RUTGERS–CAMDEN
School of Business

Operations Management (3 credits)

52:620:325:92
Term: 2026 Spring
Online

Course information

Course Instructor:	**Dr. Natalie Huang**
Office:	BSB 317
Email:	natalie.huang@rutgers.edu
Office Hours:	Tuesdays 1:00pm – 2:00pm: in-person & online Or by appointment
Textbook (required):	*Operations Management in the Supply Chain: Sustainability and Resilience,* 2024 Release, by Roger Schroeder and Susan Meyer Goldstein.

Course description

"A study of the methods used to solve problems typically confronted in the management of production facilities and office services. Topics include the location and layout of facilities and operations, methods analysis and work measurement, materials handling, production control, inventory control, quality control, office automation, budgeting, and decision making."

Prerequisite: 50:960:283 or 50:960:183.

Course overview

Operations Management focuses on the design and management of transformation processes to provide products and services to create value for the people, planet and organization prosperity. On the one hand, operations management involves the integration of activities and processes,

which facilitate the flows of materials, services, finances, and information to convert inputs into the firms' primary products and services. Operational issues include the design of products and processes, the purchase of raw materials, the control of inventories, the maintenance of quality, the planning of human resources and facilities, and the delivery of the products or services, so that customer expectations are met. Operations also have significant interactions with other areas of the organization (e.g., finance, marketing, strategy, and accounting). Therefore, understanding the role of the operations function and its impact on the competitiveness of the firm from both optional and strategic aspects is an important part of any manager's training. This course will introduce the fundamental concepts, operating practices, and models in both manufacturing and service-oriented firms to students.

Course objectives

Upon successful completion of this course, students will be able to:

- Identify the role of Operations Management (OM) in an enterprise
- Understand how the operations function related to other major business functional areas (marketing, finance, information system, human resources, engineering)
- Develop both quantitative and qualitative skills for operational problem analysis to help
    - Design products in cross-functional teams
    - Construct accurate forecasts
    - Increase process efficiency
    - Ensure manufacturing and service quality
    - Plan for capacity of human resources, equipment, and facilities
    - Management inventory
    - Build appropriate supply chains
- Apply operational tools to improve effectiveness and efficiency for different types of organizations (for-profit firms, non-for-profit organizations, governmental agencies)
- And more!

School of Business-Camden Program Learning Goals for this course:

- General Management Knowledge
- Critical Thinking and Analytical Decision Making
- Communication, Impact, and Effectiveness
- Global Perspective
- Ethical Reasoning
- Technology fluency

Topics covered

- Introduction to operations management: an overview
    - Definition of OM, major operations decision, cross-functional view

- Operations and supply chain strategy
    - Operational strategy models, key components of operational strategies
- Forecasting
- Product design
    - Implications and importance
    - NPD strategies, NPD processes
    - Quality Function Deployment, modular designs
    - Design for the Environment (DfE)
- Process selection and process-flow analysis
    - Process classifications
    - Process flow analysis, flow charts, Little's Law
- Managing quality, quality control and improvement
    - Definition, quality cycle
    - Quality management tools
- Independent demand inventory management
    - Scopes and importance
    - Inventory management tools
- Capacity planning
    - Definition, hierarchy of capacity planning
- Supply chain management
    - Definition and scope
    - Supply chain performance, Bullwhip effect
    - Closed-loop supply chains with reverse-logistics, remanufacturing and recycling
- Risk management
    - Definition and tools
- Emerging supply chain and operations issues and trends

Grading policy

The assessment of the course will be based on total points earned from the different course components, and your final course grade will be determined by a scale with the percentage never going above the following:

A (Highest grade):	92%
B+ (Work of distinction):	86%
B (Work of distinction):	82%
C+ (Average work):	76%
C (Average work):	72%
D (Passing, but unsatisfactory):	62%
F (Failure without credit):	Below 60%

The course grade consists of the following components:

Online discussions and quizzes	20%
Assignments	16%
Exam I	27%
Exam II	27%
Final essay	10%
Total	100%
Extra-credit	2%

Online discussions and quizzes

Participating in class discussion is an important part of learning. Students are expected to actively share your thoughts about the course contents as the course progresses, and also take online quizzes to keep up with the course.

Assignments

Applying the concepts, principles, tools and techniques from class to deal with practice problems promotes thorough understanding of the materials covered in lectures and in the text. To provide such opportunities, homework sets are assigned at periodic intervals throughout the course. Students are expected to make efforts to answer all homework questions on their own. To also make preparation for your future work in the area, homework is to be presented in a neat, orderly fashion in a manner that would be presentable to your supervisor on a job.

Individual homework sets are submitted on Canvas – **late homework will NOT be accepted**. This is for fairness as the solution to the homework sets will be posted on the course website after the class or discussed in class.

Exams

There will be two (non-comprehensive) exams. All exams are closed-book and closed-notes. Students are allowed to bring a calculator. **Make-up exams are not given** unless a student has made prior arrangements with the professor, and are only permitted in extraordinary circumstances.

Final essay

The final essay provides a hands-on opportunity for students to apply the course knowledge to tackle a real-world problem. Students are expected to first analyze the problem and propose efficient solutions to improve the efficiency and effectiveness of operations for business.

Course materials

Course website

This course will primarily use Canvas as the learning management system. The main course materials such as syllabus, resources, lecture slides, announcements, etc., will be posted on canvas. The system is accessible at http://canvas.rutgers.edu. Technical support will be available at 833-648-4357 or help@camden.rutgers.edu.

Course communication

Students are welcome and encouraged to reach out for questions and comments about the course. Please use your Rutgers email for course communication.

My email is natalie.huang@rutgers.edu. Note that during the week, from Monday until Friday, I will try to reply to student e-mails within 48 hours. Please do not expect immediate response. If you do not hear from me within 48 hours, please re-send your email as I may have overlooked or accidentally deleted your e-mail.

Course materials

The course primarily uses lecture slides and class videos. The slides, videos, and other course materials (e.g., suggested readings) will be posted on Canvas.

A textbook is required for the course:
Operations Management in the Supply Chain: Sustainability and Resilience, 2024 Release, by Roger Schroeder and Susan Meyer Goldstein.

Class schedule

Modifications may be made as the semester progresses and will be announced.

Week	Session	Date	Topic	Comments
1	Jan 20 - Jan 26		Introduction to operations (Chap. 1)	
2	Jan 27 – Feb 2		Operations and supply chain strategy (Chap. 2) Product design (Chap. 3)	
3	Feb 3 - Feb 9		Forecasting (Chap. 10)	HW1 issued
4	Feb 10 - Feb 16		Forecasting (Chap. 10) Capacity planning (Chap. 11)	HW1 due
5	Feb 17 - Feb 23		Independent demand inventory (Chap. 14)	
6	Feb 24 – Mar 2		Independent demand inventory (Chap. 14)	HW2 issued
7	Mar 3 - Mar 9		Process selection Review for Exam I	HW2 due
8	Mar 10 - Mar 23		**Exam I** Process-flow analysis (Chap. 6)	
Spring Break – No Lectures				
9	Mar 24 - Mar 31		Process-flow analysis (Chap. 6)	HW3 issued
10	Mar 31 - Apr 6		Managing quality (Chap. 8) Quality control and management (Chap. 9)	HW3 due

11	Apr 7 - Apr 13	Quality control and management (Chap. 9)	
12	Apr 14 - Apr 20	Supply chain management (Chap. 16)	HW4 issued
13	Apr 21 - Apr 27	Sustainable operations Review for Exam II	HW4 due
14	Apr 28 – May 4	**Exam II** Working period for final project	

Related classroom policies and university policies

Make-up policy

If, for a university-approved reason, you cannot complete a course task (e.g., homework and exam) during the scheduled time, you must give written notice via email (natalie.huang@rutgers.edu) at least one week in advance so that other arrangements can be made. If the situation does not allow for advance notification (e.g., emergency hospitalization), contact me as soon as possible after the missed work and provide written documentation. The ability to make up work for non-university approved reasons is not guaranteed. The professor reserves the right to request written documentation to support your absence (such as a doctor's note, an obituary, or military orders).

Incompletes

"Incompletes" will only be given through prior consultation, under extreme circumstances, and when completion of the course requirements in question would substantially improve your grade. In the rare event when an "incomplete" is given, you must submit all of the agreed-upon work to me by the Rutgers registrar deadline to avoid the "incomplete" converting to an "F": https://registrar.camden.rutgers.edu/gradeinstruction#incomplete.

Disability services/accommodations

The University is committed to supporting the learning of all students and faculty will provide accommodations as indicated in a Letter of Accommodation issued by the Office of Disability Services (ODS). If you have already registered with ODS and have your letter of accommodations, please share this with me early in the course. If you have or think you have a disability (learning, sensory, physical, chronic health, mental health or attentional), please contact https://success.camden.rutgers.edu/disability-services.

Accommodation will be provided only for students with a letter of accommodation from ODS. Their services are free and confidential. Letters only provide information about the accommodation, not about the disability or diagnosis.

Academic Integrity

The Academic Integrity policy can be found at https://studentconduct.rutgers.edu/processes/university-code-student-conduct http://studentconduct.rutgers.edu/student-conduct-processes/academic-integrity/

Students are responsible for understanding the principles of academic integrity and abiding by them in all aspects of their work at the University. Students are also encouraged to help educate fellow students about academic integrity and to bring all alleged violations of academic integrity they encounter to the attention of the appropriate authorities.

Academic Integrity means that you (the student) must:

- properly acknowledge and cite all use of the ideas, results, or words of others,
- properly acknowledge all contributors to a given piece of work,
- make sure that all work submitted as your own in a course activity is your own and not

from someone else
•obtain all data or results by ethical means and report them accurately
• treat all other students fairly with no encouragement of academic dishonesty

Adherence to these principles is necessary in order to ensure that:
•everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments
•all student work is fairly evaluated, and no student has an inappropriate advantage over others
•the academic and ethical development of all students is fostered
•the reputation of the University for integrity is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students.

Artificial Intelligence Use

Students are expected to follow the University's Academic Integrity Policy. All ideas, text, images, and other content you submit should be appropriately cited when taken, directly or indirectly, from another source. For purposes of this course, use of AI and generative artificial intelligence (GAI) will be treated analogously to assistance from another person. Unauthorized or unacknowledged collaboration, or the presentation of another's work as your own, is a violation of the Academic Integrity Policy. If you are unsure about whether particular uses of AI or GAI tools may be plagiarism, cheating, or another form of academic dishonesty, please reach out to me to discuss it as soon as possible.

Code of Student Conduct

Rutgers University-Camden seeks a community that is free from violence, threats, and intimidation; is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and does not threaten the physical or mental health or safety of members of the University community, including in classroom space.

As a student at the University, you are expected adhere to the Code of Student Conduct.
To review the code, go to the Office of Community Standards:
https://deanofstudents.camden.rutgers.edu/student-conduct