



Faculty Details proforma for DU College Web-site



Title	Dr.	First Name	Manisha	Last Name	Jain	Photograph
Designation	Associate Professor (Chemistry)					
Address	Acharya Narendra Dev College, Govindpuri, Kalkaji, New Delhi -110019, INDIA					
Phone No Office	+ 91 11 2641 2547, +91 11 2629 3224, +91 11 26294542					
Residence	-					
Mobile	-					
Email/ Web-Page	manishajain@andc.du.ac.in, drmanishagupta@gmail.com www.wikieducator.org/User:Mani_g1					
Educational Qualifications						
Degree	Institution				Year	
Ph.D. (Inorganic Chemistry)	Department of Chemistry, University of Delhi, Delhi, India.				2002	
M.Sc. (Chemistry)	Hindu College (University of Delhi), Delhi, India.				1997	
B.Sc. (H) Chemistry	Gargi College (University of Delhi), Delhi, India.				1995	
10+2	GGSSE, Srinivaspuri, New delhi (CBSE, Delhi, India)				1992	
Career Profile						
<ol style="list-style-type: none">Associate professor (permanent) in Acharya Narendra Dev College (University of Delhi) since 16.07.2003Lecturer (Temporary) in St. Stephen's College (University of Delhi) from 15.07.2001 to 15.07.2003Lecturer (ad hoc) in Acharya Narendra Dev College (University of Delhi) since 23.10.2000 to 14.07.2001						
Administrative Assignments						
Contribution in corporate life of Institution						
(a) Curriculum development: Member of the Curriculum Development Committee (constituted in 2004) for Interdisciplinary Courses for B.Sc. Programmes in Physical Sciences, Life Sciences, Applied Sciences, of Delhi						

University, for designing syllabus of paper entitled ANALYTICAL TECHNIQUES.

(b) Sports/Community and extension Service

- **Programme Officer**, NSS Unit of ANDC (May 2018- till date)
- **Convener**, Women Empowerment Cell of ANDC (SASHAKT) (2016-2018)

(c) Administrative Assignments:

- **Presiding Officer**, Internal Complaints Committee at ANDC, (2016 – 2019)
- **Convener** of Editorial Committee (Magazine and Annual Report) (2014-16).
- **Teacher-in-Charge** of the chemistry Department from 01.04.2012 – 31.12.2013 and 13.02.2014 – 31.03.2014.
- **Officiating Teacher-in-Charge** of Chemistry Department from 01.01.2012 to 31.01.2012
- **Coordinator** of Remedial Coaching Classes for SC/ST/OBC /Minorities students ---Merged scheme under UGC XI th plan (20010-2012)
- **Convener** of Centre for Foreign Language Studies in ANDC (2004-2006)
- **Convener** of Chemistry Society – ABHIKRIYA ((2004-2006). Published first issue of departmental magazine, **OZEIN** .
- Member of Professional Development Committee (2008-2010)
- Member of College Development Committee (2008-2009)
- Member of Committee for College with Potential for Excellence (2008- 2010)
- Member of Prospectus and Editorial Committee (2004-2006).
- Member of Fellowship Committee (2004-2006).

d) Cultural/ Extra- Curricular Activities

- Member, Equal Opportunity Cell of ANDC (2018-till date)
- Member, NSS Unit of ANDC (May 2016- 2018)
- Member, Garden Committee (2016-18)
- Member, Alumni Affairs Committee (2015-16)
- Member, Environment Society (2014-2016)
- Member, Academic Events Management Committee (2014-2016)
- Member, Editorial Committee (2010-2012)
- Member, Annual Events Management Committee (2008-2010)
- Member, website development Committee (2006-2008)
- Member, Alumni Affairs Committee (2006-2008).

Areas of Interest / Specialization				
Bioinorganic Chemistry, Environmental Chemistry, Analytical Chemistry, Green Chemistry				
Subjects Taught				
Inorganic Chemistry, Analytical chemistry, Green Chemistry, Instrumentation, Research methodology in Chemistry				
Research Guidance				
Details of Summer Projects and students trained				
S.No.	Title of Summer Project	Mentors	Student	Course
Summer 2011				
1	Synthesis of 2-aminomethylbenzimidazole and 1,2-Bis (benzimidazolyl)ethylamine and their copper complexes	Dr Manisha Jain	Manorama Kumari	B.Sc (H) Chem III
2	Synthesis and characterization of copper complex with 1,5-Bis (2-benzimidazolyl)-3- hydroxy-3-carboxylic acid	Dr Manisha Jain	Priya Bhadana	B.Sc (H) Chem III
3	Synthesis and characterization of copper complex with 1,4-Bis (2-benzimidazolyl)-1,2-dihydroxyethane	Dr Manisha Jain	Sneha	B.Sc (H) Chem III
4	Synthesis of lab cleansing reagent.	Dr. Seema Gupta Dr Manisha Jain	Ravi Kumar	B.Sc (H) Chem III
Summer 2012				
5	Isolation of crude extracts from medicinal plants	Dr. Manisha Jain Dr. Meenu Aggarwal	Raj Kumar Saha Mukesh Kumar	B.Sc. (H) BMS II
			Simran Suri	B.Sc. (H) BMS I
			Piyush Sarraf, Mamta, Subodh	B.Sc. (Life Sc.) II
Summer 2013				
6	Extraction of crude natural product from plant <i>Syzygium cumini</i> (jamun)	Dr. Manisha Jain	Akash Kumar	B.Sc.(H)BMS II

7	Synthesis of a heterocyclic Schiff base and its copper complex and checking its antibacterial properties	Dr. Manisha Jain Dr Pankaj Khanna	Himadri Shekhar Roy	B.Sc.(H)BMS II
8	Extraction of toxic metal ions from waste water using kitchen waste like vegetable and fruit peels	Dr. Manisha Jain	Simran Suri	B.Sc.(H)BMS II
9	Synthesis of thiourea based Copper (I) complex and checking its biological activity	Dr. Manisha Jain	Arpita Guha	B.Sc.(H)BMS II
10	Estimation of hardness and concentration of As in ground water of Delhi and NCR and hence compare the quality of ground water	Dr. Manisha Jain	Chandan Kumar	B.Sc.(H)LS II
11	Redesigning undergraduate organic lab experiments through a greener and economic pathway.	Dr. Manisha Jain	Gayaprasad	B.Sc. LS II
12	Survey based study to assess the decision making ability of Class XII students for choosing subjects of higher education	Dr. Manisha Jain Dr Seema Gupta	Sarika Gupta Lucky Mathur	B.Sc.(H)BMS I
Summer 2015				
13	Greener Approach to Synthesis and Characterisation of Oxalamide derivative of 2-aminobenzothiazole	Dr. Manisha Jain	Pankaj Kushwaha	B.Sc. (H) Chemistry II yr
14	Exploring Synthetic Routes to Prepare Heterocyclic Compounds and their Derivatives	Dr. Manisha Jain	Suraj Singh	B.Sc. (H) Chemistry II yr
15	Exploring Copper Coordination Chemistry	Dr. Manisha Jain	Sumit Tiwari Prashant Singh	B.Sc. (H) Chemistry I yr
16	Peptide Chemistry: An attempt to explore Solid Phase Peptide Synthesis	Dr. Manisha Jain Ms. Swarndeep Kaur	Sundaram Maurya	B.Sc. (H) Chemistry II yr

Publications Profile

In Indexed/ Peer Reviewed Journals

- **Subject Expert for enriching the manual for Microscale Chemistry Laboratory Kit for class**

XII, published in Year 2018

http://ncert.nic.in/departments/nie/niew/school_kits/sr_sec_level/Manual_01.pdf

<u>Year of Publication</u>	<u>Title</u>	<u>Journal</u>	<u>Co-Author/s</u>
2015	An Explorative Study on Knowledge and Awareness of Health Problems Related to Usage of Fabric Dyes by Road Side Dyers in Delhi, India	DU Journal of Undergraduate Research and Innovation, 2015, 1(3), 20-25	G. Dhawan, S. Gupta, U. Dhawan , Deepika , P. Dungriyal , Z. Zaidi , Y. Singh , J. Thakur , Dharmendra , A. Chauhan and K. Sharma
2008	Oxidation of electron deficient olefins using a Copper (II) complex based on a bis benzimidazole diamide ligand	Transition Metal Chemistry 2008, 33(2), 175-182	Manisha Singla, Pavan Mathur* M.S. Hundal
2006	Oxidative Dealkylation of hindered phenol catalyzed by Copper (II) Bis Benzimidazole diamide complex	Inorganica Chimica Acta, 359 (13), p.4360-4366, Oct 2006	M.A. Sridhar, Pavan Mathur*
2003	Synthesis, Crystal Structure and Spectral Studies of Cu (II) / Cu (I) Complexes derived from Diamide Bisbenzimidazole Ligand	Inorganica Chimica Acta, 2003, 353, 197-205.	Sanjib K Das, Pavan Mathur* and A.Wally Cordes
2001	Synthesis, Crystal Structure, Spectral Studies and Catechol Oxidase activity of Trigonal Bipyramidal Cu(II) Complexes derived from a Tetradentate Diamide Bis-Benzimidazole ligands	Inorganic Chemistry, 2001, 40, 878-88.	Pavan Mathur* & Ray J. Butcher
2001	Synthesis and Characterisation of Dicopper (II) complexes with N, N, N', N', N''- Pentakis (benzimidazol-2-yl-methyl) diethylenetriamine	Indian Journal of Chemistry, 2001, 40A, 316-319.	Lata Nohria, Pavan Mathur*
2001	Synthesis and Characterization of Nickel (II) Complexes with 1,5-Bis(benzimidazol-2-yl) -3-thiapentane	Indian Journal of Chemistry, 2001, 40A, 247-251.	Lata Nohria, and Pavan Mathur
1999	Synthesis, Characterisation, EPR and Magnetic Measurements of Manganese (II) Complexes with Bis(2-benzimidazolyl)propane and bis(2-benzimidazolyl)butane ligands	Indian Journal of Chemistry, 1999, 38A, 1219-1222.	Veena Arora, & Pavan Mathur

Conference / Presentations /Workshops

- Reviewed the Educational e-content (Video lectures) for the Chemistry-04 for the MOOCs running on *Swayam* platform, in a workshop organized by CIET, NCERT Delhi from February 17-21, 2020.
- **Organised a 5-day Workshop on Empowering Teachers: Current Technology Based Educational Contents Creation and Delivery” (Using Open Source, Free software)** from December 2-6, 2019.
- **Resource Person in Professional Development Program for science teachers** (PGT, Chemistry) organized by Salwan Educational Trust in Salwan Public School, Mayur Delhi on May 21, 2019.
- **Subject Expert to conduct Interviews for selection of chemistry PGTs** in Air Force Bal Bharti School, Lodhi Road on February 22, 2019.
- **Member of Organising Committee** for ‘Education Conclave 2018’ organised by Acharya Narendra Dev College on November 02, 2018 in ANDC Campus.
- **Reviewer of Training Modules developed by NCERT** for Chemistry Teachers teaching at Senior secondary level in a workshop organized by DESM, NCERT, Delhi from August 27-31, 2018.
- **Participated in a Workshop** on “Sexual Harassment of Women at Workplace” (Prevention, Prohibition and Redressal) Act, 2013, organized by Internal Complaints Committee, Jawahar Lal Nehru University , Delhi on May 1– 2, 2018.
- **Course Coordinator** of a two months **Add-on course on ‘Legal Awareness’** for ANDC students in January 2018 in coordination with Delhi State Legal Services Authority, South-East District.
- **Participated** in a **workshop on ‘Accessible Cinema Through Audio Description and Subtitles’** organized by Dyal Singh College on September 15, 2017.
- **Organized a two-day workshop** on ‘Gender Sensitisation amongst Youth’ for second and third year students of ANDC on January 24-25, 2017,
- **Resource Person** for one full session in School Teacher's Training Workshop entitled **Science Pedagogy: Laboratory Learning to Classroom Teaching**, Organised by Acharya Narendra Dev College (University of Delhi) on January 20-21, 2016.
- **Steward (Observer)** for the Guinness World Record Break Attempt of the event ‘The Largest Practical Session’ with 2000 students by Vijnana Bharati, conducted on 07 Decemeber 2015 at IIT Campus, New Delhi. The Record has made an entry in the Guinness Book of World Records.
- **Organised** a three days **workshop** entitled **Basic Chemistry Experimentation Skills and Lab Ethics** for undergraduate chemistry students at Acharya Narendra Dev College, University of Delhi from May 25-27, 2015.
- **Resource Person** in 'Teacher's Training Workshop for Bal Bharti School Teachers' for the session on 'Investigatory Projects' Organised by BBPS Training Centre empanelled by CBSE on May 20, 2015.
- **Content developer** in Chemistry for **UDAAN CBSE -2014** – a project to provide free online resources to

disadvantaged girl students of Class XI and XII for preparation of admission test for the premier engineering colleges in the country.

- **Oral Presentation** on 'Environment Management by Chemical Waste Treatment and Recycling at the source' by **Pooja Rawat**, Neha Kumari, Sweta Sharma, Shubham Biswas, Seema Gupta and Manisha Jain at international Conference on **Harnessing Engineering Technology and Innovation for Sustainable Development** held at Dr S S B University of Chemical Engineering and Technology, Punjab University, Chandigarh, India on 19-20 September 2014 under Technical Education Quality Improvement Program.
- **Resource** person in a Workshop entitled **Review and Development of Microscale Chemistry Kit for Higher Secondary Stage'**, organized by NCERT from 23rd July to 25th July 2014, in Division of Educational Kits, NCERT, Delhi.
- **Resource** person in a Workshop entitled **Review and Development of Microscale Chemistry Kit for Higher Secondary Stage'**, organized by NCERT from 9th to 13th June 2014, in Division of Educational Kits, NCERT, Delhi.
- **Participated** in 1st International Conference on **Emerging Trends of Nanotechnology in Drug Discovery (INDD – 2014)** jointly organized by Sri Venkateswara College, University of Delhi and Department of Biochemistry, University of Delhi, South Campus on May 26-27, 2014.
- Participated in **The Academic Congress Enabling the Young: Redefining Education**, organized by University of Delhi on September 6-7, 2012.
- **Participated** in workshop on **Research in UG Science and Mathematics Education**, organised by Acharya Narendra Dev College in collaboration with Vidya Bhawan Society from May 14-18, 2012.
- A **member of organising committee** of One day National Seminar on Teaching Redefined: Open Access to Education, sponsored by INASP, UK, held at ANDC on 1st Nov 2011.
- A **member of the organising committee** of International Conference on Open Paradigms in Education, OPEN 2011, Organised by Acharya Narendra Dev College on 31 Jan-02 Feb 2011.
- **Resource person in Workshop on Multimedia Content Development using Easy Now Techniques**, Organised by Acharya Narendra Dev College from **May 4-7, 2010**.
- **Participated** in Workshop on **Application of Free/Open Source Software in Science Teaching and Research** from 14-15 April, 2010, organized by Acharya Narendra Dev College in collaboration with NRCFOSS, Anna University, Chennai
- A **member of the organising Committee of National Symposium on Chemistry in Biology: The Future of Life Sciences**, Organised by Acharya Narendra Dev College on **12 -13 Feb 2010**
- **Participated** in workshop on **Educational e- content preparation through Easy Now techniques** from **04-09 October 2009**, organised by Acharya Narendra Dev College in collaboration with CEMCA.
- **Participated in** Wikieducator workshop on open educational resources **WIKIED 2008** on **3, 4 and 6 of october 2008** held at Acharya Narendra Dev College in collaboration with Gandhi Bhavan with support from Commonwealth of Learning.
- **Participated in the Second International Symposium on Green/Sustainable Chemistry**, Organised by

Department of Chemistry, University of Delhi, on **January 10-13, 2006.**

- **Presented a poster in National Symposium on Innovative Methods in Chemistry Education IMCE -2005** organised by Indian Association of Chemistry Teachers held on **22 October 2005** at CDRI, Lucknow, India
- **Participated in Fifth National Conference of Chemistry Teachers** organised by Indian Association of Chemistry Teachers held on **21 October, 2005** at CDRI, Lucknow, India
- **Participated in National Symposium on Emerging Areas of Forensic Science** held on **4-6 December 2004**, at Sri Guru Tegh Bahadur Khalsa College (University of Delhi) Delhi, India.
- **Presented poster in International Conference on Chemistry Biology Interface: Synergistic New Frontiers – 2004**, organized by Dr. B. R. Ambedkar Centre for Biomedical Research, held at Vigyan Bhavan, New Delhi on **21-26 November 2004.**
- **Attended Seminar on Latest Developments and Application of X – Ray Fluorescence Technique in Petrochemical Industry** organized by Indian Society of Analytical Scientists (ISAS) – Delhi Chapter, held in Hotel Le- Meridian, New Delhi on **15 December 2003.**
- **Participated in ANDC Series of Science Lectures- National Symposium on Biotechnology: Expanding Horizons** organized by Acharya Narendra Dev College and held at INSA Auditorium, New Delhi on **17-18 October 2003.**
- **Participated in workshop on Friendly Approach to Undergraduate Chemistry Laboratory** organized by Zakir Hussain College (University of Delhi), Delhi on **09 October 2003.**
- **Presented poster in International Symposium on Trends in Medicinal Chemistry and Bio Catalysis** held at Department of Chemistry, University of Delhi, Delhi from **26-29 January 2000.**
- **Presented poster in Indo Russian Seminar on Trends in Chemical Sciences** held at Department of Chemistry, University of Delhi, Delhi from **24-25 January 2000.**
- **Attended First National Symposium on Green Chemistry** held at Department of Chemistry, University of Delhi, Delhi from **11-13 January 1999.**

Research Projects (Major Grants/Research Collaboration)

Details of Externally Funded Projects Undertaken and Completed

1. Title of the project : **Formulation of biodegradable and low-cost Liquid detergent for laboratory glassware**

Name of the Mentors : Dr. Seema Gupta, Dr. Manisha Jain

Funding Agency : **IEDC, NEDB (DST)**

Grant: Rs. One lakh only

Duration and year: 1 yr (2011-12)

Students : Ravi Kumar (B.Sc (H) Chemistry III yr), Namrata Chakraborty and Akash (B.Sc (H) Chemistry III yr)

2. Title of the project : **Survey-based study to identify the health hazards associated with occupational exposure of textile dyes used by dyers to color the fabrics**

Name of the Mentors : Dr. Seema Gupta, Dr. Manisha Jain (Chemistry Deptt), Dr Gagan Dhawan (BMS Deptt)
Funding Agency : **University of Delhi (Innovation Projects Scheme)**
Grant: Rs. Ten lakh only
Duration and year: 1 yr (2012-13)
Students: Priya, Deepika, Zaineab Zaidi, Yashaswi Singh, Jyoti Thakur (B.Sc (H) BMS, II), Keshav Sharma (B.Sc (H) Chemistry II), Aayush, Dharmender (B.Sc (H) Chemistry III)

3. Title of the project : **Environment Management by waste treatment at source**

Name of the Mentors: Dr. Manisha Jain , Dr. Seema Gupta (Chemistry Deptt)
Funding agency : **IEDC, NEDB (DST)**
Grant: Rs. Fifty two thousand only
Duration: 1 yr (2013-14)
Students : Shweta Sharma, Pooja Rawat, Neha Kumari, Shubham Biswas
B.Sc (H) Chemistry II yr

4. Title of the project : **Design and Development of Gold Nanoparticle based Optical Biosensor for Protease Sensing**

Name of the Mentors: Dr. Manisha Jain , Dr. Seema Gupta (Chemistry Deptt), Dr Gagan Dhawan (BMS Deptt)
Funding agency : **IEDC, NEDB (DST)**
Grant: Rs. Ninety thousand only
Duration: 1 yr (**2014-15**)
Students : Divyansh Mittal, Eshant Bhatia, Nitish Malhotra
B.Sc (H) BMS III and II yr

5. Title of the project : **Analysis of the efficacy of plant sources recommended as brain tonics**

Name of the Mentors : Dr. Manisha Jain, Dr. Geetika Kalra, Dr. Saumya Saxena
Funding agency : **University of Delhi under DU Innovation Project Scheme (2015-16).**
Grant: Rs. Four Lakhs
Duration: One year
Students: Sandeep Kumar, Rammehar Singh, Jyoti, Chingripem Shangjam, Nirupama Soni
Annu Chandra, Kajol B.M Singh, Raghuveer Verma, Sonu Kumar, Suraj Singh
B.Sc. (H) Botany II Sem, B.Sc.(H) Chem IV sem.

6. Title of the project : **Extraction of microbial enzymes from kitchen waste and development of Biological Detergent**

Funding agency : **IEDC, NEDB (DST)**
Grant: Rs. Ninety thousand only
Duration: 1 yr (**2015-16**)
Students: Nitish Malhotra, Shiwani Katiyar, Rahul Shah
B.Sc (H) BMS II and I yr

Awards and Distinctions

1. **QUALIFIED Joint CSIR-UGC National Eligibility Test for JRF and Eligibility for Lectureship in 1997.**
2. **Received Prof. R. P. Mitra Memorial Gold Medal for first rank in M.Sc. (Chemistry), University of Delhi in 1997.**
3. **Received Prof. K. N. Johry Memorial Gold Medal for first rank in M.Sc. (Chemistry) Inorganic Chemistry Specialisation, University of Delhi in 1997.**
4. **Secured First Position in South Campus, University of Delhi and overall Fifth position in University of Delhi in B. Sc. (H) Chemistry in 1995.**
5. **Received Dr. Chandrakanta Khurana Memorial award for first rank in B. Sc. (H) Chemistry Part II in 1994.**
6. **Secured Fifth position in South Campus University of Delhi in B.Sc.(H) Chemistry II yr, 1994.**

Association With Professional Bodies

1. **Life member of Indian Society of Analytical Scientists – Delhi Chapter, India**
2. **Life member of Indian Association of Chemistry Teachers, Promoting Excellence in Chemistry Education c/o Homi Bhabha Centre for Science Education (TIFR) , India.**

Other Activities

Involvement in Activities at University level

A working group member of Chemistry Undergraduate Syllabi Revision 2019, in the light of UGC's Learning Outcome-Based Curriculum Framework (UGC-LOCF) to revise the Generic Elective Course titled 'Atomic Structure, Bonding, General Organic Chemistry (Theory + Practical)' in B.SC. life Science (CBCS).

Have been a member of Analytical Techniques team of Courses Restructuring Committee, of University of Delhi, meant for developing curriculum for new B.Sc. Program in Delhi University Implemented in 2005.

Contribution in e-Content Development

- Developed an e-content on Redox titrations for first year students. The content is uploaded on Youtube and linked to ANDC's webpage <http://andcollege.du.ac.in/?q=departments/chemistry/faculty/3> (<https://www.youtube.com/watch?v=6lQfpNgVzyU>, <https://www.youtube.com/watch?v=EP6nROfAQH8>, <https://www.youtube.com/watch?v=1oH4JGLzx-8>, <https://www.youtube.com/watch?v=bV7vdzi6MxE>)
- Developed assignments for second year students ... http://wikieducator.org/Inorganic_chemistry

- Article ---
[http://wikieducator.org/How to make Chemistry lab an efficient place of learning while working](http://wikieducator.org/How_to_make_Chemistry_lab_an_efficient_place_of_learning_while_working)
- Presentation---- https://www.slideshare.net/mani_g1
- Practical Chemistry--- http://wikieducator.org/Chemistry_lab

Signature of Faculty Member