

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

NPTEL Video Course - Mathematics - NOC:Introduction to Queueing Theory

Subject Co-ordinator - Prof. N. Selvaraju

Co-ordinating Institute - IIT - Guwahati

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

- Lecture 1 - Queueing Systems, System Performance Measures
- Lecture 2 - Characteristics of Queueing Systems, Kendall's Notation
- Lecture 3 - Little's Law, General Relationships
- Lecture 4 - Laplace and Laplace-Stieltjes Transforms, Probability Generating Functions
- Lecture 5 - An Overview of Stochastic Processes
- Lecture 6 - Markov Chains: Definition, Transition Probabilities
- Lecture 7 - Classification Properties of Markov Chains
- Lecture 8 - Long-Term Behaviour of Markov Chains
- Lecture 9 - Exponential Distribution and its Properties, Poisson Process
- Lecture 10 - Poisson Process and its Properties, Generalizations
- Lecture 11 - Continuous-Time Markov Chains, Generator Matrix, Kolmogorov Equations
- Lecture 12 - Stationary and Limiting Distributions of CTMC, Balance Equations, Birth-Death Processes
- Lecture 13 - Birth-Death Queues: General Theory, M/M/1 Queues and their Steady State Solution
- Lecture 14 - M/M/1 Queues: Performance Measures, PASTA Property, Waiting Time Distributions
- Lecture 15 - M/M/c Queues, Erlang Delay Formula
- Lecture 16 - M/M/c/K Queues
- Lecture 17 - Erlang's Loss System, Erlang Loss Formula, Infinite-Server Queues
- Lecture 18 - Finite-Source Queues, Engset Loss System, State-Dependent Queues, Queues with Impatience
- Lecture 19 - Transient Solutions: M/M/1/1, Infinite-Server and M/M/1 Queues, Busy Period Analysis
- Lecture 20 - Queues with Bulk Arrivals
- Lecture 21 - Queues with Bulk Service
- Lecture 22 - Erlang and Phase-Type Distributions
- Lecture 23 - Erlangian Queues: Erlangian Arrivals, Erlangian Service Times
- Lecture 24 - Nonpreemptive Priority Queues
- Lecture 25 - Nonpreemptive and Preemptive Priority Queues
- Lecture 26 - M/M/1 Retrial Queues
- Lecture 27 - Discrete-Time Queues: Geo/Geo/1 (EAS), Geo/Geo/1 (LAS)
- Lecture 28 - Introduction to Queueing Networks, Two-Node Network
- Lecture 29 - Burke's Theorem, General Setup, Tandem Networks

Get DIGIMAT For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

<http://www.digimat.in>

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

- Lecture 30 - Queueing Networks with Blocking, Open Jackson Networks
- Lecture 31 - Waiting Times and Multiple Classes in Open Jackson Networks
- Lecture 32 - Closed Jackson Networks
- Lecture 33 - Closed Jackson Networks, Convolution Algorithm
- Lecture 34 - Mean-Value Analysis Algorithm
- Lecture 35 - Cyclic Queueing Networks, Extensions of Jackson Networks
- Lecture 36 - Renewal Processes
- Lecture 37 - Regenerative Processes, Semi-Markov Processes
- Lecture 38 - M/G/1 Queues, The Pollaczek-Khinchin Mean Formula
- Lecture 39 - M/G/1 Queues, The Pollaczek-Khinchin Transform Formula
- Lecture 40 - M/G/1 Queues: Waiting Times and Busy Period
- Lecture 41 - M/G/1/K Queues, Additional Insights on M/G/1 Queues
- Lecture 42 - M/G/c, M/G/â and M/G/c/c Queues
- Lecture 43 - G/M/1 Queues
- Lecture 44 - G/G/1 Queues: Lindley's Integral Equation
- Lecture 45 - G/G/1 Queues: Bounds
- Lecture 46 - Vacation Queues: Introduction, M/M/1 Queues with Vacations
- Lecture 47 - M/G/1 Queues with Vacations