



COURSE PREFIX, #, SECTION, & TITLE
IE 305-01E Facilities Planning and Management – Spring 2024

INSTRUCTOR INFORMATION



Instructor: Dr. Paul McCright, Instructor, Engr & Tech Dept

Office Location: AG/ET Room 213B

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

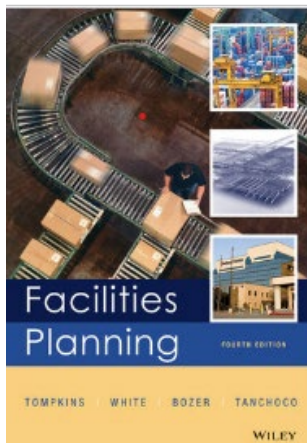
E&T Office Fax: 903-886-5960

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

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary
Readings

Textbook(s) Required: Tompkins, K.A., White, J.A., Bozer, Y.A., Tanchoco, J.M.A. (2010) *Facilities Planning*. 4th Edition. Wiley, ISBN-13: 978-0470444047.



Course Description

Study of production facilities, including location, planning design and management. Emphasis on production systems, machine selection, facility location-allocation, material handling, and storage and warehousing. Prerequisites: MATH 2318 with a minimum of C or better.

Student Learning Outcomes

- Analyze products and manufacturing processes by studying the functions involved in the product development cycle.
- Design a facility layout via systematic approaches.
- Identify locations of multiple facilities by applying analytical facilities location methods.
- Analyze and design material handling systems in a warehouse.

ABET Student Outcomes:

SLO 2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

COURSE REQUIREMENTS

Point Distribution

Assessment Type	%
Homework/Quiz	20
Exam 1	20
Exam 2	20
Exam 3	20
Term Project	20
Total	100

Based on the points received, the grades will be determined according to the criteria below.

Grade Criteria

A	B	C	D	F
100 - 90	89 - 80	79 - 70	69 - 60	59 - 0

The syllabus/schedule are subject to change.

Instructional Methods

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 homework assignments, three exams, and a term project.

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 as well as through oral presentations.

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.

TECHNOLOGY REQUIREMENTS

Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

The syllabus/schedule are subject to change.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

Desktop Support

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or point release of that major version) and the previous major version of iOS (the latest minor or point release of that major

The syllabus/schedule are subject to change.

Device	Operating System	Browser	Supported Browser Version(s)
			version). For example, as of June 7, 2017, D2L supports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version. Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
 - 512 MB of RAM, 1 GB or more preferred
 - Broadband connection required courses are heavily video intensive
 - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- **For YouSeeU Sync Meeting sessions *8 Mbps* is required.** Additional system requirements found here: <https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>
- You must have a:
 - Sound card, which is usually integrated into your desktop or laptop computer
 - Speakers or headphones.
 - *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.
- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: [JAVA web site http://www.java.com/en/download/manual.jsp](http://www.java.com/en/download/manual.jsp)
- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.
JavaScript is enabled.
Cookies are enabled.

The syllabus/schedule are subject to change.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
 - [Adobe Reader](https://get.adobe.com/reader/) <https://get.adobe.com/reader/>
 - [Adobe Flash Player \(version 17 or later\)](https://get.adobe.com/flashplayer/) <https://get.adobe.com/flashplayer/>
 - [Adobe Shockwave Player](https://get.adobe.com/shockwave/) <https://get.adobe.com/shockwave/>
 - [Apple Quick Time](http://www.apple.com/quicktime/download/) <http://www.apple.com/quicktime/download/>
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

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

Zoom Video Conferencing Tool

https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

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.

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

The syllabus/schedule are subject to change.

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

Preferred interaction with the instructor is an office visit during set office hours or an email message depending on the depth of interaction needed. The instructor is committed to being available during all office hours (subject to unusual circumstances) and to responding to emails as quickly as possible, but always within 24 hours of receipt of the message.

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. A group term project will be announced midway through the semester. It will provide the opportunity to practice all the steps of planning a facility layout and will require a formal written report as well as an oral presentation.

The syllabus/schedule are subject to change.

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/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

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

<https://www.britannica.com/topic/netiquette>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedures 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](#)

[Undergraduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

[Graduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf>

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

The syllabus/schedule are subject to change.

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

Velma K. Waters Library Rm 162

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

Fax (903) 468-8148

Email: 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>

The syllabus/schedule are subject to change.

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

AI use policy [Draft 2, May 25, 2023]

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

The syllabus/schedule are subject to change.

Department or Accrediting Agency Required Content

This course addresses ABET Student Learning Outcome 2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.

COURSE OUTLINE / CALENDAR

AT-A-GLANCE							2025 YEARLY PLANNER														
JANUARY							FEBRUARY							MARCH							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
			1	2	3	4							1								1
5	6	7	8	9	10	11	2	3	4	5	6	7	8	2	3	4	5	6	7	8	
12	13	14	15	16	17	18	9	10	11	12	13	14	15	9	10	11	12	13	14	15	
19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22	
26	27	28	29	30	31		23	24	25	26	27	28		23	24	25	26	27	28	29	
														30	31						
APRIL							MAY							JUNE							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
			1	2	3	4	5					1	2	3	1	2	3	4	5	6	7
6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14	
13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21	
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28	
27	28	29	30				25	26	27	28	29	30	31	29	30						

The syllabus/schedule are subject to change.



IE 305 – 01E Facilities Planning & Management

Spring Semester 2025

Course Schedule – Tentative (Nov. 24, 2024)

Week	Day	Date	Topics	Assignment
1	Tu	1/14/2025	Introduction	
	Th	1/16/2025	Product & Process Design	Ch.2, pp. 30-47
2	Tu	1/21/2025	Schedule Design	Ch.2, pp. 47-63
	Th	1/23/2025	Facilities Design	Ch.2, pp. 63-72 HW Set 1
3	Tu	1/28/2025	Flow Systems	Ch.3, pp. 83-97
	Th	1/30/2025	Departmental Planning	Ch.3, pp. 97-113 HW Set 2
4	Tu	2/4/2025	Activity Relationships	Ch.3, pp. 113-119
	Th	2/6/2025	Space Requirements	Ch.3, pp. 119-129 HW Set 3
5	Tu	2/11/2025	Restrooms & Food Service	Ch.4, pp. 146-156
	Th	2/13/2025	Health Services, ADA, Offices	Ch.4, pp. 156-170 HW Set 4
6	Tu	2/18/2025	Review for Exam 1	Chapters 1-4
	Th	2/20/2025	EXAM 1	

The syllabus/schedule are subject to change.

7	Tu	2/25/2025	Layout Planning Models	Ch.6, pp. 292-302
	Th	2/27/2025	Algorithmic Approaches	Ch.6, pp. 302-314
HW Set 5				
8	Tu	3/4/2025	CRAFT & BLOCPAN	Ch.6, pp. 314-326
	Th	3/6/2025	MIP & LOGIC	Ch. 6, pp. 326-337
HW Set 6				
	Tu	3/11/2025	SPRING BREAK	
	Th	3/13/2025	SPRING BREAK	
9	Tu	3/18/2025	MULTIPLE, Shapes & Aisles, & Multifloors	Ch. 6, pp. 337-344, 351-354
	Th	3/20/2025	Commercial Layouts & Change	Ch.6, pp. 354-366
HW Set 7				
10	Tu	3/25/2025	Review for Exam 2	Chapter 6
	Th	3/27/2025	EXAM 2	
11	Tu	4/1/2025	Layout Models	Ch.10, pp. 517-546
	Th	4/3/2025	Layout Models	Ch.10, pp. 547-568
HW Set 8				
12	Tu	4/8/2025	Special Layout Models	Ch.10, pp. 569-607
	Th	4/10/2025	Automated Storage & Retrieval	Ch.10, pp. 608-642
HW Set 9				
13	Tu	4/15/2025	Fixed Path Handling Models	Ch. 10, pp. 642-671
	Th	4/17/2025	Waiting Line Models	Ch.10, pp. 671-705
HW Set 10				
14	Tu	4/22/2025	Problem Session	
	Th	4/24/2025	Project Work	
15	Tu	4/29/2025	Project Presentations	
	Th	5/1/2025	Review for Exam 3	Chapter 10
16	Tu	5/6/2025	EXAM 3	
	Th	5/8/2025		

The syllabus/schedule are subject to change.

The syllabus/schedule are subject to change.