

Fall 2023

EM 602-101: Management Science

Layek Abdel-Malek

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COURSE OUTLINE

EM 602- MANAGEMENT SCIENCE

Dr. Layek Malek

Fall 2023

Recommended TEXT: Taha, H., Operations Research: An Introduction, 11th Edition, Prentice Hall, 2023

Office Hours: Monday and Tuesday 4:30 – 5:30 or by appointment

Office: Mech. 330

Telephone: 973-596-3648

Lectures

SUBJECT

- | | |
|----|---|
| 1 | Introduction to Management Science |
| 2 | Linear Programming; Problem formulation |
| 3 | The Simplex Method, and the big M Method |
| 4 | Duality and sensitivity analysis |
| 5 | The transportation and assignment problems |
| 6 | Shortest Path Algorithms |
| 7 | Dynamic Programming |
| 8 | Deterministic Inventory Models |
| 9 | Deterministic Inventory Models (continued) |
| 10 | Stochastic Inventory Models |
| 11 | Queuing Theory, Introduction |
| 12 | M/M/1/ ∞ Systems and M/M/C/K Systems |
| 13 | Management Science in perspective |

***Approximate (The equivalent of two classes is for test)**

Grading

Mid Term 33%
Final Exam 33%
Class work 34%