

# NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Management - Operations and Supply Chain Management

Subject Co-ordinator - Prof. G. Srinivasan

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction - (Challenges, Methodologies)
- Lecture 2 - Forecasting - Time series models - Simple Exponential smoothing
- Lecture 3 - Forecasting - Linear Models, Regression, Holt's, seasonality
- Lecture 4 - Forecasting - Winter's model, causal models, Goodness of forecast, Aggregate Planning, Tabular
- Lecture 5 - Aggregate Planning, Tabular method, Linear Programming
- Lecture 6 - Aggregate Planning, Transportation model
- Lecture 7 - Aggregate Planning, Dynamic Programming, backordering
- Lecture 8 - Aggregate Planning, Quadratic model, Demand and capacity planning
- Lecture 9 - Inventory Models - Costs, EOQ model
- Lecture 10 - Inventory - EOQ model graphs, with backordering
- Lecture 11 - Inventory - Models for all quantity and marginal quantity Discount
- Lecture 12 - Multiple Quantity Discount, Multiple item inventory - Constraint on numbers of orders
- Lecture 13 - Multiple item inventory - Constraint on money value, space, equal number of orders
- Lecture 14 - Multiple item inventory - combining orders, production consumption model
- Lecture 15 - Inventory - Production consumption model with backordering, Economic lot scheduling problem
- Lecture 16 - Economic lot scheduling problem, Supply Chain inventory
- Lecture 17 - Lot sizing
- Lecture 18 - Lot sizing - heuristics
- Lecture 19 - Disaggregation
- Lecture 20 - Disaggregation - time varying demand, Safety stock - ROL for discrete demand distribution
- Lecture 21 - Safety stock - ROL for normal distribution of lead time demand
- Lecture 22 - Integrated model, ROL for normal distribution of LTD and given mean
- Lecture 23 - Safety stock reduction - delayed Product differentiation, substitution. MOM
- Lecture 24 - Sequencing and scheduling - Assumptions, objectives and shop settings
- Lecture 25 - Single machine sequencing. Two machine flow shop - Johnson's algorithm
- Lecture 26 - Flow shop scheduling - Three machines, Johnson's algorithm and Branch and bound algorithm
- Lecture 27 - Flow shop scheduling - heuristics - Palmer, Campbell Dudek Smith algorithm
- Lecture 28 - Job shop scheduling - Gantt chart, Different dispatching rules
- Lecture 29 - Job shop scheduling - Shifting bottleneck heuristic

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- Lecture 30 - Job shop scheduling - Shifting bottleneck heuristic. Line Balancing
- Lecture 31 - Line Balancing
- Lecture 32 - Location problems - p median problem, Fixed charge problem
- Lecture 33 - Location allocation problems in supply chain. Layout
- Lecture 34 - Quantitative models for layout, Summary
- Lecture 35 - Introduction to Supply Chain Management
- Lecture 36 - Location Problems
- Lecture 37 - Transportation and Distribution Models
- Lecture 38 - Transportation and Distribution Models(continued)
- Lecture 39 - Bin Packing and Travelling Salesman Problems
- Lecture 40 - Vehicle Routeing Problems
- Lecture 41 - Value of Information