commuter Cleaning The Service Encounter	Case 3.2, pp. 83-85 Ch.4, pp. 88-97
5	Tu	2/11	The Service Encounter Enterprise Rent-A-Car	Ch.4, pp. 98-104 Case 4.2, pp.105-108
	Th	2/13	Supporting Facility and Process Flows Health Maintenance Organization (A) Due 2/20: <b>Assignment #4:</b> Exercises 5.5, 5.7, 5.11, pp. 132-135	Ch. 5, pp. 111-128 Case 5.1, p. 139
6	Tu	2/18	Service Quality	Ch. 6, pp. 141-154
	Th	2/20	Service Quality Clean Sweep, Inc. Due 2/27: <b>Assignment #5:</b> Exercises 6.1, 6.2, 6.4, 6.6, pp. 167-169	Ch. 6, pp. 154-165 Case 6.1, pp 172-173
7	Tu	2/25	The Proper and Ethical Use of AI Generating Software in Professional Work	NSPE Code of Ethics
	Th	2/27	Review for Exam #1; Exam #1 Case Available Exam Preparation; <u>No Class Meeting</u>	
8	Tu	3/4	<b>EXAM #1 DUE: CHAPTERS 1-6 and Ethics</b>	
	Th	3/6	Process Improvement Sonora County Sheriff	Ch. 7, pp. 178-195 Case 7.1, pp. 195-196
	Tu	3/11	<b>SPRING BREAK</b>	

	Th	3/13	<b>SPRING BREAK</b>	
9	Tu	3/18	Service Facility Location Due 3/25: <b>Assignment #6:</b> Exercises 8.3,8.6,8.12, pp. 234-235	Ch. 8, pp. 212-225
	Th	3/19	Service Facility Location Health Maintenance Organization	Ch. 8, pp. 225-231 Case 8.1, pp. 235-237
10	Tu	3/25	Due 4/24: <b>Term Paper Assignment</b> Service Supply Relationships	Handout: Instructions Ch. 9, pp. 241-251
	Th	3/27	Service Supply Relationships Evolution of B2C E-Commerce in Japan	Ch. 9, pp. 251-262 Case 9.2, pp. 265-268
11	Tu	4/1	Globalization of Services	Ch.10, pp. 270-278
	Th	4/3	Globalization of Services Goodwill Industries of Central Texas Due 4/10: <b>Assignment #7:</b> FedEx: Tiger International Acquisition	Ch. 10, pp. 278-283 Case 10.1, pp. 284-286 Case 10.2, pp.286-289
12	Tu	4/8	Managing Capacity and Demand River City National Bank	Ch. 11, pp. 291-305 Case 11.1, pp. 325-327
	Th	4/10	Managing Capacity and Demand Discussion: Exercises 11.1,11.4,11.7 Due 4/17: <b>Assignment #8:</b> Exercises 11.3,11.5,11.9, pp. 314-316	Ch. 11, pp. 305-311 Ch. 11, pp. 314-316
13	Tu	4/15	Managing Waiting Lines	Ch. 12, pp. 328-344
	Th	4/17	Discussion: Exercises 12.1,12.2,12.3, pp. 351-352 Thrifty Car Rental Eye'll Be Seeing You	Case 12.1, pp. 345-346 Case 12.2, pp. 347-348
14	Tu	4/22	Capacity Planning	Ch. 13, pp. 350-353, 362-367
	Th	4/24	Renaissance Clinic (A) <b>TERM PAPER DUE</b>	Case 13.3, pp. 373-374
15	Tu	4/29	Review for Exam #2; Exam #2 Available	
	Th	5/1	Exam Preparation; <u>No Class Meeting</u>	
16	Tu	5/6	<b>EXAM #2 DUE: CHAPTERS 7-13</b>	