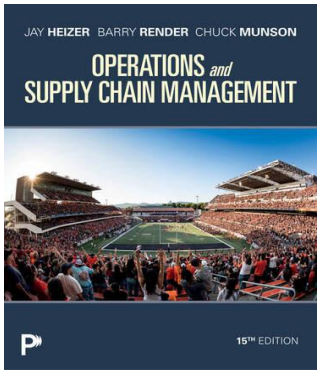
DEPARTMENT OF MANAGEMENT AND QUANTITATIVE METHODS
COLLEGE OF BUSINESS
ILLINOIS STATE UNIVERSITY
MBA 427: Summer 2026

College of Business Mission: Through our shared commitment to excellence in teaching, research, and service, we prepare students to be skilled and ethical business professionals who will make significant positive contributions to organizations, to communities, and to our larger society.
Vision: The first choice for business education in Illinois.
Academic Integrity: Students enrolled in College of Business classes are expected to maintain high standards of ethical conduct within the classroom and when completing assignments, projects, and/or exams. Plagiarism and other forms of academic dishonesty such as cheating will not be tolerated. Students are expected to provide appropriate citations for non-original writing even if the original work is paraphrased. Penalties for plagiarism and other forms of academic dishonesty may be severe.
Professional Standards: All students in this course are expected to be familiar with the "College of Business Standards of Professional Behavior and Ethical Conduct." (refer to **http://business.illinoisstate.edu/downloads/about/10-0839COBEthicsPolicyBooklet3.pdf** [page-7]) Please note that only bottled water may be consumed in the classroom wing of the College of Business Building and that all cell phones and other electronic devices should be turned off and stored away during classes, unless permission is otherwise granted by the instructor.

COURSE INFORMATION

Instructor:	Dr. A. Choudhury
Course Number & Title:	**MBA 427 – Operations and Quality Management**
Prerequisites:	MGT 100 (or equivalent). Students must have met the prerequisites in order to remain in the class.
Credit Hours:	3 credit hours
Location and Time:	SFHB 356**:** Sec. 1 & 2 - TR: 6:00 – 7:50 pm



INSTRUCTOR INFORMATION

Office Location:	SFHB 218
Office Hours:	TR: 5:30-6:00 p.m., or by appointment.
Phone:	438-5457; E-mail: choudhury@ilstu.edu

RESOURCES/MATERIALS [Required]
1. Text Book (Required): Operations and Supply Chain Management by Heizer, Render, and Munson, 15th edition. Pearson.

2. MyOMLab (Required). OMLab is needed for a) Homework access and b) Exam access.
For OMLab access: Registration Instructions – see the PDF document in Canvas under the Syllabus tab.

ISBN is 9780135350393 for MyOMLab with e-book 15e together. [Book+MyOmLab]
Course websites:
1. Canvas: www.canvas.illinoisstate.edu
2. MyOmLab: www.myomlab.com

COURSE DESCRIPTION: Operations and quality management introduces the concepts and skills needed to design, manage, and improve service and manufacturing operations and quality. The course focuses on business processes and procedures to transform various inputs into finished goods and services, and discusses issues related to the creation and delivery of those quality goods and services. Topics covered include the design of production processes, the layout and location of facilities, forecasting, scheduling, inventory management, materials planning, quality management, and statistical process control. In addition, the course highlights the role of effective operations management and quality, applying quantitative methods to manufacturing and service processes to solve complex problems for successfully competing in a global environment.
Course Objectives: Students will be able to construct an alternative operations function that consists of core wealth creation processes of a business and measures an organization's performance in operations management and quality

to efficiently achieve its mission and assess operations processes and continuous quality improvement. Each decision-making problem involves:

1. Translating a verbal description of a problem into an appropriate mathematical form.
2. Processing data using operations analytics tools and deriving solution(s) to the problem.
3. Analyzing the results and recommending problem solutions along with limitations.

Learning Outcomes: [at the completion of the course, students will be able to]

1. Discuss various operations principles and efficiently construct relevant planning and product design ideas.
2. Demonstrate an understanding of the interrelationships between operations and the other functional areas–such as marketing and finance–and explain the impact of operations' decisions on the organization.
3. Estimate product demand and data visualization of demand trends by applying analytical tools for proper planning and inventory management and suggest solution alternatives as relates to operations and quality.
4. Identify and solve proper inventory management models that minimize inventory cost and maximize efficiency.
5. Apply just-in-time (JIT) inventory system to lean operations that eliminate stock mismatches between demand and supply.
6. Discuss the global context in which operations decisions are made and identify the appropriate global strategy for the organization.
7. Develop location alternatives using Key Success Factors (KSF) and/or Break-Even analysis and propose the best location to maximize the benefit of the location to the firm with appropriate reasoning.
8. Develop an optimum layout to maximize the process efficiency and minimize the cost (or resource usage, such as the number of workstations) and propose the best strategy to gain a competitive advantage.
9. Demonstrate the importance of quality management in the success of service and manufacturing organizations. Compare quality performance by determining process capability index.
10. Understand the importance of capacity planning to maximize the efficiency of operation processes and resource utilization by determining break-even point for profit maximization
11. Formulate various alternative aggregate plan using different production sources and material requirements plan with various lot sizing techniques and propose the best plan that minimizes cost to improve profitability.
12. Solve jobs assignment to resources problem by optimizing the resource allocation in job scheduling. For example, construct a job sequence for several jobs to perform one operation process that minimizes job lateness.

Methodology: Discussion of concepts and practice of in-class problem modules will be used in the course. Solving problems is an integral part of the pedagogical method. To learn and understand the course, you must read the book and class materials on a regular basis, attempt to solve all the assigned exercises. Course syllabus and resources will guide you through the course materials, but studying the course materials repeatedly and solving exercises on a regular basis will greatly increase your knowledge base and the chance of success.

Other Policies: You are responsible for all information presented for the class and for all interpretation requirements of applications for all materials distributed (including course websites and e-mails). *Homework, Quizzes, exams, and other assignments* should be done individually and independently before the due date and time.

Class Attendance: Regular **attendance** is **essential** for your success. Before you register (enroll) for this course, make sure there are no conflicts with class dates and times; if there are**, please make the necessary changes**. I will be taking attendance in every class.

ASSESSMENTS: [MC=Multiple Choice, WP= Word Problem.]

HW/Quiz/Test	System	Points	Grade Distribution
Quiz	Canvas (MC)	150±	Total score 90% up: A
HW	MyOMLab (WP)	95±	Total score 80% up: B
HW: Simulations	Canvas	2x16=32 points	Total score 70% up: C
Exam-I	MyOMLab (WP)	90 (7Q) points	Total score 60% up: D
Exam-II	MyOMLab (WP)	90 (7Q) points	Total score below 60%: F
Total		457 ± points	

Quiz/Homework: Opens at the start of each Module and closes at the end of the Module (see due dates below).

Exam: See due dates on the next page.
No assessments may be started, turned in, or restarted later.

Make-Ups: **No make-ups** (after or before) will be given for **tests, homework, quizzes, or simulations**. If, due to unavoidable circumstances (beyond your control and primarily due to medical reasons), you are unable to take the scheduled test (only exams), inform me as soon as possible with supporting documents (that include contact information for verification), e.g., a letter from your physician (provide physician's **phone number**). *Plane tickets, cruise tickets,* or other similar documents are not allowed. If such documentation is not provided within one week, then a grade of zero will be recorded for the missed test. If verifiable documentation is presented, the instructor reserves the right to how and when to administer a **makeup** at the **end of the semester**. Make-up is only for exams, not valid for any other assignment (you should have plenty of time to complete other assignments). The instructor will determine the exact makeup date and time and disclose it to the specific student.

View Grade: Test/quiz/homework scores will be posted on the class **web-sites** (Canvas and MyOMLab).
Incomplete Grade: A request for a grade of "I" (incomplete) will be granted only if unavoidable circumstances beyond the student's control prevent him/her from completing the course on schedule and the student has achieved an average grade of "C" or better on all exams scheduled prior to the time (which should be immediately before the final exam) of the request. The student should see the ISU catalog for other conditions pertaining to grade "I". In addition, each student is expected to know the University **Withdrawal policy,** see Academic Policies and Practices.
Accommodation for Students with Disabilities: **S**tudents need special accommodation contact the staff at 438-5853 in the Office of Student Access and Accommodation Services **StudentAccess.IllinoisState.edu**.

E-mail Policy: Please communicate with me directly via email at choudhury@ilstu.edu. Do not use Canvas's inbox messaging system and the subject should be only "MBA-427".

1. I will view and respond to the e-mails once a day (weekdays) in the late afternoon.
2. Please adhere to professional behavior in your communications, e-mail, or otherwise.

Important note for online assignments: Start the quiz or test before the amount of time allowed from the deadline, e.g., for a 60-minute-long test, you need to start at 4:00 PM if the due date is that day at 5:00 PM. If you start at 4:30 PM, you will only have 30 minutes to work on that assignment. When taking a quiz, test, or homework assignment, opening multiple tabs or windows may cause you to lose your work. In these situations, open only one tab in a window. In a homework or test (specifically in MyOMLab), when a question specifies how many decimal places to report for an answer, do exactly that; do not provide more or fewer decimal places. If your answer is not exactly on target, I will not intervene. It is very important that you do not deviate from the question and its format when reporting the answer, and that you do not rely on the tolerance limit for your answer value.

Online etiquette: All students connecting via Zoom are expected to have their video on and their faces visible.

Network Policy: Be careful, anything that can go wrong will go wrong. Therefore, it will be prudent to start tests, homework, simulations, or quizzes early. Have a backup plan in case the internet is down or the computer crashes. Save and submit your work regularly. Submit your test, homework, simulation, or quiz early if something goes wrong. For any technical disruption with ISU Canvas, contact: (309)438-4357, **https://help.illinoisstate.edu/get-it-help** and with MyOmLab contact: http://www.myomlab.com/support. Provide them with the specific time of disruption and the type of issues, then contact me.

Academic integrity: It is an essential component of any successful educational experience. Integrity should be the responsibility of both the professor and the student.
Therefore, academic integrity is a complex, interconnected set of ethical and moral tasks upheld by everyone. Our success in this course absolutely depends on all of us taking **responsibility**. Failure in this will diminish the prospects of many of us achieving a higher level of success.

Day	Date/Test start	MBA 427: Study Topics - TR	Chapter	HW/Qz/Test due
1	June 30	Operations and Productivity Operations Strategy in a Global Environment	1 2	
2,3	Jul 2,7	Forecasting Design of Goods and Services	4 5	
4	Jul 9	Sustainability in the Supply Chain, Managing Quality Simulation 1 [Excel]: Waiting line model	5S 6	
5	Jul 14	Statistical Process Control Location Strategies	6S 8	
	Jun 30 at 11 am	*HW1 (OMLab-online)* *Quiz1 (Canvas-online)* *Simulation-1 [Excel] (Canvas-online)*	*1,4,5,5s,6s,8;* *1,2,4,5,5s,6,6s,8*	***Jul 16 at 10 am***
6	**Jul 16 at 6 PM**	**Exam I** *(OMLab-online) [No class]*	**1,4,5,5s,6s,8**	**Jul 16 at 8:30 PM**
7	Jul 21	Process Strategy Capacity Planning	7 7S	
8	Jul 23	Inventory Management Simulation 2 [Excel]: Inventory Model	12	
9	Jul 28	Short-Term Scheduling, Project Management	15 3	
10	Jul 30	Project Management (contd.) Aggregate Planning	3 13	
11	Aug 4	Material Requirements Planning (MRP)	14	
	Jul 21 at 11 am	*HW2 (OMLab-online)* *Quiz2 (Canvas-online)* *Simulation-2 [Excel] (Canvas-online)*	*7,7s,12,13,14,15,3* *7,7s,12,13,14,15,3*	***Aug 6 at 10 am***
12	**Aug 6 at 6 PM**	**Exam II*** *(OMLab-online) [No class]*	**7,7s,12,13,*14&14e,15,***	**Aug 6 at 8:30 PM**

* Students should be responsible for understanding and calculating procedures from previous chapters.
Note: Please adhere to the **due date & time**, do not miss them.