

SYLLABUS  
PART I  
EDISON COMMUNITY COLLEGE  
IMT 220S OPERATIONS MANAGEMENT II  
3 CREDIT HOURS

**COURSE DESCRIPTION**

Second of two courses detailing what managers do about processes, and the tools that managers can use to make better operating decisions. Includes capacity, location, and layout planning, supply-chain management, forecasting, inventory management, aggregate planning, resource planning, lean systems, and scheduling. Operations management software and case studies will be used. Prerequisite: IMT 120S or department permission.

**COURSE GOALS**

The student will:

Bloom's Level		Program Outcomes
2	1. Discuss long- and short-term strategies to ease bottlenecks and the concept of the theory-of-constraints approach.	2, 3, 4
2	2. Describe how waiting-line models, simulation, and decision trees can assist capacity decisions.	2, 4
1	3. Describe the factors affecting location choices, both in manufacturing and services.	2, 7
3	4. Apply the load-distance method and break-even analysis to single-site location problems and the transportation method to locating a facility within a network of facilities.	2, 7
1	5. Identify the types of performance criteria that are important in evaluating layouts.	1, 2
2	6. Describe how to balance lines in a product layout and evaluate different solutions.	1, 2
2	7. Describe the strategic importance of supply-chain management and give real examples of its application in manufacturing and service industries.	2
2	8. Explain how the Internet has changed the ways companies are managing the customer and supplier interfaces.	2
3	9. Choose the appropriate forecasting technique for a given decision problem.	2, 4
3	10. Compute forecasts, using the most common approaches for time series analysis.	1, 2, 7
2	11. Distinguish between the different types of inventory and know how to manage their quantities.	1, 2
3	12. Compute the economic order quantity and apply it in various situations.	2, 8
1	13. Describe the steps involved in developing an acceptable aggregate plan.	2
5	14. Evaluate with a spreadsheet approach different level, chase, and mixed strategies for both service providers and manufacturers.	2, 4
4	15. Explain the logic of material requirements planning, how it can be used to plan distribution inventories, and how to schedule the receipt of materials to meet promised delivery dates.	2, 4, 7
1	16. Identify the key outputs from the resource planning process and how they are used.	2, 4

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2	17. Describe how lean systems can facilitate the continuous improvement of operations	2, 7, 8
2	18. Discuss the strategic advantages of lean systems and the implementation issues associated with application of these systems	2, 7, 8
2	19. Explain the importance of scheduling to the performance of a firm	2
5	20. Create schedules for single and multiple workstations	2

**CORE VALUES**

The Core Values are a set of principles, which guide in creating educational programs and environments at Edison. They include communication, ethics, critical thinking, human diversity, inquiry/respect for learning, and interpersonal skills/teamwork. The goals, objectives, and activities in this course will introduce/reinforce these Core Values whenever appropriate.

**TOPIC OUTLINE**

1. Capacity
2. Location
3. Layout planning
4. Supply-chain management
5. Forecasting
6. Inventory management
7. Aggregate planning
8. Resource planning
9. Lean systems
10. Scheduling