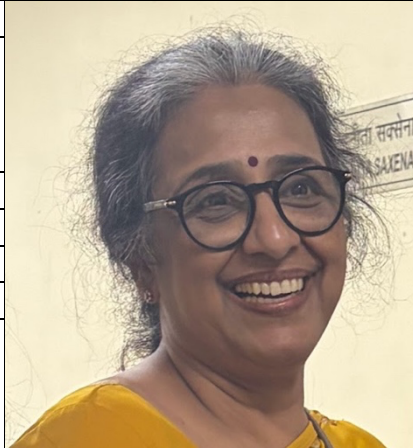




**Shaheed Rajguru College of Applied Sciences for Women
University of Delhi
Faculty Profile**

Title	Prof.	First Name	PUNITA	Last Name	SAXENA	Photograph
Designation		PROFESSOR				
Address		Flat No. 04013, ATS Advantage, 17 Ahinsa Khand, Indirapuram, Ghaziabad 201014				
Phone No Office						
Residence Mobile		9810221483				
Email		punita.saxena@rajguru.du.ac.in				
Educational Qualifications						
Degree		Institution			Year	
Ph.D (Mathematics)		Jamia Millia Islamia, New Delhi			2004	
M.Phil (Mathematics)		University of Delhi, Delhi			1990	
M.Sc (Mathematics)		Hans Raj College, University of Delhi, Delhi			1988	
B.Sc(Hons) Mathematics		Hans Raj College, University of Delhi, Delhi			1986	
Career Profile						
Total teaching experience: 38 years						
1993-till date						
At present working as Professor, Department of Mathematics, Shaheed Rajguru College of Applied Sciences for Women, University of Delhi, India						
1990-1993						
Lakshmibai College, University of Delhi, India						
Worked as Lecturer, department of Mathematics.						
1989-1990						
Jesus and Mary College, University of Delhi, India						
Worked as Lecturer, Department of Mathematics.						
Visiting Faculty/Counsellor						
- Indira Gandhi National Open University, India (MBA Course classes), 1993-1995 - Shaheed Sukhdev College of Business Studies, University of Delhi, Taught Mathematics to students of Bachelor of Information Sciences (BIS).						
Administrative Assignments						
Teacher-in-Charge						
Responsible for conducting departmental meetings, facilitating academic development and student–faculty interaction, preparing departmental timetables, coordinating faculty appointments, and overseeing the routine functioning of the department.						

- **Acting Principal**

Served as Acting Principal, from time to time, and was entrusted with overseeing the day-to-day functioning and administration of the college in the absence of the Principal.

- **College Council Committees**

Served as Member and Convener of various institutional committees, including Examinations, Purchase, Bursar, Library, Timetable, Attendance, Cultural, Fee-Concession, Women Development Cell, Academic Development Committee, Discipline, and Prospectus. These responsibilities contributed to the effective academic and administrative functioning of the institution.

- **Staff Advisor to the Student Council**

Served as Staff Advisor to the democratically elected Student Council on several occasions. Responsibilities included mentoring student representatives and facilitating inter-college competitions and educational visits to industries and research institutes across India.

- **Association with the College**

Associated with the college since its formative stage and contributed to the development of frameworks for introducing new courses and establishing academic infrastructure, including computer laboratories for Mathematics and Computer Sciences. Also served as Teacher Representative on the Governing Body, contributing to institutional decision-making and representing faculty interests.

- **University Examinations**

Serving as an examiner and evaluator for undergraduate University examinations since 1994, with responsibilities including question-paper setting, moderation, and evaluation of answer scripts.

- **Workshops and Conferences**

Organized a workshop on “Application of Mathematical Techniques in Industries” at the college in December 2005. The workshop brought together graduates, postgraduates, research scholars, and faculty from Mathematics, Statistics, and Operations Research. It aimed to provide theoretical and practical exposure to mathematical techniques used in industry, bridge the gap between academic learning and practical applications, and equip students with skills relevant to contemporary employment opportunities.

Served as a member of the Organising Committee of the International Workshop on “New Frontiers in Global Learning and Communications (NFGLC),” organized in collaboration with the University of Massachusetts, Boston, USA, from 28 December 2013 to 2 January 2014.

Served as Treasurer of the UGC-sponsored Second National Conference on “Recent Trends in Instrumentation and Electronics (RTIE),” held at the college on 5–6 October 2016.

Areas of Interest / Specialization

- Mathematical programming
- Data Envelopment Analysis
- Analytical Study of Transportation System and its related problems for Pollution control and Energy Management using Statistical and Mathematical Models.

Subjects Taught

- Calculus
- Operational Research Techniques
- Mathematical Modelling and Graph Theory
- Probability and Statistics
- Ordinary Differential Equations
- Biostatistics
- Statistical Quality Control

Research Guidance

- Supervised one student for the award of M.Phil. in Mathematics in 2024 on “Application of Data Envelopment Analysis in the Indian Transport System,” Department of Mathematics, University of Delhi.
- Supervised one student for the award of Ph.D. in 2023 on “Analytical Study of the Indian Airline Sector using Data Envelopment Analysis,” Indira Gandhi Delhi Technical University.
- Supervised one student for the award of M.Phil. in Mathematics in 2023 on “Data Envelopment Analysis in Health Sector: An Empirical Approach,” Department of Mathematics, University of Delhi.
- Supervised one student for the award of M.Phil. in Mathematics in 2009 on “On Some Aspects of Mathematical Modelling of Transportation with Special Reference to National Highway Authority of India,” Vinayak Mission University, India.

Publications Profile

Research Papers Published in Refereed/Peer-Reviewed Journals

- 2025 – “An Empirical Study of Indian Passenger Airlines for Sustainable Performance: A Window DEA Approach,” in Optimization Techniques for Sustainable Environment Under Uncertainty, pp. 1–16.
- 2023 – “Data Envelopment Analysis (DEA) Based Study of Major Sea Ports of India,” International Journal of Emerging Trends in Engineering Research, 11(5), 168–173. DOI: 10.30534/ijeter/2023/091152023.
- 2021 – “Efficiency Assessment of Indian Passenger Airlines Using Two-Stage Efficiency Model: Non-Traditional DEA Approach,” International Journal of Modelling and Simulation, 41(5), 351–358. DOI: 10.1080/02286203.2021.1983076.
- 2019 – “A Benchmarking Strategy for Delhi Transport Corporation: An Application of Data Envelopment Analysis,” International Journal of Mathematical, Engineering and Management Sciences, 4(1), 232–244.
- 2017 – “Benchmarking State Road Transport Undertakings of India: A DEA-Based Stepwise Approach,” Lecture Notes in Management Sciences, Vol. 9.
- 2017 – “Effect of Sprouting Time on Antioxidant Properties of Trigonella foenum-graecum (Fenugreek) Seeds Available in Delhi-NCR Region,” International Journal of Current Research and Review, 9(5), 33–37.
- 2016 – “Benchmarking Efficiency of Delhi Transport Corporation: A Data Envelopment Analysis Approach,” Lecture Notes in Management Sciences, Vol. 8, 33–40.
- 2016 – “Efficiency Evaluation of the Energy Companies in CNX 500 Index of the NSE, India Using DEA,” Benchmarking: An International Journal, 23(1), 113–126.
- 2015 – “Efficiency Evaluation of State Transport Undertakings of India Using DEA-NN Approach,” International Journal of Management and Information Technology, 10(5), 2189–2198.
- 2013 – “Comparing the Efficiencies of State Transport Undertakings Using Data Envelopment Analysis,” International Journal of Mathematics and Computer Applications Research, 3(5), 89–100.
- 2011 – “Efficiency Evaluation of the Indian Bus Companies Using DEA in the Light of Weight Restrictions,” Lecture Notes in Management Sciences.
- 2011 – “Measuring Efficiencies in Indian Public Road Transit: A Data Envelopment Analysis Approach,” Opsearch, 47(3), 195–204.
- 2006 – “Data Envelopment Analysis: An Application in the Transport Sector,” Journal of Interdisciplinary Mathematics, 9(2), 385–395.
- 2004 – “Neighbourhood Schools: A Paradigm to Combat Pollution and Save Energy,” Indian Journal of Transport Management, 28(3), 415–430.
- 2003 – “Resident Welfare Associations: A Futuristic Approach to Reduce Vehicular Density,” Indian Journal of Transport Management, 27(2), 220–233.

- 2001 – “Car Parking: Managerial Perspectives-II (A Case Study of Delhi),” Indian Journal of Transport Management, 25(6), 575–591.
- 2000 – “Car Parking: Managerial Perspectives-I (A Case Study of Delhi),” Indian Journal of Transport Management, 24, 741–745.

Research Papers Presented/Published in Conference Proceedings

- “A Study on Efficiency Evaluation of State Transport Undertakings in India,” presented at the International Conference on Contemporary Researches in Engineering, Science, Management & Arts (ICCRESMA), 22–24 February 2024, Coimbatore, Tamil Nadu, India. The paper was awarded First Prize.
- “Benchmarking State Road Transport Undertakings of India: A DEA-Based Stepwise Approach,” presented at the 9th International Conference on Applied Operations Research (ICAOR), Chung Yuan Christian University, Taoyuan, Taiwan, December 2017.
- “Benchmarking Efficiency of Delhi Transport Corporation: A Data Envelopment Analysis Approach,” presented at the 8th International Conference on Applied Operations Research (ICAOR), Rotterdam, Netherlands, 28–30 June 2016.
- “Efficiency Evaluation of the Indian Bus Companies Using DEA in the Light of Weight Restrictions,” presented at the 3rd International Conference on Operational Research (ICAOR), Bahçeşehir University, Istanbul, Turkey, 24–26 August 2011.
- “Enumeration Technique for Set Covering, Partitioning and Packing Problems with Quadratic Objective Function: A Combinatorial Approach,” presented at the UGC-sponsored 3rd National Conference MATEIT-2010, Delhi, India, 30–31 January 2010.
- “Efficiency Assessment of Public Transport Undertakings of India Using Data Envelopment Analysis,” presented at the Second Mathematical Programming Society International Conference on Continuous Optimization (ICCOPT-II), McMaster University, Hamilton, Ontario, Canada, 13–16 August 2007.
- “Efficiencies of State Transport Undertakings: An Empirical Analysis Using Data Envelopment Analysis,” presented at the First National Conference on Mathematical Techniques in Electronics and IT Industries, sponsored by UGC, Deen Dayal Upadhyaya College, University of Delhi, 22–25 March 2006.
- “Data Envelopment Analysis: An Application in the Transport Sector,” presented at the Sixth International Conference of the Association of Asia Pacific Operational Research Society within IFORS, New Delhi, India, 8–11 December 2003.
- “Data Envelopment Analysis: An Application in the Transport Sector,” presented at the Tenth International Conference on Statistics, Combinatorics and Related Areas, University of Southern Maine, Portland, USA, 3–5 October 2003.
- “Car Parking: Managerial Perspectives (A Case Study of Delhi),” in the Proceedings of the Thirty-Fourth Annual Convention of the Operational Research Society of India, International Conference on Operational Research and National Development, December 2001.
- “Career Options for Women in Mathematics,” in the Proceedings of the Conference of Women Scientists and Technologists: Role in National Development, organized by the Department of Biotechnology, Government of India, March 2002.

Invited Lectures

- “Statistical Quality Control,” workshop on “Quality Assurance System in Foods,” Centre for Entrepreneurship and Career Oriented Programme, University of Delhi, 2002.

- “Errors and Assessments in Analytical Measurements,” workshop on “Analytical Techniques and Instrumentation,” Centre for Entrepreneurship and Career Oriented Programme, University of Delhi, 2003.
- “Statistical Analysis and Reliability,” workshop on “Analytical Techniques in Foods,” Centre for Entrepreneurship and Career Oriented Programme, University of Delhi, October 2004.
- “Quality Control Techniques,” workshop on “Applications of Mathematical Techniques in Industries,” Centre for Entrepreneurship and Career Oriented Programme, University of Delhi, 2005.
- “Mathematics as a Tool in Engineering Sciences,” workshop on “Introduction to VLSI and VHDL,” Centre for Entrepreneurship and Career Oriented Programme, University of Delhi, 2006.
- “Data Handling in Analytical Chemistry,” UGC-sponsored workshop on “Recent Trends in Analytical Techniques (RTAT 07),” D.D.U. College, University of Delhi, February 2007.
- “Probability and its Applications,” DST-sponsored INSPIRE Workshop, H.N. Bahuguna University, Garhwal, 2010.
- “Partial Differentiation,” UGC-sponsored National Workshop on Numerical Analysis, DDUC, 2011.
- “Pedagogy of Undergraduate Mathematical Statistics: From Theory to Practice,” Janki Devi Memorial College, University of Delhi, 2026.

Workshops / Conferences Attended

- Attended the 3rd International Capacity Building Programme (CBP), organized by the University of Delhi in collaboration with Durham University, UK, on “Global Trends in Academic Administration” for senior academic and administrative faculty, 3–13 April 2025.
- 6th National Quality Conclave, organized by the Quality Council of India, 11–12 February 2011, New Delhi.
- Workshop on “Foundation Course: Building Mathematical Ability,” organized by CPDHE, University of Delhi, 20–22 May 2013.
- Workshop on “Spiritual Values and Ethics,” organized by CPDHE, University of Delhi, 1–3 March 2017.
- UGC-sponsored three-week Refresher Course in Mathematics, Academic Staff College, Jamia Millia Islamia, Delhi, 3–21 September 2001.
- UGC-sponsored three-week Refresher Course in Mathematics (Math-18), CPDHE, University of Delhi, 30 April–19 May 2001.
- UGC-sponsored three-week Refresher Course in Statistics: Statistical Models and Computer Applications, CPDHE, University of Delhi, 27 March–17 April 1997.
- Workshop on “Basic Computer Awareness,” organized by Deen Dayal Upadhyaya College and NIIT, 1–6 October 1996.
- UGC-sponsored three-week Refresher Course in Mathematics: Applied Abstract Algebra, CPDHE, University of Delhi, 28 September–18 October 1995.
- Course on “Introduction to PC and Related Software,” Delhi University Computer Centre, 6–17 September 1993.

Research Projects (Major Grants/Research Collaboration)

- Completed a UGC-funded Minor Research Project (2011–2014) on “Efficiencies of the Delhi University Colleges Using Data Envelopment Analysis.”

- Completed a University of Delhi Innovation Project (2014) on “Effect of Anemia on Academic Performance of Students of East Delhi Colleges.” - Completed a University of Delhi Innovation Project (2015) on “Biochemical Evaluation of Sprouted Fenugreek Seeds for Nutraceutical Management of Type-2 Diabetes Using In Vitro Assays.” The project received the University of Delhi’s “Best Societal Impact” Award	
Awards and Distinctions	
“Meritorious Teacher Award,” Government of NCT of Delhi, 2013. - Secured First Rank in M.Sc. (Mathematics) at Hans Raj College, University of Delhi. - Secured distinction in the M.Phil. examination, University of Delhi.	
1.	Association With Professional Bodies
	Memberships
	Operational Research Society of India – Senior Life member
	Other Activities
	- Coordinator, ANUVARTAN – College Attendance and Assessment Management System: Led the implementation and deployment of ANUVARTAN, an integrated digital platform that streamlined attendance, internal assessment, practical marks, and timetable management, thereby enhancing the efficiency, transparency, and effectiveness of academic administration. - Coordinator, NAAC Steering Committee. Coordinated the preparation and compilation of the college Self-Study Report and facilitated coordination with the NAAC Peer Team during its visit to the college in 2015. - Reviewer, Benchmarking: An International Journal since 2017. - Reviewer, European Journal of Operations Research since 2019. - Reviewer, Humanities and Social Sciences Communications, Springer Nature since 2025. - Member, Programme Committee, ICAOR, OR Lab Analytics, Operational Research Laboratory of Western Canada.