

SOUTHERN ILLINOIS UNIVERSITY  
**EDWARDSVILLE**  
SCHOOL OF BUSINESS

**Production 519: Production and Operations Management**  
**Three Semester Hours**

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**Course Catalog Description:** Management of manufacturing and service operations. Topics include process technology and product design; forecasting; long range and aggregate planning; management of independent and dependent demand; and quality. Prerequisite: MS 502 or equivalent

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**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:** This course will strive to achieve the following specific goals:

1. To develop awareness of the operations decisions that organizations must make, and of the variables upon which the decisions depend.
  2. To develop an understanding of the critical factors that affect how processes are designed, and how existing processes can be analyzed to identify opportunities for improvement.
  3. To provide an understanding of the operations management function and its relationship with the other functional areas.
  4. To teach the analytical techniques of operations management. These include universal operations management concepts such as capacity planning and dependent versus independent demand. They also include the functional areas within operations management such as inventory control and quality control.
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**Course Resources:**

- Chase, R.B., N. J. Aquilano and F. R. Jacobs, Operations Management for Competitive Advantage Tenth Edition, McGraw-Hill Irwin, Boston, 2004.
- Harvard Publishing. Several Harvard Cases will be used to cover material in the course. To obtain these cases, go to <http://harvardbusinessonline.hbsp.harvard.edu/relay.jhtml?name=cp&c=c04693> . If you have not registered with Harvard Business Online, you will be required to do so. This URL will provide you with a list of required materials for use in this course. You will have immediate access to the materials upon placing your order, for subsequent access, you must login to <http://harvardbusinessonline.org>.
- The Prod 519 Blackboard site (<http://bb.siue.edu/>) is an important source of information. It will contain additional readings, lecture outlines for each class topic and relevant web sites to assist you in class preparation.

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**Course Grading:** Course grades will be based on mid-term and final examination scores, individual written assignments and class participation. Examination scores will determine 60% of the final course grade. Class preparation and participation (including case write-up assignments) will determine the other 40% of the final course grade. The course grade breakdown is as follows.

Midterm Exam	30%
Final Exam	30%
Individual Case Write-ups	30%
Attendance and Participation	10%

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**Examinations:** There will be two examinations held during the course: a mid-term and a non-comprehensive final. Each exam will be worth 100 points. Problems, essay questions, mini-cases and short-answer questions will be used on the exams to assess your knowledge of course topics.

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**Individual Written Assignments:** The individual written assignments will be in the form of case analyses (approximately 3-5 pages long, not including exhibits). Students will be required to hand in write-ups for two Harvard Cases. These cases will also be discussed in class.

The assignments are to be typewritten/word processed. Please see the last two pages of the syllabus for specific guidelines for each assignment. Cases will be handed in at the beginning of class. Late assignments will not be accepted.

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**Participation:** This will be decided based on your overall contribution to class. Desirable contributions include asking intelligent questions on the material, answering questions on the material, presenting solutions to homework problems and participating in case discussions. Being prepared with the reading assignments and homework problems is important.

**Homework:** Questions, problems and cases are assigned for each topic to be covered in the course. The homework is not to be handed in, but will provide the basis for class discussion. The problems and readings have been selected to give you an opportunity to practice the techniques covered in class.

**Prod 519 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 519 is **required** to participate in Blackboard. You may access Blackboard by going to: <http://bb.siu.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.siu.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.

**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.siu.edu/POLICIES/3c2.html>) and the university policy on plagiarism (<http://www.siu.edu/POLICIES/1i6.html>).

**TENTATIVE COURSE OUTLINE:**

**SESSION 1**

Topic

Assignment

**Introduction to Operations Management**

Chapter 1

**Operations Strategy**

*Readings from the Textbook*

Operations Strategy and Competitiveness

Chapter 2

*Case Discussion*

Lasik Vision Corp.

Chapter 2, pp. 46-47

**SESSION 2**

**Designing and Analyzing Processes**

*Readings from the Textbook*

Process Analysis

Chapter 4

Facility Layout

Technical Note 5 pp. 186-207

Synchronous Manufacturing and the Theory of Constraints

Chapter 17

*Case Discussion*

State License Renewals

Technical Note 5, p. 216

Kristen's Cookie Company

Chapter 4, p. 123

**SESSION 3**

**Product Design/Process Selection**

*Readings from the Textbook*

Product Design and Process Selection – Manufacturing

Chapter 5

Product Design and Process Selection – Services

Chapter 6

*Production 519: Production and Operations Management*

***Case Discussion***

Circuit Board Fabricators, Inc.

Pizza USA Questions 3 and 4

**SESSION 4**

**Quality Management**

***Readings from the Textbook***

Total Quality Management: Focus on Six Sigma  
Process Capability and Statistical Quality Control

***Case Discussion***

Hank Kolb Director of Quality Assurance

**SESSION 5**

**Exam #1**

**SESSION 6**

**Supply Chain Management**

***Readings from the Textbook***

Supply Chain Management

E-commerce and E-ops

Enterprise Resource Planning Systems

**SESSION 7**

**Aggregate Planning/Strategic Capacity Management**

***Readings from the Textbook***

Strategic Capacity Management

Aggregate Sales and Operations Planning

Chapter 5, pp. 183-184

Chapter 6, pp. 239-240

Chapter 7

Technical Note 7 pp. 299-314

Chapter 7 pp. 293-294

Chapter 9

Managerial Briefing pp. 349-360

Managerial Briefing pp. 453-462

Chapter 10

Chapter 13

***Case Discussion***



*Production 519: Production and Operations Management*

Shouldice Hospital-A Cut Above

Chapter 10, pp. 404-405

Bradford Manufacturing – Planning Plant Production

Chapter 13, pp. 539-540

## **SESSION 8**

### **Material Management**

#### *Readings from the Textbook*

Inventory Control

Chapter 14

Just-in-time and Lean Systems

Chapter 11

Material Requirements Planning

Chapter 15

Synchronous Manufacturing and the Theory of Constraints

Chapter 17

#### *Case Discussion*

Quality Parts Company

Chapter 11, pp. 447-448

Hewlett Packard

Chapter 14, pp. 579-580

Brunswick Motors, Inc. – An Introductory Case for MRP

Handout

## **SESSION 9**

### **Project Management**

#### *Readings from the Textbook*

Project Management

Chapter 3

#### *Case Discussion*

Product Design at Ford

Chapter 3, pp. 95-97

## **SESSION 10**

### **Exam #2**