

BA 5602 – OPERATIONS MANAGEMENT
Tues and Thu 13.00-14.15 G110

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Office Hours:	Mon and Thu 10.30-12.30 and by appointment
Course Web Page:	https://odtuclass...TBA

Course Description:

Operations management is the design and management by an organization of all of the activities required to transform input resources into output products and services. The operations manager plans production, schedules work, and controls resources so as to meet the goals of the organization. This course covers the issues underlying the management of operations, and introduces the student to a variety of tools and techniques used by operations managers exploring alternative means of implementing decisions. As such, this course is a survey of some of the major decisions and methods of operations management.

Course Student Learning Objectives: (CSLOs)

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

Course Specific Skills:

1. Understand the relevance of operations to all members of the organization and gain a clear understanding of the operations functions in service and manufacturing firms and how it integrates with the overall business.
2. Develop the skills to apply specific operational tools and techniques to daily activities of firms.

Discipline Specific Skills:

3. Analyze decision problems in operations.
4. Develop foundation skills for advanced operations management courses such as supply chain management, project management, services management, etc.

Personal and Key Skills:

5. Develop problem solving skills.
6. Develop discussion skills.
7. Apply knowledge learned to case studies and actual organizations.
8. Write case/company analysis reports.
9. Enhance presentation skills.

Learning and Teaching Methods:

This course is going to make use of formal lectures, in-class discussions, videos, class exercises, and self-study hours.

Required Reading:

J. Heizer, B. Render, *Operations Management*, 14th edition, Prentice Hall, 2023.

The book is available through the METU Bookstore at <https://www.odtuden.com.tr/>. Students buying their textbook from the METU bookstore will have access to the textbook's online study platform via their access code. The textbook can also be found in the Main Library Reserves and older editions are available in the main library and Muhan Soysal Library. Students can use older editions of this text; however, they will be responsible for tracking which chapter corresponds to the material covered in class. The course slides can be downloaded from the ODTUClass system.

Assessment and Grading:

Form of Assessment	% Contribution	Size of the assessment	CSLOs covered by the assessment	Feedback Method
Midterm Examination 1	25	90-minute essay-type examinations	1, 2, 3, 4, 5	Written and oral (in class)
Midterm Examination 2	25	90-minute essay-type examinations	1, 2, 3, 4, 5	Written and oral (in class)

Midterm Examination 3	25	90-minute essay-type examinations	1, 2, 3, 4, 5	Written and oral (in class)
Term Project	20	Self-study hours (4 hours)	1, 2, 3, 5, 7	Written and oral (in person)
Discussions, Attendance, Participation	5	Class participation during regular lectures	6, 7	Oral (in person)

No “extra” work above the aforementioned will be accepted or credited. There will be no make-ups for the exams without an approved excuse or a medical report. If you have a time conflict, please contact me ahead of time. This course does not have a final exam.

Midterm Exams: All exams will be at 5.45 pm and will be made up of essay-type questions. Everything in the chapters covered and class discussions will be included. The midterm exams will cover everything since the beginning of the term or since the last midterm exam. You may use printed course slides and a calculator during the exams.

Class participation: You are encouraged to demonstrate your knowledge of the assigned material or make comments during class. You may also be called on randomly. Please note that attendance does not mean participation. In participation, quality is more important than quantity. Students who have not submitted their **Student Information Sheets** (downloaded from the ODTUClass system) with a photo embedded by **October 13th, 2023**, to ODTUClass will not receive a participation grade.

Living Case Term Project: Students are required to study an organization and submit a written report. You will be responsible for finding an organization that will let you conduct the required analyses. You may pick manufacturing or service organizations, not-for-profit and voluntary organizations, governmental organizations, or parts of METU as your focus.

The project may be conducted in teams of **up to 3 people**; i.e., it may be done in smaller groups or individually. **Send in your team composition and the name of the organization you will be studying by November 2, 2023.** Every member of the team is responsible for the research and report, and the project grade will hold for every team member. If there are cases of non-productive team members, teams are expected to first address this problem themselves. If a team cannot do so, the instructor should be notified well before the project due date so that appropriate action may be taken.

The projects will be turned in to Turnitin by **January 8, 2024, 5 pm** (one submission per team is enough, noting all team member names on the cover page). Your report should be maximum 15 pages (1.5 spaced) excluding appendices and references. Late project papers or papers severely exceeding page limits will NOT be graded unless you have a legitimate excuse cleared in advance.

Use your judgment to figure out which of the questions below are most applicable to your case. If there are topics or questions not directly suitable for your context, you are expected to find other OM tools that could be useful to your organization and apply them as suited. Additional OM subjects that can be examined in your project will earn you bonus points. You are also encouraged to use literature or tools outside of the scope of this course.

Term Project Part 1: Overview of firm and key operational considerations.

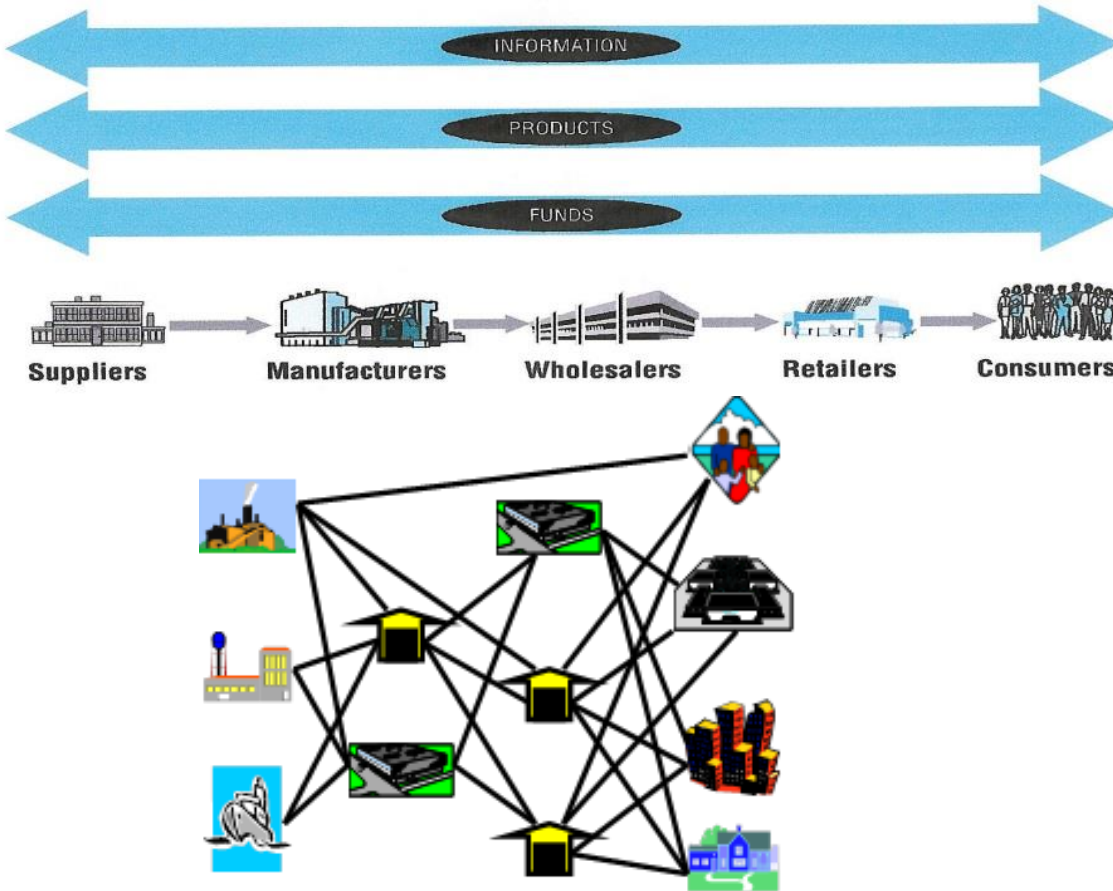
Cover the following aspects of organization as best as you can:

1. Goals of the organization—try to keep this limited to the local branch or store
 - a. Product or service offered
 - b. Competitive strategy, customers, market share, and competitors
 - c. Key success factors for your organization
 - d. Performance to date
2. Employees
 - a. Number
 - b. Skill level (or education)

- c. Organization chart
3. What does the manager think the top issues are with regard to business and with regard to operations?

Term Project Part 2: Process design and process analysis

1. Make a list of major processes. Use the figures below as reference.

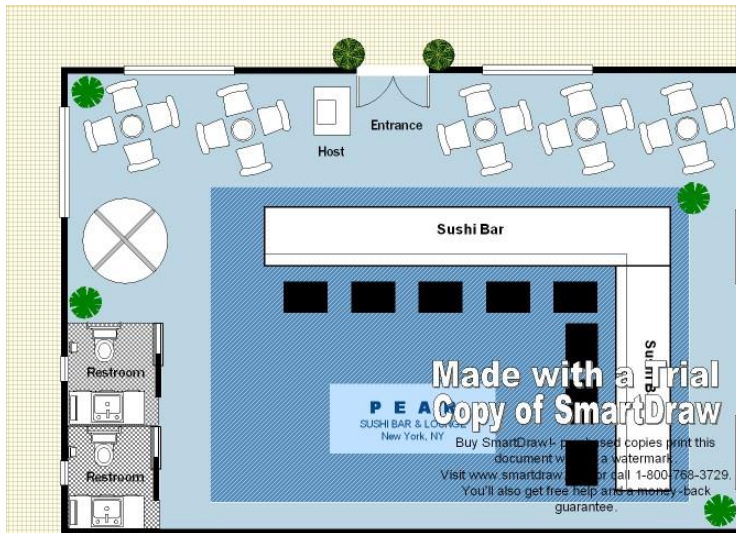


- Does your organization have an assembly line, job shop, continuous flow, or project shop process/layout?
- What kinds of forecasting methods are being used in the firm? How appropriate are these forecasting methods to the problems the firm faces?
- What are the measures of capacity for the organization?
- Choose one significant process to study. Draw a process diagram for analysis. Is there scope for improving the process?

Present Method <input checked="" type="checkbox"/>	PROCESS CHART	Proposed Method <input type="checkbox"/>	
SUBJECT CHARTED <u>Hamburger Assembly Process</u>		DATE <u>8/1/05</u>	
		CHART BY <u>KH</u>	
DEPARTMENT _____		CHART NO. <u>1</u>	
		SHEET NO. <u>1 OF 1</u>	
DIST. IN FEET	TIME IN MINS.	CHART SYMBOLS	PROCESS DESCRIPTION
	—	○ → □ ▽	Meat Patty in Storage
1.5	.05	○ → □ ▽	Transfer to Broiler
	2.50	○ → □ ▽	Broiler
	.05	○ → □ ▽	Visual Inspection
1.0	.05	○ → □ ▽	Transfer to Rack
	.15	○ → □ ▽	Temporary Storage
.5	.10	○ → □ ▽	Obtain Buns, Lettuce, etc.
	.20	○ → □ ▽	Assemble Order
.5	.05	○ → □ ▽	Place in Finish Rack
3.5	3.15	2 4 1 - 2	TOTALS
Value-added time = Operation time/Total time = (2.50+.20)/3.15 = 85.7%			

○ = operation; → = transportation; □ = inspection; ▽ = delay; ▽ = storage.

- Draw a layout and comment on improvements that can be made. A sample layout is shown below.



Term Project Part 3: Total Quality Management

1. What is the organization's philosophy towards quality? Define quality for your firm's product or service along various quality dimensions. Does the firm have a quality system, i.e., a set of written procedures? If they do not have written procedures, how are they able to ensure consistent delivery of quality service?
2. Take a particular dimension and actually measure quality. Note that measurement can be done using industry standards, observation, by comparison against a "standard" product or service, as well as by asking customers' for their opinion. Compare the measurement with a benchmark.
3. What concrete suggestions can you make to the organization in terms of usage of TQM/SPC/other tools and techniques?

Term Project Part 4: Inventory Management

1. Can your product or service be inventoried? How does your organization manage inventory? Can you suggest improvements?
2. How would you implement the Just in Time philosophy for your organization? Does it make sense to do this?
3. As a final analysis, apply (modify as needed) E. Goodson's "Read a Plant—Fast" (Harvard Business Review, May 2002) article to summarize your overall findings of your organization.

Course Schedule

The following table gives the **tentative** schedule for the semester. The lectures will stress the most important and/or most difficult material. We have a lot of topics to cover so based on our pace, adjustments may be required in the schedule.

Oct. 3-5	Introduction (Chapters 1 and 2), Operations Management at Hard Rock Café video, Operations Management at Frito Lay video
Oct. 10-17	Forecasting (Chapter 4), Forecasting exercise
Oct. 19-26	Process strategy (Chapter 7), Process Strategy and Selection video, Service Process Matrix video, manufacturing technologies videos
Oct. 31	Location strategies (Chapter 8), Where to Place Hard Rock's Next Café video No class on November 2—makeup session on October 13 (time TBA).
Nov. 7	Layout strategies (Chapter 9), Layout of the Arnold Palmer Hospital's New Facility video
Nov. 9-14	Managing quality (Chapter 6), The Culture of Quality at Arnold Palmer Hospital video, Quality at the Ritz-Carlton Hotel video
Nov. 16-21	Statistical process control (Supplement 6), Honda video
Nov. 17	Midterm 1 (Chps. 1, 2, 4, 7, 8, 9)
Nov. 23-30	Inventory management (Chapter 12), "He Shoots, He Scores" game
Dec. 5	Aggregate planning (Chapter 13)

Dec. 7	MRP and ERP (Chapter 14)
Dec. 12-14	Short term scheduling (Chapter 15)
Dec. 15	Midterm 2 (Chps. 6, S6, 12, 13)
Dec. 19-26	JIT and lean production systems (Chapter 16), HP training video, Honda & Visa ad videos
Dec. 29-Jan. 4	Project management (Chapter 3), Muzikfest game
Jan. 5	Midterm 3 (Chps. 14, 15, 16, 3)

Course Policies:

STUDENT DISABILITIES: Any student, who, because of a disabling condition, may require special arrangements in order to meet course requirements, should contact the instructor as soon as possible. Students should present the appropriate documentation from the university's Disability Support Office (Engelsiz ODTÜ Birimi, ODTÜ Kütüphanesi, Solmaz İzdemir Salonu, Tel: 210.7196; engelsiz@metu.edu.tr) verifying their disability, and outlining the special arrangements required. Please note that no accommodations will be provided to the disabled students prior to the completion of this approved University process.

ACADEMIC DISHONESTY: The Department of Business Administration has no tolerance for acts of academic dishonesty. Such acts damage the reputation of METU, the department and the BA/MBA/MS degree and demean the honest efforts of the majority of the students. The minimum penalty for an act of academic dishonesty will be a zero for that assignment or exam.

CHEATING: All university, faculty/institute, and department principles on academic honesty will be strictly enforced. The usual consequence for academic dishonesty is failure of the course and referral of the case to the Dean of the Faculty/Institute for additional disciplinary action. Examinations are individual and are to be completed without outside assistance of any sort. Persons observed cheating during examinations will receive a failing grade in the course. Homework assignments are individual, unless otherwise specified by the instructor, and are to be completed without outside assistance of any sort, as well. Persons observed cheating in their homework assignments will receive a score of zero for the portion of the semester grade that is allocated to such assignments.

PLAGIARISM: The instructor assumes that students will do their own work. By placing their names on assignments (individual or team), students are affirming that the contents are their original work. Any previous work available from files or past students, as well as materials available on the internet may be used only as a suggestive model. Violation of this provision will be considered as unethical behavior, subject to disciplinary action. If you have any doubt about the use of a specific material, see the instructor ahead of time. Any material used from outside sources should be referenced appropriately.

METU HONOR CODE

Every member of METU community adopts the following honor code as one of the core principles of academic life and strives to develop an academic environment where continuous adherence to this code is promoted. "The members of the METU community are reliable, responsible and honorable people who embrace only the success and recognition they deserve, and act with integrity in their use, evaluation and presentation of facts, data and documents."

GOOD LUCK AND ENJOY THE CLASS!