

ISOM 2700: Intro. to Operations Management

Sections L1 & L2

Spring, 2024

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Course Description & Objectives

Operations is one of the major functions in an organization, concerned with the transformation of inputs (e.g., raw material, labor, capital, and information) into outputs (goods and services). Operations management is an area of management concerned with analyzing and improving the transformation process. This course will give an overview of main topics in operations management, providing students with the managerial tools needed to analyze and improve organization's business processes efficiently and effectively. The lessons from this course are important for careers in a variety of business sectors, including entrepreneurship, finance, and marketing.

Course Schedule and Venues

- Section L1: Tue & Thu 9:00-10:20am (2464)
- Section L2: Tue & Thu 12:00-1:20pm (1104)

Textbooks (optional)

- Cachon and Terwiesch, "Matching Supply with Demand", 4th Edition, International Edition, McGraw-Hill
- Jacobs and Chase, "Operations and Supply Chain Management: The Core", 5th Edition, International Edition, McGraw-Hill

Grading Policy

- The grade will count the assessments using the following proportions:

After-class quizzes	20%
Midterm exam	40%
Final exam	40%
Total	100%

- Both exams are offline/closed book/closed notes. Basic formula sheet will be provided by the instructor.
- The final exam is not cumulative; that is, it only covers the course material after the midterm exam.
- No makeup exam for the midterm exam will be given. If you miss the midterm exam for a valid and verifiable reason approved by the instructor in advance, you may take a *cumulative* final exam (covering entire course) and the weight of the mid-term will be added to the final exam. Otherwise, a zero mark will be assigned as your mid-term grade.
- There will be six after-class quizzes (on canvas) throughout the course, each with equal weight. The lowest grade will be dropped.
- Practice problem sets will be provided throughout the course to help students improve their understanding of course material. The practice problems are not counted toward the final grade, so there is no need to submit solutions to the practice problems, although it is highly encouraged to solve the problems individually.
- Re-grading policy: The process of assigning the grades is intended to be one of unbiased evaluation. Students are encouraged to respect the integrity and authority of the professor's grading system and are discouraged from pursuing arbitrary challenges to it. If you believe an inadvertent error has been made in the grading of exams, a request re-grading may be submitted. In the event that you would like to request to re-grade:
 - Email the TA and *me* within **3 days** of receiving your grade, including a brief written statement of why you believe that an error in grading has been made. Last requests will not be entertained.
 - I will re-grade your assessment/examination **in its entirety**. That is, I will re-grade **all the items** in your assessment/examination.

Academic Integrity

Students at HKUST are expected to observe the Academic Honor Code at all times (see <http://rpghandbook.ust.hk/student-conduct-and-academic-integrity#honor> for more information). Zero tolerance is shown to those who are caught cheating on exam. In addition to receiving a zero mark on the exam involved, the final course grade will appear on your record with an X, to show that the grade resulted from cheating. This X grade will stay with your record until graduation. If you receive another X grade, you will be dismissed from HKUST.

Course Outline

The schedule is tentative and subject to change. The learning goals below should be viewed as the key concepts you should grasp after each session, and also as a study guide before each exam, and at the end of the semester.

Module	Date	Contents	Note
	Feb 1	Introduction to OM	
Process Analysis	Feb 6 Feb 8	Fundamentals of Process Analysis Application: The Goal	
Quality Mgmt.	Feb 15 Feb 20 Feb 22	Statistical Process Control I Statistical Process Control II Six Sigma	
Resource Mgmt.	Feb 27 Feb 29 Mar 5	Decision Tree Method Resource Allocation via Linear Programming I LP Excel Solver	Laptop in Class
Service Mgmt.	Mar 7 Mar 12 Mar 14 Mar 19	Basics of Service Management Simple Queueing Models (M/M/s) General Queueing Models Simulating Service Systems	Laptop in Class
	Mar 21 TBD	Midterm Exam Review Session Midterm Exam (Tentative)	
Inventory Mgmt.	Mar 26 Apr 9 Apr 11	Newsvendor Problem Economic Order Quantity (EOQ) More on Inventory Models	
Demand & Revenue Mgmt.	Apr 16 Apr 18 Apr 23	Forecasting Methods Capacity-based Revenue Mgmt. Price-based Revenue Mgmt.	
Supply Chain Mgmt.	Apr 25 Apr 30 May 2	Introduction to Supply Chain Management Bullwhip Effects Supply Chain Coordination	
Best Practices in OM	May 7	TBD	
	May 9 TBD	Final Exam Review Session Final Exam	