



Advanced Production/Operations Management
OSCM 3322 Spring 2018



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Class Hours: TR 6:00-7:20 p.m.

COBA Room 326

Office Hours: TR 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 3 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
5 %	Attendance and Punctuality	F =	numerical grade < 60
10 %	Supply Chain News presentation		
30 %	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 <http://sa.utep.edu/osccr/academic-integrity> 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.



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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.

Please keep in mind this University policy on 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 each 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.

5. Quizzes

There will generally be one reading quiz due each 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 due each Tuesday for the entire semester. Reading quizzes will usually cover one chapter, except in cases where two chapters are being covered in a subsequent week’s lecture.

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 <http://sa.utep.edu/cass>

7. Other Student Services

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

Sexual Harassment Guide for students: <http://admin.utep.edu/Default.aspx?tabid=43881>

University Counseling Center: <http://sa.utep.edu/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: <http://sa.utep.edu/selc>, 106 Union West, 747-5670. Includes study space with workstations; family friendly room with lactation space.

University Career Center: <http://sa.utep.edu/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 more information on campus concealed carry, see <http://sa.utep.edu/campuscarry/>. For more information on overall campus safety, see <http://admin.utep.edu/emergency>.

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://academics.utep.edu/Portals/1880/static/vpsa/STA_CampusCarry_16_ExclusionZones.pdf

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: TR 6:00–7:20 p.m.

COBA Room 326

Detailed Course Outline:

Week	Day	Date	Subject	Discussion	HW
1	Tue	Jan 16	Syllabus Chapter 1 Reading Quiz 1	Expectations for the course Introduction to Production Systems Chapters 1 and 2, on Blackboard	
	Thu	Jan 18	Chapter 2	Manufacturing Operations	
2	Tue	Jan 23	Chapter 2 Problems/Activity Reading Quiz 2	Manufacturing Operations Review / Assign Class Project! Chapter 3, on Blackboard	#1 - Ch 2
	Thu	Jan 25	Chapter 3	Manufacturing Models and Metrics	
3	Tue	Jan 30	Chapter 3 Problems/Activity Reading Quiz 3	Manufacturing Models and Metrics Chapter 4, on Blackboard	
	Thu	Feb 1	Case Study	The Trophy Project Case Study from Chapter 5	#2 – Case in-class
4	Tue	Feb 6	Chapter 4 Reading Quiz 4	Introduction to Automation Chapter 7 on Blackboard	#3 – Ch 3
	Thu	Feb 8	Chapter 7	Numerical Control	
5	Tue	Feb 13	Chapter 7 Problems/Activity Reading Quiz 5	Numerical Control + In-Class Review Chapter 8, on Blackboard	
	Thu	Feb 15	Exam #1	1 hour exam covers Chapters 1-4,7	
6	Tue	Feb 20	Tennis Ball Exercise Reading Quiz 6	In-Class Exercise Chapter 9, on Blackboard	#4 – from class activity
	Thu	Feb 22	Chapter 8	Industrial Robotics	
7	Tue	Feb 27	Chapter 9 Reading Quiz 7	Discrete Control Using PLCs, PCs Chapter 10, on Blackboard	
	Thu	Mar 1	Chapter 9 Problems/Activity	Discrete Control Using PLCs, PCs	#5 – Ch 9
8	Tue	Mar 6	Chapter 10 Reading Quiz 8	Material Transport Systems. Chapter 11 and 12, on Blackboard	
	Thu	Mar 8	Chapter 10 Problems/Activity	Material Transport Systems.	#6 – Ch 10
9	Tue	Mar 13	No Class !	Spring break Mar 12-16	
	Thu	Mar 15	No Class !	Spring break Mar 12-16	
10	Tue	Mar 20	Chapter 11 Reading Quiz 9	Storage Systems Chapters 13, 14 on Blackboard	
	Thu	Mar 22	Chapter 11 Problems/Activity	Storage Systems. + In-Class Review	



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11	Tue	Mar 27	Exam #2 Reading Quiz 10	1 hour exam covers Chapters 8-11 Chapter 15, on Blackboard	
	Thu	Mar 29	Guest Speaker	Mr. Gutierrez – General Director at CDCP Automation	#7 – from class activity
12	Tue	Apr 3	Chapter 12 Reading Quiz 11	Automatic ID and Data Capture Chapter 16, on Blackboard	
	Thu	Apr 5	Chapter 13/14	Overview of Manufacturing Systems Single-station Manufacturing Cells	#8 – Ch 12
13	Tue	Apr 10	Chapter 13,14 Problems/Activity Reading Quiz 12	Overview of Manufacturing Systems Single-station Manufacturing Cells Chapter 17, on Blackboard	
	Thu	Apr 12	Chapter 15,16	Manual Assembly Lines Automated Production Lines	#9 – Ch 13,14
14	Tue	Apr 17	Chapter 15,16 Problems/Activity Reading Quiz 13	+ In-Class Review Chapters 18 and 19, on Blackboard	
	Thu	Apr 19	Exam #3	1 hour exam covers Chapters 12-16	
15	Tue	Apr 24	Chapter 17 Reading Quiz 14	Automated Assembly Systems Chapter 26, on Blackboard	
	Thu	Apr 26	Chapter 18	Cellular Manufacturing Systems	#10 – Ch 17
16	Tue	May 1	Chapter 19	Flexible Manufacturing Systems	
	Thu	May 3	Chapter 26	JIT and Lean Production + In-Class Review	
17	Thu	May 10	Final Exam 7:00-9:45 pm	1 hour exam covers Chapters 17-19,26	