

M.Phil. in OPERATIONAL RESEARCH

The M.Phil. Programme consists of two parts. In part-I, the student is required to study a compulsory course on Research Methodology and two courses from the list of courses offered by the Department from time to time. In part-II, the student is required to write a dissertation under an approved supervisor from the Department.

No. of seats

M.Phil. OPERATIONAL RESEARCH	
Categories	No. of Seats
General	11
Schedule Caste	3
Schedule Tribe	2
OBC	6
Total	22
PWD*	up to 5% of total seats
Foreign Nationals*	up to 5% of total seats

* supernummary as per the University of Delhi rules.

Eligibility

The candidate should have a minimum of 55% marks (or equivalent CGPA score) in Master's Degree in Operational Research or in an allied subject with at least two papers in Operational Research with 60% or above marks from a recognized university/institute. Additionally, the common eligibility criteria as per University rules will also be applicable.

Note: As per University rules, for admission to the M.Phil programme, the OBC/SC/ST candidates shall be given 5% relaxation in the minimum eligibility marks.

How to apply: Online registration through University Admission Portal for M.Phil./Ph.D. admissions.

Selection Procedure:

- The admission to M.Phil. programme is through Written Examination based on Multiple Choice Question pattern.
- The Entrance Test will be a qualifying examination with qualifying marks as 50%. The syllabus for the entrance test will consist of 50% questions on research aptitude/methodology and 50% subject specific questions.
- The shortlisted candidates on the basis of Written Examination will called for Interview.

- The Written Examination and Interview carry weightage of 85% and 15%, respectively.

Notes:

- There will be a common Written Examination for both M.Phil. and Ph.D. programmes in Operational Research.
- No TA/DA will be paid for attending the written test and interview.

Syllabus for M.Phil. Entrance Examination

The syllabus for the written examination is from the following areas.

Operational Research: Definition and scope of operations research, Formulation of simple linear programming problems, Simplex method, Duality, Complementary slackness theorem, Simple transportation and assignment problems, Convex functions and their basic properties, Lagrange theorem, KKT optimality conditions, quadratic programming, Characteristics of Inventory system, Simple economic lot size inventory models with and without shortages, Economic production quantity model, Reorder level, Simple single period stochastic inventory model, Definition of Queues and their characteristics, Queueing models with Markovian input and Markovian service, M/M/1 & M/M/C queueing models, Definitions of reliability and availability, Reliability of multi components systems, Failure time distributions- exponential and weibull.

Research Methodology: Criteria of good research, Ethical issues in research such as plagiarism, falsification, integrity and misleading authorship, Statistical measures, Measurement and scaling techniques, Probability, Conditional Probability, Theorem of total probabilities, Bayes Theorem, Random variables, Sampling fundamentals, Sampling distributions, Sampling theory, Estimation, Testing of hypothesis, Correlation and regression.