MS&E 260
Introduction to Operations Management

Instructor:	Richard Kim, PhD (richhkim@stanford.edu) Huang Engineering Center, Room 212A Mobile: (310) 804-2625 Office Hours: Mondays 1:00pm – 2:00pm (Huang 212A) Tuesdays 10:00am – 11:00am (Huang 212A)
Course Assistants:	Tina Diao (tdiao@stanford.edu) Office Hours: Wednesdays 4:00pm – 5:00pm (Huang 203) Mondays 7:00pm – 8:00pm (Zoom session accessible here) Eline van den Haak (elinevdh@stanford.edu) Office Hours: Tuesdays 12:00pm – 1:00pm (Huang 203) Thursdays 12:00pm – 1:00pm (Huang 203)
Class Times:	Lectures: Mondays and Wednesdays 10:30am – 11:50am Problem Sessions: Fridays 10:30am – 11:20am
Location:	Thornton 102
Exams:	Midterm: Friday, July 19, 2019 (TBD logistics) Final: Saturday, August 17, 2019 (TBD logistics)
Grading Schema:	30% Homework (5 assignments) 30% Midterm 30% Final Exam 5% Participation 5% Final Thoughts Paper
Books:	No required textbook. Recommended texts: (1) S. Nahmias. *Production and Operations Analysis*. 6th Edition. McGraw-Hill/Irwin Series. (2) Operations and Decision Sciences. 2009 (on reserve at Engineering Library).
Website:	http://canvas.stanford.edu. Lecture slides and sample problems will be posted to the course website 1-2 days prior to the corresponding lecture. We recommend that students bring the lecture notes (either hard or soft copy) to each class to facilitate note taking. Q&A will be managed on Piazza (https://piazza.com/class/juu4gn8cxyh3b8). Please see Lecture 1 notes regarding our Piazza management policy.

Course Overview: Operations management focuses on the effective planning, scheduling, and control of manufacturing and service entities. This course introduces students to a broad range of key issues in operations management. Topics include determination of production planning, optimal timing and sizing of capacity expansion, inventory control, dynamic lot sizing, and supply chain management.

Course Objectives: By the end of this course, you will:

- Be familiar with a range of problems faced in operations management
- Know how to develop and apply mathematical and analytical models to solve these problems
- Understand the implications of operations decisions at the strategic, tactical, and operational levels and the appropriate solution methodology to support each type of decision
- Understand the social and environmental sustainability considerations associated with inventory control and production processes

Prerequisites: An understanding of probability at the level of MS&E 120 (Probabilistic Analysis) and optimization is a prerequisite for this course. You are allowed to take the class without meeting the prerequisite at your own risk.

Policies and Procedures

Academic Integrity

Please familiarize yourself with the Stanford Honor Code (honorcode.stanford.edu); violations will be prosecuted to the fullest extent of the (Stanford) law. You may work together on homework assignments, but each student must turn in his/her own written solutions in his/her own words.

Preparing for Class

All handouts will be posted on the coursework website before the class. We recommend you to print and bring a hardcopy of the lecture slides to each class to facilitate taking notes. We will also make use of the black board so be prepared with paper and pen to take notes.

Consulting with Instructors

If you are having difficulty (for whatever reason), find help right away – do not wait until you fall even further behind! Your instructors are available for advice or to answer questions and help you throughout the quarter and we encourage you to consult us as necessary. Feel free to drop by during our office hours or contact us to make an appointment if you cannot make it to office hours.

Students Requiring Disability Accommodations

Please contact the Office of Accessible Education (OAE) (https://studentaffairs.stanford.edu/oae/faculty/process) by the end of the first week of class. We also highly recommend that you inform the instructor about your application so that all the necessary arrangements for the exams can be made in a timely manner.

Exam and Homework Grading

If you believe that an error was made in grading the homework, you should write a short justification of your claim and attach it to the original homework assignment in question. Then, give the justification and homework assignment (stapled together) back to us. You have one week after the homework is returned to the class to request a regrade. The same procedure applies to exams. Please note that solutions will be regraded fully, meaning your grade could increase, decrease, or not change at all.

Homework (30% of Final Grade)

Assignments will be posted on the course website and due dates are shown on the course schedule. Homework assignments are due at 10:30am PDT in Canvas (online submission only) on the due date specified. Late assignments will NOT be accepted. Each homework assignment counts toward your final grade. We do not drop the lowest homework score.

Weekly Schedule (order of topics subject to change)

Day	Topic	Deadlines
	Week 1	
Mon, Jun. 24	Introduction/Course Overview Inventory Management Overview	
Wed, Jun. 26	Inventory Management with Deterministic Demand (EOQ Model)	HW #1 released
Fri, Jun. 28	Problem Session, Tina	
	Week 2	
Mon, Jul. 1	Inventory Management with Uncertain Demand (Newsvendor Model)	
Wed, Jul. 3	Inventory Management with Uncertain Demand [(Q,R) Systems]	HW #1 due HW #2 released
Fri, Jul. 5	Problem Session, Eline	
	Week 3	
Mon, Jul. 8	Service Level in (Q,R) Systems	
Wed, Jul. 10	Introduction to Capacity and Waiting Times	HW #2 due
Fri, Jul. 12	Problem Session, Tina	
	Week 4	
Mon, Jul. 15	Capacity and Waiting Times, continued Loads and Capacities	
Wed, Jul. 17	Midterm Review	HW #3 released
Fri, Jul. 19	Midterm Exam	Midterm Exam
	Week 5	
Mon, Jul. 22	Supply Chain Contracts	
Wed, Jul. 24	Supply Chain Management Guest Speaker: Colin Kessinger, PhD	HW #3 due HW #4 released
Fri, Jul. 26	Problem Session, Eline	
	Week 6	
Mon, Jul. 29	Revenue Management	
Wed, Jul. 31	Revenue Management, continued	HW #4 due HW #5 released
Fri, Aug. 2	Problem Session, Tina	
	Week 7	
Mon, Aug. 5	Decision Analysis	
Wed, Aug. 7	Lean Techniques Guest Speaker: Alejandro Martinez, PhD	Final Thoughts Paper released
Fri, Aug. 9	Problem Session, Tina	HW #5 due
	Week 8	
Mon, Aug. 12	Case Study: Managing Space Surveillance Systems	
Wed, Aug. 14	Final Exam Review Session, Eline	Final Thoughts Paper due
Final Exam: Saturday, August 17, 2019 (TBD logistics)		