

Business Management 4232: Operations Planning and Control
Fall 2017 Mon/Wed 5:30-6:50 SB205

Professor: Dr. Andrea Prud'homme, CFPIM CSCP CIRM
Contact Info: 614 Fisher Hall, prudhomme.3@osu.edu, (614) 292-3173
Office hours: Tue 10:30 -12:00 and by appointment; **drop-ins are welcome**

The Ohio State University educates students to analyze situations and solve problems; to think critically, logically, and creatively; and to be engaged and responsible global citizens. The University's curriculum - comprising distinct, yet interrelated programs in general education and specialized study - enables students to develop the knowledge, skills, and perspectives that equip them to learn and adapt, to contribute and to succeed in a rapidly changing world. This class is designed to support OSU's curricular experience objectives.

OBJECTIVES OF THE COURSE

Develop an understanding of the following tangible and practical skills that are valued by employers:

- communicate professionally using the correct terminology of business and the profession
- understand the structure of operations planning and control systems in a variety of applications
- understand and apply the conceptual and analytical tools for improved decision making
- solve problems, analyze situations, take corrective action and make managerial recommendations
- practice making operations planning and control decisions

COURSE CONTENT

The course will describe the use of manufacturing planning and control (MPC) systems to manage material flow, capacity, and other resources in operations. Operations planning and control is an integrative function in business that is critical in linking the planning activities in many areas of the business (e.g., marketing, operations, finance, human resources, and engineering). Topics covered include forecasting, sales & operations planning (S&OP), master production scheduling (MPS), material requirements planning (MRP), capacity management, inventory management, and production activity control (PAC).

In particular, this course will emphasize the overall structure of the planning and control function in managing manufacturing (and to a lesser degree service) operations and how this function coordinates activities with other business areas. We develop both a broad perspective of the operations function and an understanding of the details of operations planning and control system techniques. While it will be necessary to 'memorize' key vocabulary terms, some basic equations and general theories, models and processes, ***the greater goal is to help you learn to integrate your knowledge so that you may apply it to solve a variety of problems, make good decisions and generate recommendations*** that will contribute to the success of your employer.

COURSE MATERIAL – you MUST get ONE of 1A or 1B or 2 below

1A. *(Intro) Introduction to Materials Management. Custom Edition for APICS* (2012) by Chapman, Arnold, Gatewood & Clive. ISBN: 978-1-323-76464. This is a standard text and primary reference for the CPIM exams. Get this new directly from APICS at a discount as an APICS member (**free membership for students**).
<http://www.apics.org/ProductCatalog/APICSProduct?ID=11184>

1B. *(Intro) Introduction to Materials Management 8th Edition* by Chapman, Arnold, Gatewood & Clive from Pearson, ISBN 978-0134156323 (the same as APICS text above, but more expensive new). If you get the 7th edition the pages numbers in the syllabus will not align, and you will miss new material in the 8th edition.

2. *(SCFPC) Supply Chain Focused Manufacturing Planning and Control* by W.C. Benton from Cengage Learning, ISBN: 978-1-258-0884-6. This book is a great reference for people specifically interested in sourcing.

Optional additional text, especially if interested in pursuing full APICS CPIM certification: *(MPC) Manufacturing Planning and Control for Supply Chain Management: APICS/CPIM Certification Edition* by Jacobs, Berry, Whybark and Vollmann ISBN: 978-0-07-175031-8

ADDITIONAL MATERIAL may be posted in Carmen; lecture notes will be published by the start of each week for the material in that week. **Students are responsible for reviewing Carmen regularly.**

Copies of all the books above have been placed on reserve in the Knowlton (architecture) library. It is strongly encouraged that operations/supply chain management majors keep a copy of the text for future reference.

PROFESSIONAL DEVELOPMENT

While earning your degree from a top ranked business school and a majoring in an area that is in the top 10 of the country are certainly excellent starts to preparing you for a meaningful (and successful) career, there are additional steps you should take, including joining and becoming active in a professional organization and pursuing professional certification. There are several student professional organizations that allow for the opportunity to learn more about operations, logistics, purchasing, and supply chain management within Fisher such as Buckeye Operations Management Society (BOMS) at <https://groups.cob.ohio-state.edu/boms/> (a student chapter of APICS), the Purchasing and Supply Management Association (PSMA) at <http://www.osupsma.com> and The Logistics Association (TLA) at <http://osutla.com/>. Students are strongly encouraged to become active members of one of these relevant student organizations.

In addition to joining student organizations, you are encouraged to join a professional organization, such as one of the following:

- **APICS** is the best known and most respected professional organization in the area of operations and supply chain management, and **offers free membership to full-time students** (<http://www.apics.org/membership-application>). Members receive deep discounts on study materials and exam fees for CPIM (Certified Production and Inventory Management), CLTD (Certified in Logistics, Transportation and Distribution) and CSCP (Certified Supply Chain Professional) certification, in addition to APICS career center access.
- **ISM** (Institute for Supply Management) is the best known and most respected professional organization for sourcing/purchasing and **offers free membership to full-time students** (<http://www.ism.ws/Membership>) and is useful for getting discounts if pursuing the CPSM (Certified Professional in Supply Management).
- **CSCMP** (Council of Supply Chain Management Professionals) is the best known, most respected professional organization for those in logistics, and offer a student membership for \$40/year (<http://cscmp.org/membership/membership-types>) and discounts for SCPro (Supply Chain Pro) certifications.

INSTRUCTOR EXPECTATIONS

Your time at university should teach you the fundamentals of your chosen profession and provide the opportunity to develop professional demeanor and habits. Being on time and prepared for business meetings is a key professional behavior and a key metric in operations management, **so our class will start promptly at the assigned time**. Arriving late to class is disruptive and disrespectful, and much like being late to work will have negative consequences, as will missing classes. My expectation is that you will be familiar with the assigned readings and problems BEFORE class, corresponding to the class schedule. To do well in this class, and your career, it is vital that you really understand how to use and apply what we will cover in this class. *You will likely have to extend the material and use it in new ways for assignments, the exams and in your careers.*

NO COMPUTERS OR CELL PHONES IN THE CLASSROOM:

*Wall Street Journal, April 5, 2016 By Gerard Baker "Mightier Than the Laptop...compared with those who type or write their notes: people who write them out in longhand appear to learn better, retain information longer, and more readily grasp new ideas. **Writing by hand appears to focus classroom attention and boost learning** in a way that typing notes on a keyboard doesn't. Researchers found that students who took handwritten notes generally outperformed students who typed their notes via computer. Generally, people who take class notes on a laptop do take more notes and can more easily keep up with the pace of a lecture, but researchers found those who took notes by hand could remember the lecture material longer and had a better grip on concepts presented in class, even a week later."*

PLEASE ASK QUESTIONS IN CLASS!! If something is unclear to you, it is probably unclear to others, and we will all be grateful you asked. I try to make our complex material as understandable as possible, and appreciate your assistance in identifying where a student, or perhaps even the class, may be 'stuck' or confused. I can't help if you don't ask. Your active participation will help make this a great class!

PLEASE COME SEE ME IN MY OFFICE IF YOU NEED TO DISCUSS SOMETHING IN MORE DETAIL. There may be times in class that one or two individuals get stumped. If this happens, I may keep the class moving and work with those who need more assistance on an individual basis outside of class or during office hours.

I will do all I can to help you succeed; please seek assistance early, before you get too behind.

DISABILITY ACCOMODATION

If you need an accommodation based on the impact of a disability, please arrange an appointment with me as soon as possible (first week of class). I rely on the Office for Disability Services for assistance in verifying need and developing accommodation strategies. You should start the verification process as soon as possible.

GRADING

There are a number of activities and assignments that will be used to asses your understanding of the material covered in this course:

PARTICIPATION

Attendance is not the same as participation, but attendance is clearly necessary for participation. **You start the class with a '0' for participation**; credit is earned by making or asking substantive and intellectual contributions on a regular basis, by being focused on course material, and by being actively engaged in and contributing to daily class discussion, in-class exercises and our simulation. Credit is lost by missing, sleeping in or being late to class, using your phone/computer for non-class purposes, working on non-BM4232 activities in class, being unprepared for class sessions/discussions, failing to actively contribute to class discussion, missing group in-class activities or quizzes, missing in-class ITEC work, and other disruptive, unprofessional or non-scholarly behaviors. Your participation will be tracked daily by a peer; tracking peer participation will count towards your participation. Your grade is subjective, determined by me and at my discretion. Everyone will also submit a peer evaluation of the contribution to team efforts of all members of the team. This input will used to adjust grades for team members who are not making substitutive contributions to group work, including assignments, quizzes, exercises, and the ITEC simulation.

IN-CLASS WORK

Missing an in-class activity, quiz or simulation work due to an absence or for being late to class **can NOT be made up** unless the absence is for a documented illness or OSU approved event, accompanied by appropriate documentation. Assignments not received on time will not be accepted at a later date/time.

ORGANIZATIONAL ATTENDANCE

It is expected that each student will attend at least two meetings of a related organization (see list under Professional Development). This will be documented by the student's signature on attendance records, which I will obtain from the student organizations at the end of the term - **be sure to sign-in – if your name is not on a sign in form, you will not get credit**. I encourage you to attend a meeting that has a guest speaker, company or topic that is of interest to you, and not to wait until the last minute to attend a meeting.

GUIDELINES FOR SUBMISSION OF WORK IN THIS COURSE

Please **REFER TO, PRINT AND SUBMIT** the "***Guidelines for submission of work in BM4232***". The document is available in Carmen under the 'Course Administration' and also 'Assignments'. If you have any questions about the guidelines, please ask.

PRACTICE EXERCISES

You will be asked to complete a number of assignments to practice applying the concepts that are discussed in the text and in class. Some of these may be completed in groups, and some must be completed individually (**assume everything is an individual assignment unless specifically indicated otherwise**). It is important that you understand how to do all of the exercises, even group work, on your own as similar problems may appear on the exams and, more importantly, in future jobs. No exercises or exams will be 'dropped' from your grade or 'curved', but you may drop one quiz score.

Organizational Attendance	2%
Participation	10%
Quizzes	15%
Practice Exercises	18%
ITEC Simulation (group)	15%
Midterm Exam*	20%
Final Exam*	20%
	<hr/>
	100%

* you must pass (earn 60.0% or more) on **BOTH** the midterm and final exams to pass the class. If you do not earn 60.0% you will need to retake the exam until you earn a passing grade on the exam.

ACADEMIC INTEGRITY

Please **REFER TO, PRINT AND SUBMIT** the “*Academic Integrity*” document (same information as below). The document is available in Carmen under ‘Course Administration’ and ‘Assignments’. If you have any questions about the guidelines, or if a behavior could be considered academic misconduct, please ask.

Academic integrity is essential to maintaining an environment that fosters excellence in learning, teaching, research, and other educational and scholarly activities. Thus, The Ohio State University, Fisher College of Business and the Committee on Academic Misconduct (COAM) **expect that all students have read and understand the University’s Code of Student Conduct**, (oaa.osu.edu/coam/home.html) and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University’s *Code of Student Conduct* **and this syllabus** may constitute “Academic Misconduct” and result in action taken.

Any material submitted for credit in this course must be **ONLY your own work if it is an individual-based homework, assignment, quiz or exam**, or **ONLY the work of you and your specific team members if it is a group-based homework, assignment or quiz**. Students are not permitted to show, demonstrate, discuss, text message, group message, share, post, place in a file repository, e-mail, provide any information about or access to documents or files, solutions, assignments, or in any way share work, files, submissions, documents, thoughts, ideas or solutions regarding homework, assignments, cases, quizzes or exams with any other individual or any members of another team of students, including the work of students from other terms, classes or sections. **In short, you are to share NOTHING, in anyway, with ANYONE not specifically authorized by your professor**. If you purposefully or accidentally pick-up, look at, share, utilize, copy, and/or submit someone else’s work, I will consider it a violation of this syllabus. If outside references are used, they must be properly referenced. **Case write-ups, homework, assignments, quizzes, or other submitted work that appears to be similar to another student’s or team of students’ current or past submissions may initiate serious disciplinary action**. It is recommended that you take action to protect your work, such as promptly collecting your materials from shared printers, disposing of rough drafts properly, and removing your files from shared computers. **You are responsible for controlling your own and your team’s work, as well as for understanding the source of material that a team member shares**. Everyone listed on an assignment is equally responsible for content and source material of submission(s). Suspected academic misconduct on a group submission will result in all members of the group being turned in to COAM.

Cases of suspected academic misconduct will be reported to the Committee on Academic Misconduct. If COAM determines that you have violated the University’s *Code of Student Conduct* (i.e., committed academic misconduct), **the sanctions for the misconduct could include a failing grade (‘E’) in this course and suspension or dismissal from the University**.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me BEFORE you engage in the behavior about which you have concerns. Other sources of information on academic misconduct (integrity) to which you can refer include:

Ten Suggestions for Preserving Academic Integrity (oaa.osu.edu/coam/ten-suggestions.html)

Eight Cardinal Rules of Academic Integrity (www.northwestern.edu/uacc/8cards.html)

SEQUENCE OF TOPICS: COURSE OUTLINE (subject to modification, revisions will be posted in Carmen)

Dates		Topics	Readings BEFORE class & Assignments
Wed Mon	Aug 23 Aug 28	Course Introduction and Overview; and begin Manufacturing Planning and Control (MPC)	<i>Intro</i> Ch 1 Intro and Ch 2 Planning (skip pp 23-36) <i>SCFMPC</i> Ch 1: OM and MPC <i>MPC</i> Ch 1: Manufacturing Planning and Control
Wed	30-Aug	Inventory Management	<i>Intro</i> Chapters 9, 10, 11 <i>SCFMPC</i> Chapters 5 & 6A: Inventory & 8: Push/Pull <i>MPC</i> Ch 16 Order Point Inventory Control Methods <i>Inventory Individual Practice Exercise due (9/13)</i>
Mon	4-Sep	Holiday	
Wed	Sept 6	Finish Inventory Management	
Mon Wed	Sept 11 Sept 13	Capacity & Theory of Constraints (TOC)	<i>Intro</i> Ch 5 Capacity and Ch 6 PAC pp 144-150 <i>SCFMC</i> Ch 9: Capacity <i>MPC</i> Ch 10 Capacity and Ch 11 pp 327-339 <i>Capacity Group Practice Exercise due (9/20)</i>
Mon Wed	Sept 18 Sept 20	Forecasting/Demand Management	<i>Intro</i> Ch 8: Forecasting <i>SCFMPC</i> Ch 2: Forecasting (skip pp:35-41) <i>MPC</i> Ch 3 Demand Mgt and Ch 4 Forecasting <i>Fcst Individual Practice Exercise due (9/27)</i>
Mon Wed	Sept 25 Sept 27	Sales & Operations Planning (S&OP)	<i>Intro</i> Ch 2: pp 23-36 <i>SCFMPC</i> Ch 3: S&OP and Aggregate Planning <i>MPC</i> Ch 5 S&OP <i>S&OP Group Practice Exercise due (10/4)</i>
Mon Wed	Oct 2 Oct 4	Master Production Schedule (MPS)	<i>Intro</i> Ch 3: Master Scheduling <i>SCFMPC</i> Chapter 4: MPS <i>MPC</i> Ch 7 MPS <i>MPS Individual Practice Exercise due (10/11)</i>
Mon Wed	Oct 9 Oct 11	Material Requirements Planning (MRP)	<i>Intro</i> Ch 4: MRP <i>SCFMPC</i> Ch 6: MRP <i>MPC</i> Ch 8 MRP <i>MRP Individual Practice Exercise due (10/18)</i>
Mon Wed	Oct 16 Oct 18	Production Activity Control (PAC) Catch-up if needed	<i>Intro</i> Ch 6: PAC pp:150-156 <i>SCFMPC</i> no coverage of PAC <i>MPC</i> Ch 11 PAC pp 317-327 <i>PAC Individual Homework Due (10/23)</i>
Mon Wed	Oct 23 Oct 25	Review for exam MIDTERM EXAM (regular class time & place)	
Mon Wed	Oct 30 Nov 1	Introduction to ITEC, Month 1 decision EACH TEAM NEEDS A <u>PC</u> LAPTOP IN CLASS (must run Microsoft Excel)	READ ITEC CASE – bring HARD COPY to class <i>ITEC on-line quiz in Carmen BEFORE class</i> <i>ITEC Month 1 due next day by Noon</i>
Mon	Nov 6	Discuss ITEC Month 1 results; Redo Month 1	<i>ITEC Month 1 redo due next day by Noon</i>
Wed	Nov 8	ITEC Month 2 in class	<i>ITEC Month 2 due next day by Noon</i>
Mon	Nov 13	ITEC Month 3 in class	<i>ITEC Month 3 due next day by Noon</i>
Wed	Nov 15	ITEC Month 4 in class	<i>ITEC Month 4 due next day by Noon</i>
Mon Wed	Nov 20 Nov 22	Holiday Break	
Mon	Nov 27	ITEC Month 5 in class	<i>ITEC Month 5 due next day by Noon</i>
Wed	Nov 29	ITEC Month 6 in class	<i>ITEC Month 6 due next day by Noon</i>
Mon	Dec 4	ITEC Wrap-up & Discussion	<i>ITEC Group Report Due</i>
Wed	Dec 6	Review for Comprehensive Final Exam	
Fri	Dec 8	FINAL EXAM	6:00-7:45pm (note different time!)

Your name: _____

Group/Plant #: _____

Team Grade Distribution

EVERYBODY MUST FILL THIS OUT TO BE TURNED IN AT THE END OF THE COURSE; it will be part of YOUR course participation grade to complete this form. What you turn in to me will not be shared with other team members.

I fully expect team members to address issues with each other as they occur, this gives everyone a chance to modify their behavior to better meet team expectations and performance goals.

As future employees and supervisors/managers part of your responsibility will be to fairly and truthfully evaluate co-workers. You should practice now! Truthfully evaluating someone is a key business skill, and may sometimes be difficult. If a team member is not contributing fairly or has had exemplary contributions, you should reflect performance in this evaluation. Students are sometime concerned about "hurting another students' grade"; however if you are truthful you are not hurting their grade, they are receiving the grade that they themselves earned. Learning that there are consequences of poor team performance is also important. I have never been surprised by a poor evaluation; I have been disappointed when students do not truthfully providing team grade distribution information.

Since the point of this is to allow you to practice the process of evaluating colleagues, and equally important, of being evaluated by them in turn, I strongly encourage you to discuss issues with team members **as they occur**. Team member behavioral issues such as attending scheduled meetings, completing assigned tasks, quality of work, meeting deadlines, etc. are areas you may experience issues with 'co-workers' in this class, and unfortunately during your career. Now is a good time to develop and practice your team feedback and management skills.

INPUT FROM YOUR PEERS WILL BE USED TO ADJUST GRADES ON GROUP ASSIGNMENTS. Adjustments to group assignment grades can be substantial (up to a full letter grade), per peer feedback, which will naturally impact the overall course grade. This mirrors the professional world where feedback in a "360° Review" includes input from your peers, co-workers, and others that you interact with for your performance evaluation which in turn determines your pay increases, stock options, promotions, job assignments, and even your continued employment, etc. We will be using this class to allow you to develop good team skills from both a performance and an evaluation perspective.

Fill in YOUR name on the first line, and use the rest of the lines to fill in the names of your teammates. Be sure to list all of them. Then, you must decide how much of the team grade each of you has earned, such that the total sums to 100%. If there is unequal distribution of 'credit', you MUST provide information in the comments section of this form.

	Exercises	Quizzes	ITEC
YOUR NAME	_____	_____	_____
Team Member	_____	_____	_____
Team Member	_____	_____	_____
Team Member	100 %	100 %	100 %

Comments: