



蘇州大學
Soochow University

MAG 285 Operations Management

Winter 2024

Course Credits: 4

Contact Hours: 55 hours

Instructor: TBA

Email: TBA

COURSE OBJECTIVES

This course provides a general introduction to operations management (OM), or the production and delivery goods and services. The major topics of this course include OM decisions, operations strategy, product design, forecasting, capacity planning, facility layout, project management, spreadsheet modeling, optimization, TQM, JIT, process improvement, project managing, etc. By learning this course, students will learn how to design, operate, and improve the systems that deliver goods and services through OM tools such as process flow diagrams, lean management, and decision trees.

Upon Completion of this Course, students will be able to:

1. Comprehend the basic concepts of OM;
2. Apply quantitative and statistic skills in the analysis of OM;
3. Develop an operations strategy;
4. Explain the philosophy of the Evolution of Total Quality Management (TQM) and JIT;
5. Apply forecasting models to the cases.

PREREQUISITES

N/A

GRADING

Grades will be determined by accumulating points, with 100 points being the maximum, as follows:



ITEM	POINTS
Assignments	20 Points
Quizzes	20 Points
Midterm	25 Points
Final Exam	35 Points
Total	100 Points

Late submissions will be graded at the end of the course. Grades will be assigned according to the following rule:

$$A \geq 90 > B \geq 80 > C \geq 70 > D \geq 60 > F.$$

We reserve the right to make adjustments to the overall grading policy.

COURSE MATERIALS

Required Texts:

Operations Management: An integrated Approach by R. Dan Reid & Nada R. Sanders, , 4th Edition, John Wiley & Sons, Inc., 2011.

Recommended (Optional) Texts or Other Materials:

None

COURSE TOPICS

MODULE	TASKS
Module 1	<p>Topics:</p> <p>Topic 1: Introduction to Operations Management; What is OM?; Operations Management Decisions</p> <p>Topic 2: Historical Development; OM in practice</p> <p>Topic 3: Operations Strategy and Competitiveness; The Role of Operations and Strategy; Developing a Business Strategy</p> <p>Topic 4: Developing an Operations Strategy; Productivity; Product Design and Process Selection; Product Design</p> <p>Topic 5: The Product Design Process; Process Selection; Linking Product Design and Process Selection Technology Decision</p> <p>Topic 6: Supply Chain Management Components; The Bullwhip Effect</p> <p>Assessments:</p> <p>Assignment#1</p> <p>Quiz#1</p>



Module 2	<p>Topics: Topic 7: Major Issues Affecting Supply Chain Management; The role of Purchasing Topic 8: Sourcing Issues; Supply Chain Distribution; Trends in Supply Chain Management Topic 9: Total Quality Management; Define; The Evolution of Total Quality Management (TQM); The Philosophy of TQM; Quality Awards and Standards Topic 10: Statistical Quality Control; Descriptive Statistics; Statistical Process Control Methods; Control Charts for Variables Topic 11: Control Charts for Attributes; Acceptance Sampling; Implications for Managers Topic 12: Just-in-time and lean systems; The philosophy of JIT; Elements; Just-in-time Manufacturing</p> <p>Assessments: Assignment#2 Quiz#2</p>
Module 3	<p>Topics: Topic 13: Total Quality Management; Benefits; JIT in Services Topic 14: Forecasting; Principles of Forecasting; Types of Forecasting Methods; Time Series Models Topic 15: Casual Models; Measuring Forecast Accuracy; Selecting the Right Forecasting; Model Software Topic 16: Capacity Planning and Facility Location; Capacity Planning Making Capacity Planning Decision; Location Analysis; Making Location Decision Topic 17: Facility Layout; Layout Planning; Types of Layouts Topic 18: Designing Process Layouts; Special Cases; Designing Product Layouts; Work System Design</p> <p>Assessments: Midterm Assignment#3 Quiz#3</p>
Module 4	<p>Topics: Topic 19: Job Design; The Work Environment and Work Measurement; Setting Standard Times; Compensations Topic 20: “Independent Demand” Inventory Management; Types; Objectives Topic 21: Relevant Inventory Costs; ABC Inventory Classification; Mathematical Models for Determining Order Quantity Topic 22: Aggregate Planning; Roles; Types; Options Topic 23: Evaluating; Developing; Resource Planning; ERP Models Topic 24: The evolution of ERP; Benefits MRP Inputs; The MRP Explosion Process</p>



	<p>Assessments: Assignment#4 Quiz#4</p>
Module 5	<p>Topics: Topic 25: Scheduling Scheduling Operations Scheduling work; Measuring performance Comparing priority rules Sequencing; Project Management; Project life cycle Topic 26: Network planning techniques; Estimating the probability of complement Reduce project complement time; The critical chain approach Topic 27: A Spreadsheet Modeling; The Spreadsheet Modeling Process; Evaluating Spreadsheet Models Topic 28: Optimization; Algebraic Formulation;Waiting Line Models; Elements Topic 29: Spreadsheet Model Development; Solver Basics; Setting up and running solver; Outcomes of Linear Programming Problems Topic 30: Waiting line performance measures; Single-server waiting line model; Multiserver waiting line model; Master Scheduling and Rough-cut Capacity Planning Assessments: Final Exam</p>

ATTENDANCE

1) Class attendance is required. Missing classes without permission will lead to decrease in overall grade.

Missing less than two classes: no penalty.

Missing more than two classes: 7% will be taken off from the overall grade.

If the instructor reports a student's frequent missing of class to the Soochow University Academic Administration Office, the student might get a written warning and might be prohibited from attending final exam.

2) Participants in this course are expected to arrive in class promptly and adequately prepared. The primary objective of this course is to critically engage with the readings and the subject matter. Therefore, course participants are expected to have completed the reading prior to class and prepare thoughtful reflections/commentaries to share with fellow colleagues.

LEARNING REQUIREMENTS



- 1) Late assignments are not acceptable and are subjected to grade deductions.
- 2) Assignments submitted in the wrong format will be counted as not submitted.
- 3) Failure to submit or fulfill any required course component results in failure of the class.
- 4) Make-up for midterm and final exams only with valid excuses, as defined by the University.
- 5) In order to earn a Certificate of Completion, participants must thoughtfully complete all assignments by stated deadlines and earn an average quiz score of 50% or greater.

TECHNOLOGY POLICY

The use of electronic devices in class is distracting, both for the user and for the rest of the class. Only non-programmable calculators can be used in the tests and exam. Any attempts to use cell phones and other electronic communication devices will be seemed as cheating. Laptops are discouraged, unless you use them for activities DIRECTLY related to the course (eg., note taking, reading course documents).

ACADEMIC INTEGRITY POLICY

Soochow University highly values the academic integrity and aims to promote the academic fairness, honesty and responsibility. Any academic dishonesty behaviors and any attempts to cheats and plagiarism will be reported to the university administration office. A written warning and the relevant penalties will be imposed. The record might be shown on the official university transcript.

DISABILITY ACCOMMODATION

Soochow University is committed to maintaining a barrier-free environment so that students with disabilities can fully access programs, courses, services, and activities at Soochow University. Students with disabilities who require accommodations for access to and/or participation in this course are welcome.

Note:

Please contact the University Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents



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professors from seeing you have learned the course material.