Business Management 4232: Operations Planning and Control  
Autumn 2016 M/W 5:30-7:00pm Schoenbaum 205

Professor: Dr. Andrea Prud'homme, CFPIM CSCP CIRM  
Contact Info: 614 Fisher Hall, prudhomme.3@osu.edu, (614) 292-3173  
Office hours: THursday 2-3:30 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
- experience making operations planning and control decisions

COURSE CONTENT
The course will describe the use of planning and control 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 decisions and generate recommendations that will contribute to the success of your employer

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

1A. (Intro) Introduction to Materials Management: Customer Edition for APICS by Arnold, Chapman and Clive from Pearson, ISBN: 978-1-256-49733-9. This is a standard text and primary reference for the CPIM exams. You can order this directly from APICS at a discount as an APICS member (membership is free for students).  
http://www.apics.org/ProductCatalog/APICSPProduct?ID=7231

1B. (Intro) Introduction to Materials Management 7th Edition by Arnold, Chapman and Clive from Pearson, ISBN 978-0131376700 (the same as text above, but more expensive new) (there is a newer 8th edition which includes additional material and you can also use, but the page numbers in the syllabus will not exactly align).


• ADDITIONAL MATERIAL may be posted in Canvas; lecture notes will be published by the start of each week for the material in that week. Students are responsible for reviewing Canvas 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 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 The keyboard clatter of note-taking is now the soundtrack of higher education, but compared with those who type their notes, people who write them out in longhand appear to learn better, retain information longer, and more readily grasp new ideas. Handwriting 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, but I do need you to seek assistance, before you get too behind.
GRADING
There are a number of activities and assignments that will be used to assess 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 or being late to class, using your phone/computer/texting 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 grade is subjective 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 be used to adjust grades for team members who are not making substantive 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 an illness or OSU approved event and accompanied by appropriate documentation. Assignments not received by the due date/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.

SUBMISSION GUIDELINES
• All assignments are due at the start of class (unless otherwise specifically noted, e.g. ITEC assignments). Late assignments will not be accepted, for any reason, so plan your last minute printing accordingly; please account for the fact that the printers in the lab become congested before and between classes and that an inability to print at the last minute is not an acceptable excuse. Hard copies are due in class; electronic copies are to be posted in Canvas per the posted due date/time. All electronic documents must be submitted as a word or excel file (no .pdf files are permitted). All assignments submitted will be processed through the “Originality Check” software imbedded in Canvas. This software compares a student’s submission to other documents submitted through Carmen and Canvas (including previous and current BM732/BM4232 sections) and documents on the web.
• You are expected to submit work of a professional caliber (think of me as your boss). The appearance and content quality of your work should reflect your desired professional image. Submissions should be neat, tidy, complete, typed, no paper fringe, stapled (no folding over of the corners, no paperclips), etc.
• If you wouldn’t turn it in to your boss, don’t give it to me!! I will not accept unprofessional submissions which do not meet the standards in the bullet section above.
• 10% of assignment grades will be based upon the overall professionalism of what you turn in.

GLOBAL SUPPLY CHAIN ASSOCIATE (GSCA) EXAM
For this class you will need to take the Global Supply Chain Associate (GSCA) exam offered by APICS. The exam is computer based and you must sign up and pay for the exam through APICS, and take the exam at the Testing Center on Lane Ave during the approved testing window. More detailed information about registering for the exam and reserving a test time will be forthcoming.
ASSIGNMENTS
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 told 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 assignments or exams will be ‘dropped’ from your grade, but you may drop one quiz grade

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<th>Assignment</th>
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<tr>
<td>Organizational Attendance</td>
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<td>Participation</td>
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<td>Quizzes</td>
<td>15%</td>
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<tr>
<td>Practice Assignments</td>
<td>18%</td>
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<td>ITEC Case (group)</td>
<td>10%</td>
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<td>GSCA Exam</td>
<td>5%</td>
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<td>Midterm Exam*</td>
<td>20%</td>
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<td>Final Exam*</td>
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100%

* you must pass (earn 60.0% or more) BOTH the midterm and final exams to pass the class

DISABILITY ACCOMMODATION
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) - we need to discuss the course format and explore potential accommodations. 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.

ACADEMIC MISCONDUCT
Academic integrity is essential to maintaining an environment that fosters excellence in 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, (the COAM web page is 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.”

Any material submitted for credit in this course must be ONLY YOUR OWN WORK if it is an individual-based assignment, quiz or exam, or ONLY THE WORK OF YOU AND YOUR SPECIFIC TEAM MEMBERS if it is a group-based assignment or quiz. Students are not permitted to discuss, text message, e-mail, provide information about or access to documents or files, solutions, notes, or in any way share work, thoughts, ideas or solutions regarding 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. If outside references are used, they must be properly referenced. Case write-ups, 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 at home, 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.

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 over 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 Canvas)

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<th>Date</th>
<th>Topic</th>
<th>Assignments &amp; readings BEFORE class</th>
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| Wed Aug 24 Mon Aug 29 | Course Introduction and Overview Manufacturing Planning and Control (MPC) | *Intro* Ch 1 Intro and Ch 2 Planning (skip pp 20-33)  
*SCFMP* Ch 1: OM and MPC  
*MPC* Ch 1: Manufacturing Planning and Control |
| Wed Aug 31 Wed Sept 7 | Inventory Management | *Intro* Chapters 9, 10, 11  
*SCFMP* Chapters 5 & 6A: Inventory & 8: Push/Pull  
*MPC* Ch 16 Order Point Inventory Control Methods  
*Inventory Individual Practice due (9/12)* |
| Mon Sept 12 Wed Sept 14 | Capacity & Theory of Constraints (TOC) | *Intro* Ch 5 and Ch 6 pp 128-132  
*SCFMC* Ch 9: Capacity  
*MPC* Ch 10 Capacity and Ch 11 pp 327-339  
*Capacity Group Practice due (9/19)* |
| Mon Sept 19 Wed Sept 21 | Forecasting/Demand Management | *Intro* Ch 8: Forecasting  
*SCFMP* Ch 2: Forecasting (skip pp:35-41)  
*MPC* Ch 3 Demand Mgt and Ch 4 Forecasting  
*F tst Individual Practice due (9/26)* |
*SCFMP* Ch 3: S&OP and Aggregate Planning  
*MPC* Ch 5 S&OP  
*S&OP Group Practice due (10/3)* |
| Mon Oct 3 Wed Oct 5 | Master Production Schedule (MPS) | *Intro* Ch 3: Master Scheduling  
*SCFMP* Chapter 4: MPS  
*MPC* Ch 7 MPS  
*MPS Individual Practice due (10/10)* |
| Mon Oct 10 Wed Oct 12 | Material Requirements Planning (MRP) | *Intro* Ch 4: MRP  
*SCF* Ch 6: MRP  
*MPC* Ch 8 MRP  
*MRP Individual Practice due (10/17)* |
| Mon Oct 17 Wed Oct 19 | Production Activity Control (PAC) Catch-up if needed | *Intro* Ch 6: PAC  
*SCFMP* no coverage of PAC  
*MPC* Ch 11 PAC pp 317-327  
*PAC Individual Homework Due (10/24)* |
| Mon Oct 24 Wed Oct 26 | Review for exam  
**M IDTERM EXAM** | READ ITEC CASE – bring hard copy to class  
ITEC on-line quiz in Carmen BEFORE class  
ITEC Month 1 due next day by Noon |
| Mon Oct 31 Wed Nov 2 | Introduction to ITEC, Month 1 decision  
EACH TEAM NEEDS A PC LAPTOP IN CLASS | ITEC Month 1 redo due next day by Noon |
| Mon Nov 7 | Discuss ITEC results; Redo Month 1 | ITEC Month 2 due next day by Noon |
| Wed Nov 9 | ITEC Month 2 in class | ITEC Month 3 due next day by Noon |
| Mon Nov 14 | ITEC Month 3 in class | ITEC Month 4 due next day by Noon |
| Wed Nov 16 | ITEC Month 4 in class | ITEC Month 5 due next day by Noon |
| M/W Nov 21/23 | Thanksgiving Break | ITEC Month 6 due next day by Noon |
| Mon Nov 28 | ITEC Month 5 in class | ITEC Group Report Due |
| Wed Nov 30 | ITEC Month 6 in class | |
| Mon Dec 5 | ITEC Wrap-up & Discussion | |
| Wed Dec 7 | Review for Comprehensive Final Exam | |
| Fri Dec 9 | **FINAL EXAM** (comprehensive)  
6:00-7:45pm | |
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.

INPUT FROM YOUR PEERS WILL BE USED TO ADJUST GRADES ON GROUP ASSIGNMENTS. Adjustments to group assignment grades can be as much as 2 full letter grades on the assignments, per peer feedback, which will naturally impact the overall course grade. This mirrors the professional world were feedback in a “360º 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.

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 during your career. Now is a good time to develop and practice your team feedback and management skills. I fully expect team members to address these issues with each other as they occur.

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.

% of team grade earned

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Comments: