

SCMA 3320 - Advanced Supply Chain and Operations Management
Spring 2024

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Class Schedule: This is a 100% online 8-week class. Consequently, the class moves very quickly – so you need to keep up. If you fall behind, it will be very difficult to catch up.

Office Hours: Office hours are an important part in supporting you throughout this course. My scheduled virtual office hours via Zoom are Wednesday from 5:00 – 5:30 pm (March 13 – May 1, except March 27), with the links posted in Canvas. However, we can easily arrange to meet at another time via Zoom. Just email me to find a time.

Course Description: SCMA 3320 *Advanced Supply Chain and Operations Management*: 3 semester hours. Prerequisites: SCMA 3301 or MATH 1320 and a 2.0 campus GPA. This course covers supply chain management with special focus on understanding manufacturing and service operations. Emphasis is on the application of quantitative methods to the solution of strategic, tactical and operational problems. Topics include demand planning, capacity, new product design and launch, process selection, facility layout, production planning, scheduling, inventory, process control, waiting lines, lean production, etc.

This course covers supply chain management and operations management which are concerned with the efficient creation and delivery of goods and services. This includes a wide range of strategic, tactical and operational problems that can be addressed with quantitative approaches and tools. Much of the analysis relies on logical thinking, basic mathematics and algebra – and we will use Excel to facilitate analysis and solutions for many of the problems.

There are three main objectives for the course. At the end of this course, students should be able to:

- (1) Explain the importance of the key components of operations management and supply chain management, including process choice and facility layout, product and process quality, capacity management, logistics, demand forecasting, sales and operations planning, inventory, and lean production.
- (2) Demonstrate a quantitative approach to decision making using Excel for analysis and graphing.
- (3) Assess the pros and cons of operations and supply chain management decision alternatives, for process choice, facility layout, capacity management, facility location, sales and operations planning, and inventory management.

Course Materials: The text is *Introduction to Operations & Supply Chain Management*, 5th edition by Cecil C. Bozarth and Robert B. Handfield. This is available via Auto Access through the course Canvas site. Answers to the problems at the back of the chapters will be posted on Canvas. I will post all the course materials on Canvas, including Powerpoints and Panopto videos for all topics/chapters that we cover, along with associated readings and videos. Students are responsible for all materials and announcements made in Canvas.

Grading: Grades for the course are determined based on total points using the weights indicated in the following table. My grading philosophy is that students with similar scores should have similar grades, and students with different scores should have different grades, with the grade breakpoints based on the class performance. Usually this follows reasonably well a scale where 100-90=A, 89-80=B, 79-70=C, 69-60=D, etc., but not always. In any event, the top scores get A's, and other letter grades are determined by how the scores cluster (with different letter grades for different clusters). The key point is that the letter grade ranges are adjusted based on the performance of the class. Generally, plus and minus grades will be used to differentiate performance within a grade range. The grading scheme is subject to change, and any changes will be announced in class.

Exam 1	20 %
Exam 2	20 %
Exam 3	20 %
Exam 4	20 %
Quizzes & Assignments	20 %

Exams: Exams consist primarily of quantitative (calculation) problems, but also include qualitative questions (multiple choice, short answer, etc.). Preparation for the exams includes: (1) understanding the material presented in class; (2) reading and understanding the text; (3) working the homework problems and asking questions about material you do not understand; and, (4) understanding review materials. Exams grades will be posted in Canvas within 5 days of the due date or the final exam submission.

I like to give partial credit, so it is very useful for students to show their work on exams. My grading philosophy is that a small error, for example in a calculation problem, should lead to a small deduction, even though the answer may be far from the correct answer. But for me to determine if you have made a small error, I need to see your work.

Quizzes: Short quizzes are included in Canvas for many topics. These have specified available dates and due dates. All quizzes are due (must be submitted in Canvas) by 12 midnight on the due date. However, quizzes may be submitted early (and repeatedly) for feedback (indicating whether or not the answers are correct); only the final submission before the due date is graded. It is very useful for students to show their work on quizzes, so I can help find any errors if the answer is not correct. By submitting the quiz early, and receiving feedback from me, you can resubmit the quiz before the due date and get full credit. Feedback on early quiz submissions will be provided within 24 hours of submission. The quiz answers will be posted 15 minutes after the due date, and the final quiz grades will be posted within 24 hours after the due date.

Suggested Problems: A number of suggested homework problems from the end of the chapters are recommended. These are not to be turned in or graded. The suggested problems and their solutions are available on Canvas.

Course Outline: The course is divided into four parts as shown below. *This schedule is subject to change.* Course materials, including PowerPoint slides for each part, will be available on Canvas.

Part 1: Weeks 1-2: March 11 – 23, 2024

Modules 1-2 = Topics 1-5: Chapters 1-4 and Quizzes 1-6

Exam 1: available Thursday 3/21; due Saturday 3/23 at midnight

Part 2: Weeks 3-4: April 1 – 14, 2024

Modules 3-4 = Topics 6-8: Chapters 5, 14 and 6.1 – 6.4 and Quizzes 7-12

Exam 2: available Thursday 4/11; due Saturday 4/13 at midnight

Part 3: Weeks 5-6: April 15 – 28, 2024

Modules 5-6 = Topics 9-12: Chapters 6.4, 6S, 8, 9, 10 and Quizzes 13-17

Exam 3: available Thursday 4/25; due Saturday 4/27 at midnight

Part 4: Weeks 7-8: April 29 – May 8, 2024

Modules 7-8 = Topics 13-16: Linear Programming + Chapters 10.6, 11, 12, 13, 15 and Quizzes 18-21

Exam 4: available Monday 5/6; due Wednesday 5/8 at midnight

Drop Policy: If you drop the course on or before the first class after Exam 1 is returned, you will receive a grade of "Excused". If you drop after the first class after Exam 1 is returned, you will receive an "Excused" or "Failing" grade based on your grade at the time the instructor receives written notification that you are dropping the course.

Academic Honesty: Academic dishonesty includes activities such as cheating, plagiarism, or sabotage. According to the University Standard of Conduct, Section 6.0101, "The Board of Curators recognizes that academic honesty is essential for the intellectual life of the University. Faculty members have a special obligation to expect high standards of academic honesty in all student work. Students have a special obligation to adhere to such standards." Any student who is caught cheating on any exam or assignment will receive a grade of zero for that assignment or exam. Further, a recommendation may be made to the appropriate university officials that additional formal disciplinary action be taken.

Any written assignments should be in your own thoughts and words. Plagiarism, which is presenting the ideas, written work (including material from web sites), or any other information from someone else as your own work, is academic dishonesty. Last year there were 19 cases of plagiarism among UMSL students, and in each case the student was found guilty, and received a failing grade and a sanction from the Office of Academic Affairs. Any ideas or quotes from other sources (including web sites) that you use in a written assignment should be in quotations and should be properly acknowledged. For a nice discussion of how to properly cite your sources and how to avoid plagiarism, see <http://www.umsl.edu/~comm/files/pdfs/plagiarism.pdf>.

Disabilities: This University abides by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) which stipulates that no student shall be denied the benefits of an education solely by reason of a disability. If anyone has a health condition or disability which may require accommodations in order to effectively participate in this class, please contact the Disability Access Services Office in 144 Millennium Student Center at 516-6554.