



Advanced Production/Operations Management
OSCM 3322 Fall 2019



Instructor: Mr. Michael S, Garcia MSPM

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Class Hours: MW 9:00-10:20 a.m.

COBA Room 304

Office Hours: MW 1:00-4:30 p.m.

Required Textbook:

Automation, Production Systems, and Computer-Integrated Manufacturing, by Mikell P. Groover, Pearson, Fourth Edition

Print ISBN: 9780133499612

eText ISBN: 9780133499711

Welcome to the undergraduate Advanced Production/Operations Management Course. Official information for OSCM 3322, including grades, will be posted on Blackboard. You are responsible for reading and responding to Blackboard “Announcements”, “Assignments”, “Assessments”, and any other information concerning this course - check your Blackboard account daily!

Course description (*From Goldmine*)

Advanced Production/Operations Management discusses the design and implementation of Advanced Manufacturing Technologies (AMT). This includes Just-in-Time (JIT) systems, cellular and Flexible Manufacturing Systems (FMS), and Computer Integrated Manufacturing (CIM). It also explores the key role that manufacturing plays in product development efforts and cross-functional teams. Other topics such as manufacturing, strategy, maintenance, and the design of work systems are presented as well. Case studies and group projects/presentations are used for instructional purposes. Restricted to majors: ACCT, BAMA, BSAD, CIS, ECON, FIN, GENB, MGMT, MKT, OSCM.

Objectives:

At the completion of this course students will be able to:

1. Identify and describe Advanced Manufacturing Technologies.
2. Define and explain Just-in-Time manufacturing.
3. Define and explain Cellular Manufacturing Systems.
4. Define and explain Flexible Manufacturing Systems.
5. Define and explain Computer Integrated Manufacturing.
6. Define the key design issues of work systems.
7. Define the key factors for maintenance of manufacturing systems.
8. Define the key factors for strategic manufacturing planning.

Prerequisite: OSCM 3321

Lectures

Important material from the textbook, reference books, and case studies will be covered in class. You should plan to read a lot and take careful notes. Discussion is strongly encouraged about the topics being covered.



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Regular Exams

There will be four regular, non-comprehensive exams that cover class materials and chapters in the textbook taught up to the date of the last class before the exam. A regular exam must be completed within 60 minutes. On examination class days, you **MUST** come to class prepared with SCANTRON forms, an electronic calculator, and writing materials for taking an exam. These materials will not be provided to you, and you cannot leave and reenter the classroom, once an exam has begun. There are generally no make-up exams. In a specific, pre-coordinated and extraordinary case, an **all-essay** make-up exam may be arranged at the discretion of the Professor.

Grading Policy:

10 %	First Regular Exam	A =	numerical grade ≥ 90
15 %	Second Regular Exam	B =	$80 \leq$ numerical grade < 90
15 %	Third Regular Exam	C =	$70 \leq$ numerical grade < 80
15 %	Final exam	D =	$60 \leq$ numerical grade < 70
10 %	Attendance and Punctuality	F =	numerical grade < 60
10 %	Supply Chain News presentation		
25 %	Homework and Quizzes		

Project

There will be a written/oral class project requirement, in the form of a Supply Chain News/Current Events presentation. Project assignments will be determined before the end of the first week of classes. Each student is expected to contribute an equal, appropriate amount of time across the duration of the class towards this project.

COURSE POLICIES

1. Electronic Devices

All electronic devices (cell phones, laptops, tablets, camera containing devices, etc.) should be completely turned off in class and should not be in the hands of students at any time during class. The Professor reserves the right to temporarily confiscate electronic devices owned by students when electronic devices create distractions or disruptions. There will be absolutely no texting, phone calls, or social media interaction during class. All students are expected and required to comply. Keep in mind that adherence to this policy is part of your participation grade, and will be worth 5% of your overall grade.

2. Academic Integrity

Cheating is unethical and unacceptable. Using information or original wording in a paper or assignment without giving credit to the source of that information or wording is **plagiarism**, and is absolutely unacceptable. Do not submit work under your name that you did not do yourself. You may not submit work for this class that you did for another class. If you are found to be cheating or plagiarizing, you will be subject to disciplinary action, per UTEP catalog policy. Refer to <https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html> for further information.

3. Attendance and Punctuality

Attendance is valued in this class, just as it is in the workplace. Being absent or late to class sends a negative message to the Professor, just like it does to an employer, manager, or customer. You cannot make a contribution to class discussion when you are not present. Please keep in mind that missing 1 class is equivalent to missing 5 days of work.

Class attendance is required and expected. Exam and quiz material will be partially based on lectures, therefore you are responsible for all material covered in class. Please arrive on time and take your seat quickly and quietly. Arriving late hinders all students and is considered disruptive to everyone in class.



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Please keep in mind this University policy on attendance (Class Attendance): “When in the judgment of the instructor, a student has been absent to such a degree as to impair his or her status relative to credit for the course, the instructor can drop the student from the class with a W before the course drop deadline or with a grade of F after the course drop deadline.” The instructor reserves the right to raise or lower student’s grade based on the quality and quantity of the student’s participation.

4. Homework

There will generally be one homework assignment given every other week for the entire semester, taken from material previously covered in class. Please note that you should complete and turn in homework **exclusively through Blackboard**. Homework will not be accepted via hardcopy, email, or text messages and cannot be turned in after its due date. If you expect to miss class, make sure you will be able to do the homework before its due date. No late assignments will be accepted. Unless specifically stated otherwise in a homework assignment, all homework is a strictly individual and non-collaborative task.

5. Quizzes

There will generally be one reading quiz due every other week, taken from textbook material that will be covered in the week to follow. These reading quizzes are structured to compel and reward you for reading ahead in the text in preparation for upcoming lectures. Reading quizzes will be administered through Blackboard and generally be on Mondays for the entire semester. Reading quizzes will usually cover two chapters.

6. Need for Assistance

If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the Center for Accommodations and Support Service (CASS) website at <https://www.utep.edu/student-affairs/cass/>

7. Other Student Services

University Writing Center: <http://uwc.utep.edu/index.php>

Sexual Harassment Guide for students: <https://www.utep.edu/titleix/Filing-a-Complaint.html>

University Counseling Center: <https://www.utep.edu/student-affairs/counsel/>, 747-5302, 202 Union West; walk-ins encouraged.

Student Health and Wellness Center: <https://www.utep.edu/chs/shc/>, 747-5624. Many services free to students paid for through student health fee.

Student Engagement and Leadership Center: <https://www.utep.edu/student-affairs/selc/>, 106 Union West, 747-5670. Includes study space with workstations; family friendly room with lactation space.

University Career Center: <https://www.utep.edu/student-affairs/careers/>, 103 Union West, 747-5640.

Mine Tracker: <https://minetracker.utep.edu/>. Events, news and organizations.



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8. Campus Carry:

Persons who hold a Concealed Handgun License can lawfully carry their gun into a UTEP classroom as long as it remains concealed. Open carry remains prohibited on campus. Should you feel someone is intentionally displaying a gun (or any other weapon for that matter), do not hesitate to call Campus Police (ext. 5611) or 911. For information on campus concealed carry, see <https://www.utep.edu/campuscarry/>. For more information on overall campus safety, see: <https://www.utep.edu/student-affairs/dean-of-students-office/student-safety/emergency-response/index.html>.

Please note that the GBC is a designated **Campus Carry Exclusion Zone** – a property leased by the University which has existing tenant leases *prohibiting weapons*. For more on Exclusion Zones see: <https://www.utep.edu/campuscarry/exclusion-zones/index.html>

9. Student Responsibility

Individual students must operate with integrity in their dealings with faculty and other students; engage learning materials with appropriate attention and dedication; maintain engagement when challenged by difficult learning activities; contribute to the learning of others; and perform to standards set by the faculty.

Note: This is a tentative syllabus and the Professor reserves the right to make appropriate changes.

See Detailed Class Outline on Next Page!



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Class Hours: MW 9:00–10:20 a.m.

COBA Room 304

Detailed Course Outline:

Week	Day	Date	Subject	Discussion	HW
1	Mon	Aug 26	Syllabus Chapter 1	Expectations for the course Introduction to Production Systems	
	Wed	Aug 28	Chapter 2 Reading Quiz 1	Manufacturing Operations Chapters 1, 2, on Blackboard	
2	Mon	Sep 2	No Class Reading Quiz 2	University closed, Labor Day Holiday Chapter 3, on Blackboard	
	Wed	Sep 4	Chapter 2 Problems/Activity	Review / Assign Class Project! Manufacturing Operations	#1 - Ch 2
3	Mon	Sep 9	Chapter 3 Reading Quiz 3	Manufacturing Models and Metrics Chapter 4, on Blackboard	
	Wed	Sep 11	Chapter 3 Problems/Activity	Manufacturing Models and Metrics	#2 - Ch 3
4	Mon	Sep 16	Chapter 4 Reading Quiz 4	Introduction to Automation Chapters 7 on Blackboard	
	Wed	Sep 18	Chapter 7	Numerical Control	#3 – Ch 7
5	Mon	Sep 23	Exam #1 Chapter 8 Reading Quiz 5	1 hour exam covers Chapters 1-4,7 Industrial Robotics Chapter 8, on Blackboard	
	Wed	Sep 25	Chapter 8 Problems/Activity	Industrial Robotics	#4 – Ch 8
8	Mon	Sep 30	Chapter 9 Reading Quiz 6	Discrete Control Using PLCs, PCs Chapter 9, on Blackboard	
	Wed	Oct 2	Chapter 9 Problems/Activity	Discrete Control Using PLCs, PCs	#5 – Ch 9
9	Mon	Oct 7	Chapter 10 Reading Quiz 7	Material Transport Systems. Chapter 10, on Blackboard	
	Wed	Oct 9	Chapter 10 Problems/Activity	Material Transport Systems.	#6 – Ch 10
10	Mon	Oct 14	Chapter 11 Reading Quiz 8	Storage Systems Chapter 11, on Blackboard	
	Wed	Oct 16	Chapter 11 Problems/Activity	Storage Systems.	#7 – Ch 11
11	Mon	Oct 21	Exam #2 Chapter 12 Reading Quiz 9	1 hour exam covers Chapters 8-11 Automatic ID and Data Capture Chapter 12 - on Blackboard	
	Wed	Oct 23	Chapter 12 Problems/Activity	Automatic ID and Data Capture	#8 – Ch 12
12	Mon	Oct 28	Chapter 13 Reading Quiz 10	Overview of Manufacturing Systems Chapters 13, 14 on Blackboard	
	Wed	Oct 30	Chapter 14	Single-station Manufacturing Cells	



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13	Mon	Nov 4	Chapter 14 Problems/Activity Reading Quiz 11	Single-station Manufacturing Cells Chapter 14, on Blackboard Chapter 15, on Blackboard	#9 – Ch 14
	Wed	Nov 6	Chapter 15	Manual Assembly Lines	
15	Mon	Nov 11	Chapter 15 Problems/Activity Reading Quiz 12	Manual Assembly Lines Chapter 16, on Blackboard	#10 – Ch 15
	Wed	Nov 13	Chapter 16	Automated Production Lines	
16	Mon	Nov 18	Exam #3 Reading Quiz 13	1 hour exam covers Chapters 12-16 Chapter 17, on Blackboard	
	Wed	Nov 20	Chapter 17	Automated Assembly Systems	#11 – Ch 17,18
17	Mon	Nov 25	Chapter 18 Reading Quiz 14	Cellular Manufacturing Systems Chapters 18,19, on Blackboard	
	Wed	Nov 27	Chapter 19	Flexible Manufacturing Systems	
18	Mon	Dec 2	Chapter 26 Reading Quiz 15	JIT and Lean Production Chapter 26, on Blackboard	
	Wed	Dec 4	Chapter 26 Problems/Activity	JIT and Lean Production Last day of class!	#12 – Ch 26
19	Wed	Dec 11	Final Exam 10:00am-12:45pm	1 hour exam covers Chapters 17-19,26	