

COURSE BROCHURE

Operations Research - Models and Worked Numerical Methods

Higher Education · Undergraduate / Mathematics & Operations Research

<div>One-time full-course fee</div> <div>INR 1,499</div>	<div>Access</div> <div>12 months course access</div>
--	--

Study plan

**26 written lessons with exercises;
self-paced**

Learning format

26 listed written lessons with practice and self-assessment. Twenty-six readings combine the preserved sixteen-reading foundations with ten additive chapters. Teaching covers LP and duality, transportation and assignment, CPM, inventory, basic queues and decisions, integer/dynamic programming, sequencing, economic and renewal replacement, Monte Carlo and event simulation, and elementary nonlinear/KKT methods. Four original 100-mark assessments across the combined course provide explained numerical practice. This is substantive numerical learning support with stated model assumptions, not a declaration of complete university-specific curriculum or examination coverage. Not included: Exact university, semester and current examination route for TYBCom or other institution-specific aliases is not established.; General job-shop scheduling, precedence-constrained/parallel-machine sequencing and unrestricted multi-machine optimality are not taught in full.; Continuous-time reliability, dependent failures, downtime optimisation and advanced maintenance policies remain beyond the stated replacement models.; Input-distribution fitting, formal steady-state diagnostics, variance-reduction depth and simulation optimisation are not comprehensive.; Global nonconvex optimisation, nonlinear solver implementations, full convergence proofs, stochastic dynamic programming, multiserver queueing and min-cost flow remain further depth.; This course does not award a university degree, academic credit or institutional examination equivalence.; Classroom models and synthetic examples must not be the sole basis for actual operational, maintenance, staffing or financial decisions; real

Programme overview

Twenty-six readings combine the preserved sixteen-reading foundations with ten additive chapters. Teaching covers LP and duality, transportation and assignment, CPM, inventory, basic queues and decisions, integer/dynamic programming, sequencing, economic and renewal replacement, Monte Carlo and event simulation, and elementary nonlinear/KKT methods. Four original 100-mark assessments across the combined course provide explained numerical practice. This is substantive numerical learning support with stated model assumptions, not a declaration of complete university-specific curriculum or examination coverage.

Who this is for

- 1 Read the listed scope and prerequisites before enrolment.
- 2 A parent or guardian should manage a minor learner's account and purchase.
- 3 Not included: Exact university, semester and current examination route for TYBCom or other institution-specific aliases is not established.
- 4 Not included: General job-shop scheduling, precedence-constrained/parallel-machine sequencing and unrestricted multi-machine optimality are not taught in full.
- 5 Not included: Continuous-time reliability, dependent failures, downtime optimisation and advanced maintenance policies remain beyond the stated replacement models.
- 6 Not included: Input-distribution fitting, formal steady-state diagnostics, variance-reduction depth and simulation optimisation are not comprehensive.
- 7 Not included: Global nonconvex optimisation, nonlinear solver implementations, full convergence proofs, stochastic dynamic programming, multiserver queueing and min-cost flow remain further depth.
- 8 Not included: This course does not award a university degree, academic credit or institutional examination equivalence.
- 9 Not included: Classroom models and synthetic examples must not be the sole basis for actual operational, maintenance, staffing or financial decisions; real decisions require validated inputs and appropriate professional review.

Published topics and learning focus

- 1 Linear programming: formulate, solve and check
- 2 Simplex pivots: algebra behind the table
- 3 Duality and sensitivity: what a resource is worth
- 4 Transportation: feasible allocation and an optimality check
- 5 Assignment: row reduction and one-to-one choices
- 6 Project networks: critical path and uncertainty
- 7 Inventory: derive EOQ and separate stock from flow
- 8 Queues: utilisation, waiting and model limits
- 9 Decision tables, game theory and value of information
- 10 Operations Research final assessment and worked solutions
- 11 Optimisation methods continuation
- 12 Continuation assessment and explained answers
- 13 Sequencing and replacement
- 14 Simulation and nonlinear optimisation
- 15 Integrated practice and solutions

Before you choose

- 1 These are published programme highlights, not certification of complete syllabus coverage. Review the available reading index and programme trial before enrolling.
- 2 ZELVU provides learning support. It does not award the underlying degree, professional registration or an examination result.
- 3 Current checkout terms and refund policy apply. Payment and access require successful provider verification.

Take the next step

[Explore the programme trial](#)

[View current details, scope and terms](#)

[Ask ZELVU about this programme](#)

Save this brochure for reference. Details can change: confirm the current programme page and checkout before making a purchase.