

SOUTHERN ILLINOIS UNIVERSITY  
**EDWARDSVILLE**  
SCHOOL OF BUSINESS

**Production 315: Production and Operations Management**  
**Three Semester Hours**

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**Course Catalog Description:** Study of manufacturing and service operations management. Covers process and product design, quality management, planning/control of materials and capacity, and project management. Prerequisite: MS 251.

**Course Overview:** The operations system is the part of the organization that transforms land, labor, capital and management inputs into products. The products may be physical goods (automobiles, cereal) or services (health care, automobile repair). Operations management is the management of this transformation process.

The major focus of this course is on the design, operation and control of operations systems to effectively and efficiently produce goods and services. Operations management activities include designing the production system, planning and scheduling production, managing inventories, and controlling product quality.

**Course Goals:**

- To assist students in developing skills in decision-making and systematic problem solving through the application of a variety of quantitative models.
- To provide an understanding of the operations management function and its relationship with the other functional areas.
- To develop awareness of the operations decisions that organizations must make and of the variables upon which the decisions depend.
- To teach the analytical techniques of operations management. These include universal operations management concepts such as aggregate planning, capacity planning and dependent versus independent demand. They also include the functional areas within operations management such as master scheduling, inventory control and quality control.



**Course Resources:**

- Krajewski, Lee and Larry Ritzman, Operations Management: Strategy and Analysis (7<sup>th</sup> edition), Prentice Hall, Inc., 2004.
- The Prod 315 Blackboard site (<http://bb.siue.edu>) is an important source of information. It will contain lecture outlines for each class topic and relevant web sites to assist you in class preparation. You can find more information on Blackboard later in this syllabus.
- Materials handed out in class.

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**Course Grading:** Course grades will be based on examinations, quizzes, homework, and class attendance and participation. Examination scores will determine about 71% of the final course grade. Class preparation and participation (including quizzes and homework) will determine 29% of the final course grade. There will be two mid-term exams and a **comprehensive** final. The course grade breakdown is as follows:

Exam 1	150 pts.
Exam 2	150 pts.
Final Exam	200 pts.
Quizzes	95 pts.
Homework	80 pts.
Attendance	25 pts.
Total	700 pts.

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**Examinations:** There will be three examinations held during the semester. The purpose of exams is to give you the opportunity to demonstrate the knowledge and skills you have developed through the course.

The exams will include problems, multiple choice and short answer questions designed to assess your knowledge of course topics and your ability to apply the quantitative methods covered in the course.

On exam days, if you may not wear a baseball-type cap to class; if you do wear one, you will be asked to remove it. On exams where a calculator is required, you may only use calculators. You may not use cell phones or any other electronic device for performing calculations.

It will only be possible to make up exams if you make arrangements for the make up **prior** to the time of the exam.

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**Quizzes:** Six quizzes worth 18 points each will be administered during the course of the semester. The purpose of the quizzes is twofold. Quizzes allow you to demonstrate what you have learned through the course. Quizzes also give you an opportunity to assess your areas of strength and weakness in advance of the exam.

Each quiz will consist of questions and problems related to a particular topic covered in class. Quiz dates are noted on the course schedule. The lowest quiz grade will be dropped. If you miss

one quiz, you may use the score of the next quiz as the score for the missed quiz. Any other missed quizzes will not receive credit.

**Homework Assignments:** Homework will be assigned for each of the chapters covered in class. For each chapter, one question or problem will be collected for grading. The purpose of homework is to allow you to practice what you have learned and to develop a skill in the sequence of problem solving, including identifying the question to be answered, the information used, and the results of the analysis.

The homework problem or question to be handed in will not necessarily be from the textbook. Assignments will be posted on my Prod 315 Blackboard site. (See explanation of Blackboard below.) Approximately eleven homework questions/problems will be assigned over the course of the semester, and each collected assignment will be worth 8 points. The lowest homework grade will be dropped.

Homework will be collected at the start of class on the assigned date. Homework may also be turned in to my mailbox or electronically prior to the start of class. No late homework will be accepted.

Please note the following information on homework format.

<i>Submission</i>	<ul style="list-style-type: none"> <li>▪ Homework <u>must</u> be turned in at the beginning of class.</li> <li>▪ An assignment <u>must</u> be stapled if it consists of more than one page.</li> <li>▪ LOOSE PAPERS, PAPER CLIPS, DOG-EARS, ETC. ARE NOT ACCEPTABLE AND WILL NOT BE GRADED.</li> <li>▪ The assignment should be folded vertically with the back of the assignment facing out.</li> </ul>
<i>Identification</i>	<ul style="list-style-type: none"> <li>▪ Print the following information on the back of the outside page (fold on the left) of each assignment:             <ul style="list-style-type: none"> <li>▪ Last name, first name</li> <li>▪ Seat number</li> <li>▪ Chapter number</li> <li>▪ Date</li> </ul> </li> </ul>
<i>Homework questions</i>	<ul style="list-style-type: none"> <li>▪ To receive credit, your answers <u>must be word-processed</u>.</li> <li>▪ Check your answer carefully for fatal errors (misspellings, grammar errors, etc.) An assignment that has three or more Fatal Errors will lose at least half of the assignment points.</li> <li>▪ For more information on the School of Business' Fatal Error Policy, please visit the following website <a href="http://www.siu.edu/BUSINESS/forms.html#fep">http://www.siu.edu/BUSINESS/forms.html#fep</a></li> </ul>
<i>Homework problems</i>	<ul style="list-style-type: none"> <li>▪ To receive credit, you <u>must</u> print out the problem worksheet from the Blackboard site and work the problem on the worksheet containing the problem.</li> <li>▪ When a problem requires a graph, the graph must either be produced using the graphing capabilities of MS Word™, Excel™ or other graphing program or drawn neatly using straight edges. Each graph</li> </ul>

	<p>should have a descriptive title and clearly labeled axes.</p> <ul style="list-style-type: none"><li>▪ Answers should be clearly identified. Numerical answers should be labeled with units when applicable and a sentence or two summarizing the decision that should be made based on the calculations must be included.</li></ul>
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Illegible, unintelligible and unstapled homework will not be graded and will receive a grade of zero.

Finally, while you may choose to work on and discuss questions and problems with your classmates, the work you turn in must be your own. Homework papers that are simply duplicates of other students' work will not be graded. Please read the Academic Dishonesty section below for a more detailed description of the consequences of plagiarism.

Additional problems from some chapters in the textbook will be assigned for purposes of class discussion. These additional problems will provide you with an opportunity to practice identifying and using the correct equations in different situations. You may complete and turn in these problems for 1 point extra credit per chapter. The extra credit homework must be turned in before the problems are worked in class. Please format extra credit homework using the instructions for homework questions described earlier in this section.

**Attendance:** Attendance will be taken each class period. The purpose of taking attendance is to encourage your involvement in the course. Each class period is important to your understanding of the course material. If you miss a class, you miss the opportunity to learn. You are expected to be in class on time and prepared each day.

You will receive 1 point for every class you attend, to a maximum of 25 points. In order to receive credit for attendance, you must arrive on time and stay for the entire class unless you notify me ahead of time. Most days I will take attendance by having you sign an attendance sheet. Do not sign in for a classmate. If you are caught, both you and the student you sign in will receive zero attendance points.

**Prod 315 Blackboard Site:** Blackboard is a web-based course management system. It provides valuable tools for communication and information sharing. In the Blackboard site, you will be able to download class notes and homework problems. The private e-mail on Blackboard will allow you to directly contact your classmates and me with questions about the course. You will also be able to post questions and discussion comments on a bulletin board.

Everyone in Production 315 is **required** to participate in Blackboard. You may access Blackboard by going to: <http://bb.siue.edu/>. To log onto Blackboard, you must have an active SIUE e-mail account. If you do not have an SIUE e-mail account, the Office of Information Technology provides e-mail accounts (<https://oitam.isg.siue.edu/~eid/cgi-bin/e-ID>). Your initial Blackboard login will be your SIUE e-mail identifier. For example, mine is lswanso. Your password is your SIUE e-mail password.

**Special Needs:** If you have special physical or educational needs that require accommodation or auxiliary aids and services, I am ready to accommodate you. You will need to do the following:

- A. Speak with me during the first week of class.
- B. Provide documentation of your need.
- C. If you have not done so already, please contact or visit Disability Support Services located in Rendleman Hall, Room 1218, or call the office at 650-3726 or email [jfloydh@siue.edu](mailto:jfloydh@siue.edu). They will assist in the planning of necessary accommodations.

If you have an emergency during the course of the semester that requires you to miss an extended number of classes, you will need to do the following:

- A. Contact me as soon as possible.
- B. Provide documentation of your problem.
- C. Contact the Dean of Students office located in Rendleman Hall, Room 2306, or call the office at 650-2020. The Dean of Students office will assist in you in contacting your instructors concerning your emergency.

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**Academic Dishonesty:** Academic misconduct includes cheating, plagiarism, falsification of records, unauthorized possession of examinations, intimidation, and any other action that may improperly affect the evaluation of your performance. Academic misconduct also includes assisting others in any such acts. Penalties for academic misconduct may range from grade penalties (including a zero for an assignment or examination, or failing a student for the course) to official disciplinary action including notification of the Provost's office. For more information see the Student Academic Code (<http://www.siue.edu/POLICIES/3c2.html>) and the university policy on plagiarism (<http://www.siue.edu/POLICIES/1i6.html>).

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**Classroom Expectations:** For some students, the quantitative material in this course is quite challenging. I am committed to assisting students overcome these challenges and welcome visits during my office hours or by appointment. To achieve the most efficient use of our time, I expect you to have read the material and attempted the problems prior to coming to my office. If you have not prepared the material prior to visiting my office, I may ask you to postpone our appointment until you have had the chance to study it.

I also expect you to act in a professional manner in this class, and I will act in the same manner. Professional behavior implies honesty, respect and preparation. This includes arriving for class on time, being prepared and staying for the entire class period. It also includes coming to class prepared to discuss the material assigned for the day. Finally, professional behavior includes submitting work that is neat, proofread, and consistent with the prescribed format.

Production 315: Production and Operations Management

**TENTATIVE COURSE OUTLINE:**

<b>Session</b>	<b>Topic:</b>	<b>Chapter</b>
1	<i>Introduction</i> Overview of Course Operations as a Competitive Weapon	1
2	<b>Stat Review Quiz</b> Operations Strategy/Decision Making	2 & Supp A
3	Decision Making/Process Design Strategy	Supp A & 3
4	Process Design Strategy	3
5	<i>Quiz #1</i> Process Analysis	4
6	Process Analysis/Process Performance and Quality	4 & 5
7	Process Performance and Quality	5
8	<i>Quiz #2</i> Process Performance and Quality	5
9	Review and Catch-up	
10	<b>Exam #1</b>	
11	Process Capacity	6
12	Process Capacity	6 & Supp A
13	Process Capacity/Aggregate Planning	6 & 14
14	<i>Quiz #3</i> Aggregate Planning	14
15	Aggregate Planning	14
16	Inventory Management	15
17	<i>Quiz #4</i> Inventory Management	15
18	Inventory Management	
19	Review and Catch-up	
20	<b>Exam #2</b>	15
21	Resource Planning	16
22	Resource Planning	16
23	Lean Systems	11
24	<i>Quiz #5</i> Lean Systems	11
25	Managing Project Processes	8
26	<i>Quiz #6</i> Managing Project Processes	8
27	Managing Project Processes	8
28	Review and Catch-up	
29	Review and Catch-up	
30	<b>Final Exam</b>	