Course Syllabus
SCMS 4510 – Operations Planning and Control
Summer Semester, 2018
3.0 Credit Hours

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Office Hours: By appointment

eCourseware: eCourseware link to this course

Overview

This course explores more deeply the area of operations management which is the running of a manufacturing or service-providing business. We will study the scheduling topic in great detail including capacity planning, inventory management, scheduling, resource planning (MRP/ERP), and Production Activity Control.

Learning takes work. Very few items in business are answered with either a True / False or multiple choice scenario. Although many of the questions on homework, quizzes and exams will use those assessment techniques, there will also be calculation problems and short answers (type 1 to 4 phrases or sentences). Please expect to invest time and thought into this course in order to learn the material (as opposed to achieving a certain grade).

Objectives

At the successful completion of this course, a student will be able to:

1. Describe the need to learn about the various functions in operations planning and control to better manage manufacturing or service systems.
2. Show how qualitative and quantitative forecasting techniques can be used in long-term and short-term demand determination.
3. Construct a reasonable sales and operations plan using different strategies.
4. Develop master production schedules using different lot-sizing approaches, and determine available-to-promise quantities.
5. Construct a material requirements plan for a specific master production schedule.
7. Understand how various order sequencing rules and theory of constraints scheduling can be used to improve the performance on the shop floor.
8. Develop quantitative models to manage independent demand inventory systems.

**Fogelman College: Learning Outcomes for Your Degree**

**Goal 1:** Graduates will be effective communicators.

**Goal 2:** Graduates will demonstrate critical thinking skills

**Goal 3:** Graduates will be knowledgeable about ethical factors in the business environment

**Goal 4:** Graduates will be knowledgeable about the global business environment.

**Goal 5:** Graduates will be proficient users of business presentation and analysis technology.

**Email**

All students are required to maintain and access their University of Memphis (@memphis.edu) email account. You will receive all official course correspondence at this email account. Any inability to receive incoming mail in a timely fashion (e.g., not regularly checking your email, having a “full mailbox” condition, network failures, etc.) is the student’s responsibility.

Please don’t attempt to communicate via eCourseware’s email tool; it is not regularly monitored.

**Attendance**

There are no instructor requirements for course attendance. However, as in any course, you will find that you will receive great value by investing your time with your fellow students by interacting with the instructor and each other. If you are attending a section that meets in a classroom, please arrive on time and prepared for that day’s subject; if you are attending an online section, please stay current with each week’s material.

**Inclement Weather**

In the event that inclement weather requires the cancellation of classes at The University of Memphis, local radio and television media will be immediately
notified. Additionally, the University of Memphis has established an Inclement Weather Hotline at 901-678-0888.

**Pre-Requisites / Co-Requisites**

To pass this course, students should have a good grasp of collegiate mathematics, logic, statistics, and applied writing skills. In general, it is assumed that all students who are registering for Fogelman College classes have successfully completed any prerequisites or are enrolled currently in any co-requisites associated with this course. If you have any questions, please contact your academic adviser. Note that we will be using a small set of statistical methods in this course including the standard normal distribution (z table).

A “Skills Quiz” is given as part of the course for you to be able to discover where you might have weaknesses with logic or math skills that you should address to be successful in this course.

**Textbooks**

We will use one textbook and one paperback for this class.

**Textbook**

We will use one textbook for this class. It does not matter to me whether you buy, rent, eBook, borrow, or share this textbook. Note that we will refer frequently to all portions of it so you should have your own copy readily available.


As a standard hardback textbook:

As a loose-leaf version (three-hole punched printed paper that you put into a 3-ring binder yourself) which saves $75 from the publisher’s price:

We will not be using CONNECT this semester for any assignments (such as homework, quizzes, or exams). However, McGraw-Hill publishes an eBook available only via McGraw-Hill's CONNECT tool which saves about $160 from the price of a hardcover textbook (ISBN-13: 978-1259948206). The McGraw-Hill link to CONNECT for this course is [CONNECT access (new window)] but this is only needed if you choose to use an eBook. You can find all the publisher's book options at the [McGraw-Hill publisher site](http://www.mcgraw-hill.com).
You can use Editions 11 or 12 - but be aware that page numbers and some references have changed. These editions are quite similar in content.

**Paperback**

We will have a second small book that will be read throughout the semester outside of class. It will open our eyes to the real world complications that arise from thinking technology solves all of our problems.

Goldratt, E., 2000, "Necessary but not Sufficient"

It's a paperback that should cost under $20. There will be questions throughout the course that come from this book.

This paperback does not take the time to explain the "Theory of Constraints", "Drum-Buffer-Rope", and other concepts. To be able to understand these terms and what the players are discussing, take some time to review this Theory of Constraints slide deck (download) and its references before the end of Module 1.

**Calendar and Topics**

**Calendar**

On the Home Page, the Calendar in the upper right corner shows a summary of the items in process or due within the next few days.

The full calendar for the entire semester can be viewed in various formats by clicking on "Calendar". On this screen, you can show a single day, week or month. You can see the full list of calendar items sorted by date which is a convenient way to reference the activities. You can add your own events or tasks for your reference. If you select "All Calendars" then all other courses that post events to their calendar will show up alongside this course's events.

You can also download a printable calendar for a formatted Word document version of the schedule.

**Topics**

**Module 1**: Introduction, Concepts, and Forecasting

- Chapters 1, 12b, 15, 3, and TOC
- Assessments: Homework, Quiz, Exam, and Supplemental Reading

**Module 2**: Sales and Operations Planning, Safety Stock, and MPS
• Chapter 11a, 13a, and 11b
• Assessments: Homework, Quiz, Exam, Supplemental Reading, and Discussion question(s)

Module 3: Material Requirements Planning and Capacity Planning

• Chapters 12, 5, and outside reading
• Assessments: Homework, Quiz, Exam, Supplemental Reading, and Technology Paper

Module 4: Inventory Management, JIT, and Production Activity Control

• Chapter 13, 14, and 16
• Assessments: Homework, Quiz, Exam, and Supplemental Reading

Teaching Methodology

Course Methodology

This course is delivered chapter-by-chapter. All slides and other media for each chapter will be available in eCourseware. Note that this course is beginning to be converted to be able to be taught in a hybrid or “flipped classroom” style; there may be an occasional instance of that which will be clearly identified well before that module is presented.

Professor’s Expectations of Students

Certain student behaviors (such as fairness, respect, responsibility and more) are important personal and professional characteristics to develop now if you don’t already possess them. Please see the Office of Student Conduct (new window) for clarification and additional expectations.

Further, I expect that you will regularly monitor your memphis.edu email account and the eCourseware course, stay current with the reading assignments, be prepared for the quizzes and examinations, and participate as needed so you gain the most from this course.

Student’s Expectations of the Instructor

My personal goal is to help you gain knowledge and insight into the fundamental concepts of an organization’s operations through the material presented, the homework assigned, the classroom, discussion and other online participation and any personal experience I can share during this semester. Therefore, in my role as your instructor, there are certain things you can expect from me including a well-organized and engaging learning experience based on my professional experiences in multiple industries, response to emails within two (2) business days, and feedback on all work submitted within 10 calendar days.
Student's Effort

*Past experience suggests that this can be a very difficult course for many students. Most students find Module 2 particularly challenging.*

We discuss details of a company’s operations at a time when you may not have any experience in industrial, commercial or service industries; this makes absorption of the material difficult. However, we cover these subjects in only moderate depth. Don’t underestimate the time you may need to read and absorb the information; **you are expected to have read the scheduled chapters and completed any other assigned work prior to that day’s class** so you can participate in discussions and ask clarifying questions.

This is a required course for many students, a prerequisite for others, and is often taken as part of a full-time student course load. The expected effort is based on a full time student spending 40 hours per week after combining all of your classes, homework, teamwork, reading and other research across all of your classes. Since this 3 credit-hour course is 20% to 25% of a full time student course load, I expect you to spend 8 to 10 hours per week working on this course whether you are a full time or part time student. Since approximately 3 hours of that time will be spent in class, the remaining 5-7 hours are allocated to the course requirements. Therefore, most of your learning will occur outside of the classroom. Please put your investment of time and money to good use.

**Learning is an activity - it takes action.** Sitting in class doesn’t make you an educated adult just like sitting in a garage doesn’t make you a car. Our society is well along the path of becoming media-centric; however learning cannot be done via "sound bites” or memes. There are no easy answers for problems or questions. **Become engaged with your education - in all classes, not just this one.**

Your grade is dependent only on the quality of the various assessments such as quizzes, homework, discussions, and exams. Remember that the quantity of your time and effort spent on this class is not a factor in your grade.

**Courtesy**

To maximize the learning experience for all, please minimize or eliminate the use of laptops, all electronic equipment should be silenced by turning them off or setting them to “silent mode”, do not use your cell phones or music players during class time, do not bring non-students into class with you (such as spouses, children, parents, pets or siblings), and do not bring food or beverages that are noisy or highly fragrant.

**Integrity, Netiquette, and Plagiarism**

As your instructor for this course, I assume that all students are performing their academic work consistently with all expectations for academic integrity on our
campus. So let's be sure we know what that means and how it will negatively affect you should you violate the conditions intentionally or unintentionally.

What is “Academic Integrity”?  

The Fogelman College of Business has established a standard set of guidelines for all students taking courses or pursuing a degree through the college. You should take the time to review the information on the Fogelman College Academic Integrity (new window) website where short specific definitions are given for plagiarism, cheating, and fabrication. FCBE's Understanding Plagiarism (new window) site provides details about the serious topic of plagiarism. Plagiarism is not limited to written reports; it includes all forms of computer files, including Excel files, online homework assignments, etc. Significant plagiarism suspected and confirmed by the instructor will make your project or assignment score 0 – no exceptions.

Note: Should you be caught in violation of these policies, you may initially see this as a "negative event" with respect to this course, but it should also be seen as a "positive event" since you will now have experienced the value of other people's work and creativity. Just as these other people want their work and creations to be properly recognized (and compensated if necessary), you too, would want to have your work and creations protected since you would have spent your time and energy creating them. You can learn the value of other's work by copying it and being disciplined, or you can acknowledge the value of other people's work and value it appropriately.

Follow up with me or the Office of Student Conduct (new window) if you have any questions.

Why is it important in the Fogelman College?  

The University of Memphis has clear codes (above) regarding cheating and classroom misconduct that we both must adhere to. For the university to represent that their graduates have actually earned the significant education a degree represents, the faculty and staff must monitor for inappropriate behaviors. We recognize that cheating, plagiarism, and other acts of dishonesty do not contribute to learning and are both unethical and illegal under the academic standards of The University of Memphis.

How Academic Integrity is reinforced and achieved in this course  

In this course, you will be assessed on your knowledge of the content in a variety of ways. Specific expectations of academic honesty will be reinforced this semester as you take quizzes, submit written assignments, perform group projects, participate in discussion boards, and take examinations. The professor's experience along with electronic tools (such as but not limited to Turnitin and eCourseware) will be used consistently to monitor each student's work.
Turnitin

As noted on the FCBE Academic Integrity website, the university has a full license to Turnitin.com as an aid to students in better understanding how to submit research and writing that adheres to our principles of individual academic achievement. If there is a research paper to be submitted using eCourseware’s Dropbox and/or via email as attachments, that work will be submitted to the Turnitin.com service for an initial indication of originality. Students submitting reports that indicate substantial amounts of plagiarized content that are confirmed by the professor will receive a score of 0; the incident will also be reported to the department chair for further consideration.

eCourseware

eCourseware itself provides faculty with various tools to monitor inappropriate behaviors.

You may work together on studying and homework assignments – in fact I encourage it; however you cannot submit work from anyone else and represent it as your own work – that is plagiarism.

Misconduct in Online Classes

Students in traditional classroom settings as well as those in hybrid, flipped and fully online classes in the Fogelman College of Business & Economics are expected to behave in a professional and collegial manner. Inappropriate behavior in an online learning space can be just as disruptive to the learning experience as in regular classroom situation. Therefore, online students are required to adhere to the same professional, legal and ethical standards of conduct online as on campus.

Netiquette

Noun: “the rules of etiquette that apply when communicating over computer networks, especially the Internet.” (Dictionary.com Unabridged)

Students should conform to generally accepted standards of "netiquette" while sending e-mail, posting comments to the discussion board, and while participating in other means of communicating online. The Fogelman College of Business & Economics has developed its own set of “netiquette” guidelines at Netiquette Guide for Online Courses (new window).

My Role and this class

I vigorously monitor all assignments for issues of academic integrity and plagiarism (by using Turnitin and eCourseware) and act on them. If you have any questions about academic integrity or plagiarism, you are strongly encouraged to talk to me and review
the FCBE Standards for Academic Integrity (new window) well before submitting any work.

One Experience at UM

I used to cancel one class per module to allow students to take the online exams during class time since a few students have very tight schedules between work, family, health, and distance issues. Then one day, I found 18 students huddled together in plain view taking my exam together.

It turns out that D2L has electronic tracking of everything done online - even just viewing files. So there was eyewitness testimony, electronic testimony, and student admission of cheating. Each student was given 0 points for that exam, as stated in the syllabus and supported by the college.

Nothing in your work life will allow for copying or cheating since, if what was needed already existed, the company would just go get it themselves and you would not have been hired. They need you to be able to think through problems and come up with solutions. Please don't take courses for a grade - take them to learn something that you can use in your chosen career.

Academic References

What is Plagiarism at the University of Memphis? (new window)

Academic Integrity at University of Memphis (new window)

How Not to Plagiarize (University of Toronto - new window)

Miscellaneous References

Here are two interesting references to help you think about and test your work for plagiarism (from The Visual Communications Guy (new window); this site has a number of creative resources on many topics other than these)

Did I Plagiarize? (new window)

Can I Use that Picture? (new window)

FCBE Academic Internship Credit

In FCBE, all majors offer an academic internship course option as a substitution for a required elective in a student’s major. To apply for academic credit, students must obtain an internship highly related to their major, register prior to the start of their internship and have their internship approved by departmental internship faculty.
To review the requirements for applying for academic credit, visit FCBE's Professional Development Center's Internship page (new window). Students should allow approximately two weeks for the review and processing of an academic internship application through the Fogelman Internship Network.

**Grading and Evaluation Criteria**

**Graded items**

**Homework**

Any homework performed using eCourseware’s Quiz tool may be submitted up to three times. All attempts will be scored but only the highest score will be posted to the gradebook.

**Introduction Quiz**

A short “Intro Quiz” is given to check your grasp of the course’s syllabus, design and grading, as well as your ability to locate course information by yourself. There are two attempts at this quiz; both attempts will be scored but only the highest score will be posted to the gradebook.

**Skills Quiz**

The Skills Quiz is a short quiz to check your skill level for the logic and math skills you will need to be successful in this course. There are two attempts at this quiz; both attempts will be scored but only the highest score will be posted to the gradebook.

**Module Quizzes**

There are three quizzes - one for each module; each quiz has only one attempt. They are intended to provide practice prior to the exam and are representative of the types of questions and problems that will be on the corresponding exam. Module quizzes will have somewhat more time allotted per question or problem than exams to provide additional opportunity for thought and calculations.

- Find a clear, safe space free from any distractions so you can concentrate on the questions and problems.
- Start at a time that allows you enough time to complete it before the finish time. As you take the quiz, save your work frequently in case there is a technical disruption.
- You may use the formula sheet provided with each module
- You may use a standard calculator - one that cannot be programmed and has no internet access. You cannot use a smartphone (the issue is copying and plagiarism - not capability)
• You should take the quiz without accessing the textbook since it is intended to be a practice for the exam. You should interpret the results (your strengths and weaknesses) as a guide for what to study for the exam itself.
• You may not use the internet for any purpose (other than the quiz itself) during the quiz

Exams

There is only one attempt on each of the three exams.

• Find a clear, safe space free from any distractions so you can concentrate on the questions and problems.
• Start at a time that allows you enough time to complete it before the finish time. As you take the exam, save your work frequently in case there is a technical disruption.
• You may use the formula sheet provided with each module
• You may use a standard calculator - one that cannot be programmed and has no internet access. You cannot use a smartphone (the issue is copying and plagiarism - not capability)
• You must take the exam without accessing the textbook. You are demonstrating to your future employer the knowledge you have gained.
• You may not use the internet for any purpose (other than the exam itself) during the exam

Timing

eCourseware begins a timer when you begin one of these graded items above. The timer runs whether you are on the system or not - which means that you cannot sign out of eCourseware to go do something else and expect to have the remaining time still available. Expect to start and finish the quiz or exam in one session.

Online Discussions

There are two forms of online discussions:

• Graded: You are graded for your original post as well as your follow up posts to other student’s postings and replying to those who post questions or challenges to your post.
• Not Graded: These are optional topics but will be valuable as we exchange ideas and expand our knowledge.

Graded and Not Graded discussion details (download) provide the requirements and rubrics used in these assignments.
Q&A Forums

These forums (found in the Communication / Discussion folder in eCourseware) are open for any course-related question about homework, quizzes, exams, current events, career, terms, concepts, textbook, etc.

The Q&A forums are not graded; they are intended for open questions and their replies.

Questions about the material **must** be posted to the online Q&A discussion forums for the benefit of the entire class. Only specific issues that should remain confidential should be emailed to the instructor. If you send a general class-related question to the instructor, you will be asked to post it online before it is answered.

Scheduling Project (Excel)

This is a two-part assignment that takes some of the scheduling techniques you’ll learn in this course and lets you demonstrate your Excel skills by creating a schedule using Excel formulas that will generate one or more manufacturing schedules. Details are provided in a separate instruction document.

“Necessary but not Sufficient” Reading

This paperback by E. Goldratt will expose us to the real-world difficulties in running a business even when they are using sophisticated software systems for scheduling and inventory control. It is a fictional story based on an amalgamation of real world experiences of the author. Each course module will have an assignment with a few questions that deal directly with the contents and story line of this book; additionally, each of the four exams will have a question or two from this book.
Grading Scale

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Grade Calculation

I don’t give grades:

I document your performance on the graded components; not any potential biases or your preconceptions of your level of effort. Situations such as "you have to graduate by a specific date", "you have to maintain a certain grade point average to stay in a program", "you have taken this course two or three times before", or "you have worked very hard and attended every class" have no impact to your future employer or this class.

Translation:

Your grade depends on the graded items, not on how much time you spend on the work itself.
You can determine your grade, in detail, at any point in time by looking at your gradebook in eCourseware. Notice that the final numeric score above is rounded to one decimal point and will be kept to that level of precision to determine the letter grade (ex: there will be no further rounding of a score of 89.9 to 90.0 to change from B+ to A-).

The Grade Estimator is a spreadsheet that allows you to estimate your final grade at any point in time as well as help you determine what you need to score in order to obtain any letter grade you are interested in. This is possible because as you have read, there is no curve and no extra credit; further the amount of effort you do or do not invest are not factors in your grade.

Extra Credit: Extra credit is not offered for any reason. Many instructors, including me, consider "extra credit" to just be a way to burn additional calories late in the semester that do not provide additional learning. If you focus on absorbing the course material, doing the assigned work well and on time, you will have minimized your work and maximized your education.

Curve: There is no curve in this class. The advantage of this policy is that any perception of bias in any direction is removed. In business, you either know the subject matter or you do not.

Timeliness / Late Submissions: In business, we must produce our "products" (reports, analyses, presentations, schedules, deliveries, proposals, finished goods, etc.) on specified dates. Each graded assignment has a corresponding due date. All dates for all such items are known and published before the semester begins; the due dates are intentionally set to be following the completion of the material needed to successfully complete each assignment. Therefore late submissions are not accepted and score 0 points. It is incumbent on you to manage your time in school, work, and family to meet these schedules. You may submit work early; there is no need to wait until the last day.

Plagiarism: If you have plagiarized, your work for that effort will be scored at 0. Repeated plagiarism will be referred to the Office of Student Conduct (new window). Please refer to Integrity, Netiquette and Plagiarism for further details.

Real Life: With that said, "real life" can and does happen to us all - car accidents, family or personal illnesses, business trips, new babies, etc. I will gladly work with you for documented events so you can complete the work and earn the corresponding credit. This timeliness policy is to encourage and teach professional self-discipline.

Accuracy

You may contact me with any questions, errors or omissions; I will gladly discuss any legitimate concern about your grade and quickly fix any errors in the gradebook.
Confidentiality

To comply with FERPA and UM policies:

- I will not leave any detailed information on your voice mail or give any such information to your spouse or other family member without either (a) your explicit permission in writing to protect your privacy or (b) receiving specific permission and direction of the department chair.
- All electronic communication for any purpose will be sent to your memphis.edu email address.