



Deen Dayal Upadhyaya Gorakhpur University

NAAC A++, UGC-Entitled, NIRF #151-200, IIRF #75

M.Sc Mathematics

Type

Pg Program

Mode

Online

Duration

2 Years

Total fees

₹ 30,500

Deen Dayal Upadhyaya Gorakhpur University

Deen Dayal Upadhyaya Gorakhpur University, founded in 1950, is the first university in Uttar Pradesh to emerge as a leading higher-studies centre after Independence. It has earned an A++ accreditation from NAAC for its relentless pursuit of its motto, “Let the noble thoughts come to us from all directions,” which reflects its openness to diverse perspectives, cultures, and values in its academic and organizational spheres. DDU Gorakhpur University offers Online Programs, ODL Programs, and Work-linked Programs to support diverse learners. The university bears the name of the eminent political philosopher, Pandit Deen Dayal Upadhyaya. It is situated in Gorakhpur, where it draws inspiration from the spiritual, philosophical, patriotic, and philanthropic heritage of Gautam Buddha, Sant Kabir, Guru Gorakshnath, Bismil, Hanuman Prasad Poddar, and the world-famous Gita Press.

Key features

- ◆ Industry-Integrated Curriculum
- ◆ NAAC A+ Accredited University
- ◆ Entrepreneurship & Innovation Cell
- ◆ Digital Learning Management System (LMS)
- ◆ Scholarship Opportunities for Meritorious Students
- ◆ Experienced Faculty from Academia & Industry

M.Sc Mathematics

Highlights

- ◆ Flexible online learning format designed around graduates and working professionals seeking stronger career direction, with room to balance study, work, and personal commitments.
- ◆ Course coverage includes algebra, calculus, linear algebra, and mathematical modelling, giving learners a clearer view of mathematics, quantitative reasoning, and analytical problem-solving and its applications.
- ◆ Learning is supported through guided modules, faculty-led inputs, and examples connected to current academic or professional contexts.
- ◆ Assignments and applied exercises help learners connect concepts with abstract problems, quantitative patterns, and logical relationships rather than studying the subject in isolation.
- ◆ Useful for building confidence, subject depth, and readiness for future pathways in Lecturer / Assistant Professor, Data Analyst, and Statistician and related teaching, analytics, research, quantitative roles, and advanced academic pathways, with added focus on case-based thinking.

Learning outcomes

- ◆ Within M.Sc (Mathematics) from Deen Dayal Upadhyaya Gorakhpur University, analyze abstract problems, quantitative patterns, and logical relationships using concepts from algebra, calculus, linear algebra, and mathematical modelling.
- ◆ Apply subject knowledge to solve mathematical modelling, proof-based reasoning, and structured analysis challenges with greater structure and clarity.
- ◆ Evaluate quantitative choices using logical reasoning, assumptions, and mathematical evidence while considering precision, logical clarity, and disciplined reasoning.
- ◆ Create or present solutions, proofs, models, and analytical explanations with clear structure and practical relevance.
- ◆ Build readiness for progression in Lecturer / Assistant Professor, Data Analyst, and Statistician and related teaching, analytics, research, quantitative roles, and advanced academic pathways through stronger subject understanding and applied thinking, while strengthening case-based thinking.

Eligibility Criteria

Mathematics as a subject in UG III Year or B.Tech./BCA

Curriculum Overview

Semester I (5 subjects)

- ♦ MAT- 501N - Groups and Canonical Forms
- ♦ MAT- 502N - Topology
- ♦ MAT- 503N - Differential and Integral Equations
- ♦ MAT- 504N - Complex Analysis
- ♦ MAT- 505N - Real Analysis

Semester II (6 subjects)

- ♦ MAT- 506N - Fields and Modules
- ♦ MAT- 507N - Differential Geometry of Manifolds
- ♦ MAT- 508N - Partial Differential Equations
- ♦ MAT- 509N - Operations Research
- ♦ MAT- 510N - Fluid Dynamics
- ♦ MAT- 500N - Basic Statistical Tools for Mathematical Sciences



Curriculum Overview (continued)

Semester III (14 subjects)

- ♦ MAT- 511N - Number Theory
- ♦ MAT- 512N - Functional Analysis-I
- ♦ MAT- 513N - Mathematical Modelling
- ♦ MAT- 514N - Discrete Mathematics
- ♦ MAT- 515N - General Relativity and Gravitation
- ♦ MAT- 516N - Summability Theory and Approximation
- ♦ MAT- 517N - Hydro Dynamics
- ♦ MAT- 518N - Numerical Solution of Differential Equations
- ♦ MAT- 519N - Advanced Topology
- ♦ MAT- 520N - Mathematical Epidemiology
- ♦ MAT- 521N - Complex Manifolds
- ♦ MAT- 522N - Riemannian Geometry
- ♦ MAT- 523N - Hydro Statics
- ♦ MAT- 524N - Project



Curriculum Overview (continued)

Semester IV (14 subjects)

- ♦ MAT- 525N - Measure Theory
- ♦ MAT- 526N - Functional Analysis-II
- ♦ MAT- 527N - Classical Mechanics
- ♦ MAT- 528N - Fourier Analysis
- ♦ MAT- 529N - Cosmology
- ♦ MAT- 530N - Wavelet Analysis
- ♦ MAT- 531N - Magneto Hydrodynamics
- ♦ MAT- 532N - Fixed Point Theory and its Application
- ♦ MAT- 533N - Bio Mathematics
- ♦ MAT- 534N - Contact Manifolds
- ♦ MAT- 535N - Finsler Geometry
- ♦ MAT- 536N - Variational Analysis and Nonsmooth Optimization
- ♦ MAT- 537N - Mathematics for Humanities (Not for Mathematics Students)
- ♦ MAT- 538N - Dissertation/ Research project

Fee Structure

Fee heads	Year 1	Year 2	Total
Registration Fee	₹ 500	—	₹ 500
Exam Fee	₹ 3,000	₹ 3,000	₹ 6,000
Course Fee	₹ 12,000	₹ 12,000	₹ 24,000
Total	₹ 15,500	₹ 15,000	₹ 30,500

Career & Placement highlights



95%

of graduates placed



3x

Average salary hike

Top Career Roles



Machine Learning Engineer



Data Scientist



Systems Architect



Technical Support
Specialist



Entrepreneur



Cybersecurity Analyst