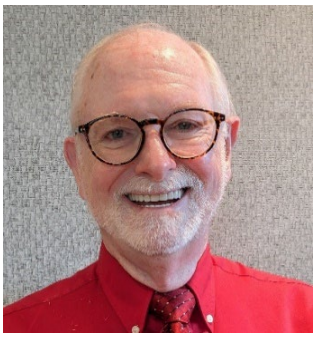
IE 318.001 ANALYSIS OF PRODUCTION SYSTEMS

Second Half – Spring 2025

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 Required
William J. Stevenson (2018). 13th edition. Operations Management. NY: McGraw-Hill / Irwin.
Software Required
Microsoft Word, Excel, and PowerPoint.

Course Description

Analytical principles of production systems analysis and control; emphasis placed on stochastic analysis; role of variability and impact on cycle time; push versus pull production strategies; inventory models; production planning and scheduling; queuing models. Prerequisites: IE 311 and IE 312. (2022- 2023 Undergraduate Catalog, East Texas A&M University, http://coursecatalog.tamuc.edu/undergrad/)

Student Learning Outcomes

After completing this course:
1. Illustrate qualitative and quantitative forecasting techniques and their influence on production planning and control.
2. Solve aggregate planning problems.
3. Solve inventory control and planning issues using either deterministic or stochastic modeling.
4. Understand the push and pull philosophies in production planning.
5. Demonstrate operation scheduling methods in variety shop environment.
6. Analyzing queuing models.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

- Using Microsoft Word, Excel, and PowerPoint.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

1. A scientific calculator for exams.
2. Microsoft Word, Excel, PowerPoint.

Instructional Methods

This course utilizes lectures, assignments to assist students in achieving the course learning outcomes.

Student Responsibilities or Tips for Success in the Course

Students should attend the lectures and deliver the assignment in a timely manner.
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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

Weights of the assessments in the calculation of the final letter grade.
Grading rubric:

Exam 1:	25%
Exam 2:	25%
Quizzes and Home Work	25%
Term project:	25%

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 a term project, labs, and exams.

There will be three exams. Students will apply automation techniques to solve applied engineering problems. Exams will be used to assess a student's knowledge and skills related to industrial automation concepts.

The student project is devised to make students utilize their knowledge to solve real world problems. The types of projects will be left up to the student teams. The final report should be comprehensive, should describe methods used, and should show and illustrate the improvements and the final solution. A detail written procedure will be provided at the time of team member formation.

TECHNOLOGY REQUIREMENTS

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

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**.**

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 48 hours. For urgent questions, and for questions that are not answered within 24 hours, please prefer e-mail correspondence.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

One day late assignment is accepted with a 15% grade deduction; after this, no assignment will be accepted.

Assignments and labs will be given to support the instructional material (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.

There will be three exams. Students will apply statistics to solve applied engineering problems. Exams will be used to assess a student's knowledge and skills related to applied statistics concepts.

The student project is devised to make students utilize their knowledge to solve real world problems. The types of projects will be left up to the student teams. The final report should be comprehensive, should describe methods used, and should show and illustrate the improvements and the final solution. A detail written procedure will be provided at the time of team member formation.

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 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
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

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 A&M-Commerce 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 A&M campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

COURSE OUTLINE / CALENDAR

Week	Date	Topics	Reading
1			
	1/13	Introduction to Operations Management	Ch.1
	1/15	Introduction to Operations Management	Ch.1
2	1/17	Quiz1	
	1/22	Competitiveness, Strategy, and Productivity	Ch.2
	1/24	Quiz 2	
3	1/27	Forecasting	Ch.3
	1/29	Forecasting	Ch.3
	1/31	Quiz 3	
4	2/3	Aggregate Planning and Master Scheduling	Ch.11
	2/5	Aggregate Planning and Master Scheduling	Ch.11
	2/7	Quiz 4	Ch.11
5	2/10	Aggregate Planning and Master Scheduling	Ch.11
	2/12	MRP and ERP	Ch. 12

	2/14	Quiz 5	Ch. 12
6	2/17	MRP and ERP	Ch. 12
	2/19	MRP and ERP	Ch. 12
	2/21	**Exam 1**	**Exam 1**
7	2/24	Inventory Management	Ch. 13
	2/26	Inventory Management	Ch. 13
	2/28	Quiz 6	
8	3/3	Inventory Management	Ch. 13
	3/5	Inventory Management	Ch. 13
	3/7	Quiz 7	
	3/10		
	3/12	**Spring break**	
	3/14	**Spring break**	
9	3/17	Course Progress Meeting	
	3/19	JIT and Lean Operations	Ch. 14
10	3/24	JIT and Lean Operations	Ch. 14
	3/26	Project Discussion	
11	3/31	Supply Chain Management	Ch. 15
	4/2	Supply Chain Management	Ch. 15
12	4/7	Scheduling	Ch. 16
	4/9	Scheduling	Ch. 16
13	4/14	Management of Waiting Lines	Ch. 18
	4/16	Exam review	
14	4/21	Exam 2	13,14,15,16,18
	4/24	Term Project meeting	No Class Mtg
15	4/28	Term Project meeting	No Class Mtg
	4/30	Term Project meeting	No Class Mtg
16	Final week	**Final Presentation**	