



DEPARTMENT OF CHEMISTRY

Where Chemistry Meets Innovation & Investigation



Admissions Open Chemistry 2026 | JIIT - Noida
B.Sc. (Hons.) Forensic Science
| Ph.D. Chemistry

ABOUT THE DEPARTMENT

The Department of Chemistry at Jaypee Institute of Information Technology (JIIT), Noida, offers undergraduate, postgraduate, and doctoral programs in Chemical and Forensic Sciences. The department is strengthened by well-equipped laboratories and advanced analytical instrumentation for in-depth learning and research-oriented training.

The department offers B.Sc. (Hons.) Forensic Science, B.Sc. (Hons.) Forensic Science with Research, M.Sc. Chemistry, and Ph.D. programs. The M.Sc. Chemistry program provides strong foundations in inorganic, organic, physical, analytical, and materials chemistry with exposure to emerging areas such as nanotechnology, medicinal chemistry, spectroscopy, computational chemistry, and catalysis.

The Forensic Science program is an interdisciplinary program that integrates chemistry, biology, physics, computer science, and law with practical exposure in crime scene investigation, fingerprint analysis, forensic biology, toxicology, cyber forensics, and analytical techniques.

The department aims to develop skilled professionals with strong analytical thinking, technical expertise, and research aptitude for careers in academia, industry, research, and forensic sciences.



INTRODUCTION

VISION

To become a centre of excellence in chemical sciences promoting transformative learning and interdisciplinary research.

MISSION

- 1: To create a collaborative and inclusive environment for advanced learning in chemical sciences.
- 2: To empower professionals to lead research and innovation for sustainable solutions
- 3: To create industry-focused and ethically sound technological solutions to real-world challenges

PROGRAMS



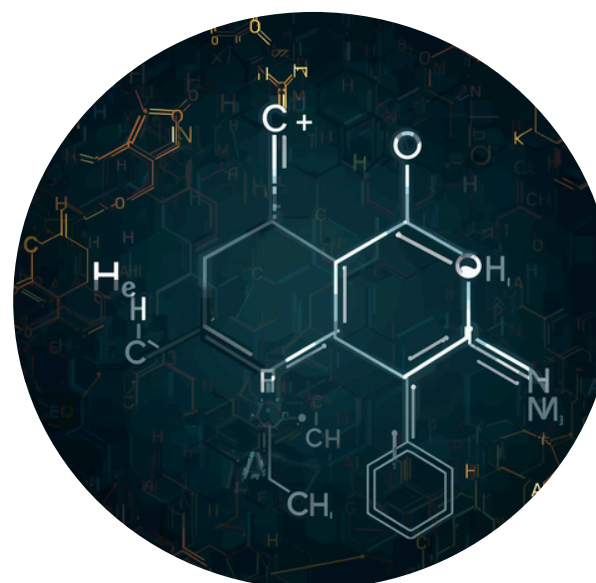
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B.Sc. (Hons.) Forensic Science

- NEP 2020 aligned
- Exit option after 3 years
- Crime scene investigation
- Digital and Cyber forensics
- Forensic Chemistry
- Forensic Biology
- Analytical techniques
- Forensic Labs and Investigative agencies

✓02



M.Sc. Chemistry

- Core + Electives + Research Project (6 months)
- Organic, Inorganic, Physical, Analytical & Materials Chemistry
- Nanotechnology, Catalysis & Energy Materials
- Research Training with Modern Analytical Instrumentation
- Dissertation-Based Learning & Interdisciplinary Research

✓03



Ph.D. Chemistry

- Interdisciplinary research
- Advanced analytical facilities
- Publications & collaborations
- Research projects
- Innovation-driven environment

CURRICULUM

- B.SC.(HONS.) FORENSIC SCIENCE (FIRST SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credits
			L	T	P	Total	
1	25B21CH111	Introduction to Forensic Science	3	0	0	3	3
2	26B51CS123	Programming Fundamentals for Forensic Science	3	0	0	3	3
3	25B21BT111	Biology-I: Introduction to Life Sciences	3	0	0	3	3
4	23B21PH111	Physics-I: Optics and Electromagnetism	3	0	0	3	3
5	25B21CH112	Chemistry-I: Fundamentals of Chemistry	3	0	0	3	3
6	22B28HS111	English	1	0	2	3	2
7	25B25CH111	Forensic Science Lab	0	0	2	2	1
8	26B55CS123	Programming Fundamentals Lab for Forensic Science	0	0	2	2	1
9	26B25PH111	Physics Lab-I	0	0	2	2	1
10	25B25CH112	Chemistry Lab	0	0	2	2	1
Total						23	21

CURRICULUM

- B.SC.(HONS.) FORENSIC SCIENCE (SECOND SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credits
			L	T	P	Total	
1	25B25CH212	Forensic Photography	0	0	4	4	2
2	25B25CH312	Evidence Collection Workshop	0	0	2	2	1
3	25B21CH116	Questioned Document Analysis	3	0	0	3	3
4	25B21HS111	Forensic Psychology	3	0	0	3	3
5	25B21CH117	Crime Scene Investigation	3	0	0	3	3
6	25B25CH113	Crime Scene Investigation Lab	0	0	2	2	1
7	25B21CH113	Introduction to Biometry	3	0	0	3	3
8	25B21CH112	Crime and Society	3	0	0	3	3
		Total				25	19

CURRICULUM

- B.SC.(HONS.) FORENSIC SCIENCE (THIRD SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credits
			L	T	P	Total	
1	25B51CI231	Digital and Cyber Forensics	3	0	0	3	3
2	25B55CI231	Digital Forensics Lab	0	0	2	2	1
3	25B21CH211	Chemistry-II: Analytical Techniques	3	0	0	3	3
4	25B25CH211	Analytical Techniques Lab	0	0	2	2	1
5	25B21BT211	Biology-II: Forensic Biology and Serology	3	0	0	3	3
6	25B25BT212	Forensic Biology and Serology Lab	0	0	2	2	1
7	25B21CH118	Criminal Law and Criminology	3	0	0	3	3
8	25B21CH115	Fingerprint Investigation	3	0	0	3	3
9	25B25CH112	Fingerprint Investigation Lab	0	0	2	2	1
		Total				25	19

CURRICULUM

- B.SC.(HONS.) FORENSIC SCIENCE (FOURTH SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credits
			L	T	P	Total	
1	25B21CH212	Forensic Anthropology	3	0	0	3	3
2	25B25CH213	Forensic Anthropology Lab	0	0	2	2	1
3	25B21BT213	Forensic Medicine and Toxicology	3	0	0	3	3
4	25B25BT213	Forensic Toxicology Lab	0	0	2	2	1
5	25B51CI241	Cyber Laws	3	0	0	3	3
6	25B21PH212	Voice Forensics	2	0	0	2	2
7	25B21CH213	Financial Forensic	3	0	0	3	3
8	25B25CH214	Financial Forensic Lab	0	0	2	2	1
9	25B21PH211	Physics-II: Ballistic and Explosives	3	0	0	3	3
10	25B25CH212	Ballistic and Explosives Lab	0	0	2	2	1
		Total				23	21

CURRICULUM

- B.SC.(HONS.) FORENSIC SCIENCE (FIFTH SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credits
			L	T	P	Total	
1	25B21CH311	Forensic Thanatology	3	0	0	3	3
2	25B25CH311	Forensic Thanatology Workshop	0	0	2	2	1
3	25B21CH312	Chain of Custody	3	0	0	3	3
4	25B21CH214	Information Security, Audit and Compliances	3	0	0	3	3
5	25B21CH314	Chemistry-III: Advanced Analytical Techniques	3	0	0	3	3
6	—	Physics-III: Forensic Physics	3	0	0	3	3
7	—	Biology-III: Forensic Genomics and Molecular Forensics	3	0	0	3	3
8	XXXXXXXX	Elective - 1	3	0	0	3	3
		Total				19	22

Electives - 1

25B22CH311	Medicinal Chemistry of Drugs of Abuse
25B22BT311	Wild Life Forensic
25B22PH311	Applied Cryptography
26BXXCIXXX	Data Science & Artificial Intelligence

CURRICULUM

- B.SC.(HONS.) FORENSIC SCIENCE (SIXTH SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credits
			L	T	P	Total	
1	25B27CH311	Dissertation	0	0	24	24	12
	25B21CH313	Forensic QA & Accreditation	3	0	0	3	3
2	XXXXXXX	Elective - 2	3/0	0	0/6	3./6.	3
		Total				27	18

Electives 2	25B22PH312	Audio & Video Forensics
	25B25CH311	Drug Analysis Workshop
	25B22BT312	Immunology and Immunological Techniques
	26BXXCHXXX	Anti-dope Forensics

CURRICULUM

- B.SC.(HONS.) FORENSIC SCIENCE (SEVENTH & EIGHTH SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credits
			L	T	P	Total	
1	25B31CH411	Research Methodology & Statistics	3	1	0	4	4
2	25B37CH411	Project Part I	0	0	32	32	16
		Total				36	20

S.No.	Course Code	Course Title	Contact Hours				Credits
			L	T	P	Total	
1	25B31CH412	Current Trends in Fingerprint Science	3	1	0	4	4
2	25B37CH412	Project Part II	0	0	24	32	16
		Total				36	20

CURRICULUM

- M.SC. CHEMISTRY (FIRST SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credit
			L	T	P	Total	
1	25M11CH111	Group Theory and Photoinorganic Chemistry	3	1	-	4	4
2	25M11CH112	Stereochemistry and Reactive	3	1	-	4	4
3	25M11CH113	Chemical Dynamics and	3	1	-	4	4
4	25M11CH114	Quantum Chemistry	3	1	-	4	4
5	25M15CH111	Inorganic Chemistry Lab-I	-	-	4	4	2
6	25M15CH112	Physical Chemistry Lab-I	-	-	4	4	2
7	19M21HS111	Presentation and	2	-	-	2	Audit
		Total	14	4	8	26	20

CURRICULUM

- M.SC. CHEMISTRY (SECOND SEMESTER)

S.No	Course Code	Course Title	Contact Hours				Credit
			L	T	P	Total	
1	25M11CH115	Organometallics and Bioinorganic	3	1	-	4	4
2	25M11CH116	Organic Reagents and Pericyclic	3	1	-	4	4
3	25M11CH117	Molecular Spectroscopy	3	1	-	4	4
4	25M11CH118	Supramolecular Chemistry	3	1	-	4	4
5	xxxxxxxx	DE-I	3	-	-	3	3
6	25M15CH113	Inorganic Chemistry Lab-II	-	-	4	4	2
7	25M15CH114	Organic Chemistry Lab-I	-	-	4	4	2
		Total	15	4	8	27	23

CURRICULUM

- M.SC. CHEMISTRY (THIRD SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credit
			L	T	P	Total	
1	25M11CH211	Nanomaterials and Their Applications	3	1	-	4	4
2	25M11CH212	Industrial Chemistry	3	1	-	4	4
3	25M11CH213	Organic Spectroscopic Techniques	3	-	-	3	3
4	xxxxxxxx	DE-II	3		-	3	3
5	xxxxxxxx	DE-III	3		-	3	3
6	xxxxxxxx	DE-IV	3		-	3	3
7	25M15CH211	Organic Chemistry Lab-II	-	-	4	4	2
8	25M15CH212	Physical Chemistry Lab-II	-	-	4	4	2
		Total	18	2	8	28	24

CURRICULUM

- M.SC. CHEMISTRY (FOURTH SEMESTER)



S.No.	Course Code	Course Title	Contact Hours				Credit
			L	T	P	Total	
1	xxxxxxxx	DE-V	3	-	-	3	3
2	25M17CH211	Project Work/Dissertation	-	-	20	20	10
		Total	3	-	20	23	13



LIST OF PROPOSED ELECTIVES



DE I	
xxxxxxxx	Frontiers in Inorganic Chemistry
xxxxxxxx	Environmental Chemistry
xxxxxxxx	Nuclear Chemistry
xxxxxxxx	Green Chemistry

DE II	
xxxxxxxx	Food Chemistry
xxxxxxxx	Chemistry of Natural products
xxxxxxxx	Computational Chemistry
xxxxxxxx	Inorganic Polymers

DE III	
xxxxxxxx	Chemoinformatics
xxxxxxxx	Bioorganic Chemistry
xxxxxxxx	Physical Organic Chemistry- Advanced
xxxxxxxx	Pharmaceutical Technologies
xxxxxxxx	Advanced Quantum Chemistry

DE IV	
xxxxxxxx	Biopolymers
xxxxxxxx	Surface Chemistry and Catalysis
xxxxxxxx	Computer Aided Drug Design
xxxxxxxx	X-ray Crystallography
xxxxxxxx	Biosensors

DE V	
xxxxxxxx	Chemistry of Surfactant and Pesticides
xxxxxxxx	IPR
xxxxxxxx	Medicinal Chemistry
xxxxxxxx	Non-equilibrium Thermodynamics



PH.D. IN CHEMICAL SCIENCES

The Department of Chemistry at JIIT Noida offers a research-driven doctoral program focused on interdisciplinary and innovation-oriented research in emerging areas of chemical sciences. The department provides a dynamic research environment supported by experienced faculty members, advanced analytical instrumentation, and collaborative research opportunities.

Research areas include:

- Nanotechnology & Materials Chemistry
- Catalysis & Green Chemistry
- Medicinal & Synthetic Chemistry
- Biosensors & Diagnostic Devices
- Electrochemistry & Energy Materials

The department is equipped with modern research facilities including GC-MS/MS, LC-MS/MS, HPLC, FTIR, UV-Vis spectroscopy, electrochemical workstations, and other advanced analytical instruments supporting

SCHOLARSHIPS



Shaping the future for tomorrow

Merit based
Tuition Fee
Waiver (up to
50%)



Ph.D. Scholarship
- ₹45,000/month



We believe in empowering the next generation of chemists.
Fueling their curiosity and passion for discovery.
By providing tools, knowledge, and mentorship,
We inspire innovation that shapes the future of science.
Together, we build a brighter world through chemistry.



SCHOLARSHIPS



FORENSIC SCIENCE - Graduates can explore opportunities in:

- Forensic Science Laboratories (FSL/CFSL)
- Crime Scene Investigation
- Cyber & Digital Forensics
- Forensic Toxicology & Biology Labs
- Questioned Document Examination
- Law Enforcement & Investigation Agencies
- Private Forensic & Security Organizations
- Research & Higher Studies in Forensic Science



CHEMISTRY - Graduates can pursue careers in:

- Research & Development (R&D)
- Pharmaceutical & Chemical Industries
- Analytical & Testing Laboratories
- Energy & Materials Sector
- Quality Control & Quality Assurance
- Environmental & Industrial Analysis
- Academia & Higher Research
- Government Research Organizations



Faculty Profile



Prof. Pammi Gauba – Biotechnology & nanobiotech; biosensors, nanomedicine, soil/water remediation, sustainable tech.

Prof. Sudha Srivastava – Nanomaterials for biomedicine; biosensors, diagnostics, nanoparticle vaccines.

Dr. Gunjan Purohit – Nanomaterials in catalysis, organic synthesis, SPF blockers, jet fuels, lubricants.

Dr. Haneesh Saini – MOFs/MOPs, membranes for water purification, oil–water separation, sustainability.

Dr. Neakanshika Chadha – Porous graphene, carbon nanomaterials, e-waste management, foams, energy storage.

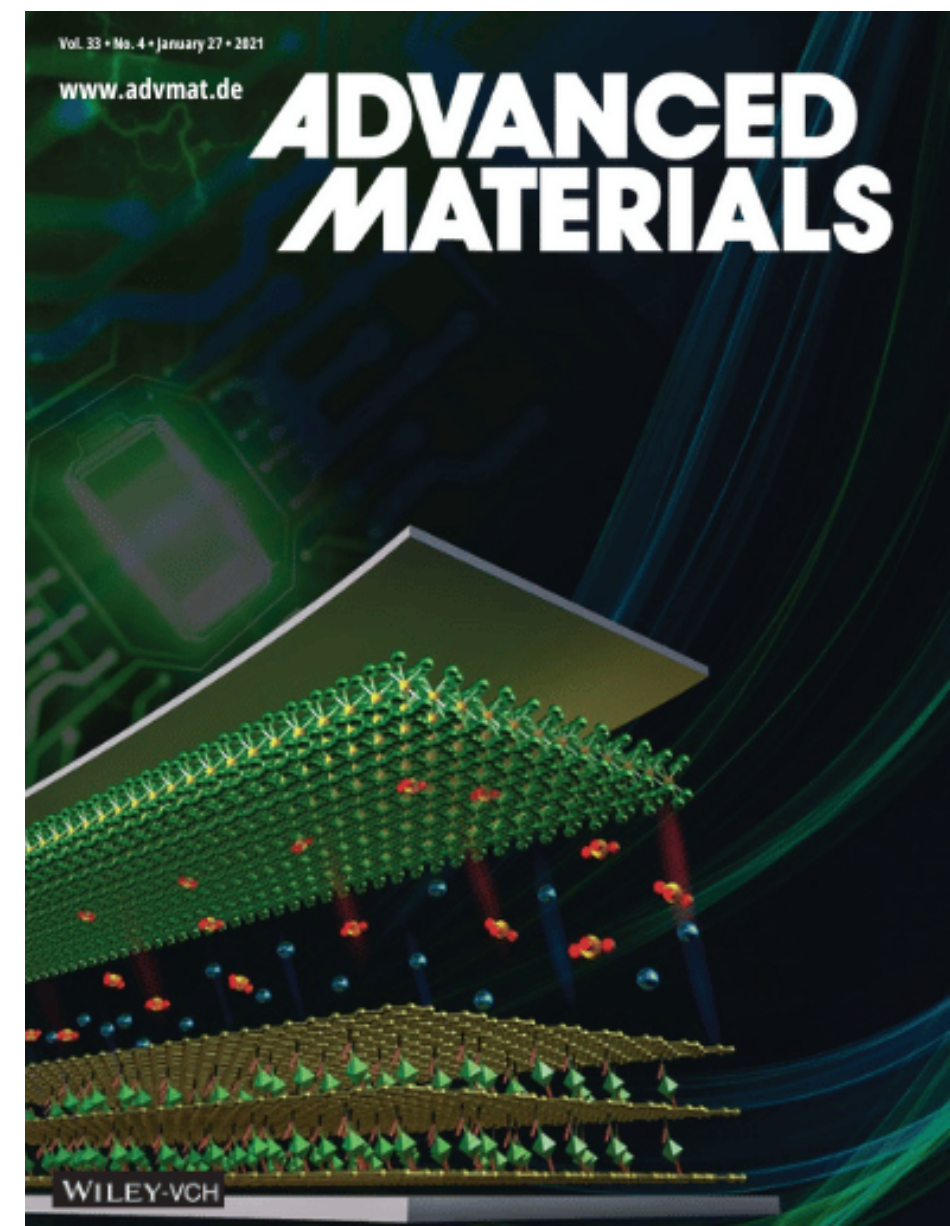
Dr. Nishant Yadav– Materials chemistry for electrochemical storage, catalysis, synchrotron studies, next-gen batteries.





THRUST AREAS

- Catalysis
- Synthetic Chemistry
- Supramolecular & Materials Chemistry
- Interdisciplinary & Innovative Technologies



Research Excellence

✓ Our Chemistry Department offers state-of-the-art laboratories equipped with modern instruments that support advanced research. Our faculty members are dedicated to fostering a dynamic learning environment where students engage in hands-on experiments and cutting-edge projects.

We emphasize innovation, critical thinking, and problem-solving skills, preparing our students to tackle real-world challenges.

Through partnerships with industry and research institutions, we provide opportunities for internships and collaborative research that broaden academic and professional horizons.

Key Facilities

- LC-MS/MS & GC-MS/MS – High precision molecular analysis
- HPLC – Advanced separation & purification
- **Atomic Absorption Spectrometer (AAS)** – Metal detection & analysis
- UV-Vis Spectrophotometer – Optical property studies
- Zeta Potential & Particle Size Analyzer – Nanomaterial characterization
- Pressure Reactors & Pilot Scale Units – Applied & industrial chemistry



CURRENT RESEARCH ACTIVITIES



01

COLLABORATIONS

- All India Institutes of Medical Sciences (AIIMS), New Delhi
- Central Pollution Control Board (CPCB), New Delhi
- Jamia Hamdard, New Delhi
- Jamia Millia Islamia, New Delhi
- PGIMER, Chandigarh



03

PATENTS, AWARDS AND RECOGNITIONS

- Patents Granted: 3
- Patent applications Published: 4
- Technology Transfer: 1



02

SPONSORED PROJECTS

- 5 ongoing Projects
- (INR~2.5 Crores)
- 11 Completed Projects (INR~2.6 Crores)
- 3 Completed Industry Projects



04

PUBLICATIONS

- Publications: 137
- Faculty Publications $\geq$ 50 citations: 6
- Scopus Indexed Publications: 120

RESEARCH PUBLICATIONS



S No.	Name of Journal	Impact Factor (Thomson Reuter)
1	Environmental Chemistry Letters	15.7
2	Biosensors and Bioelectronics	12.8
3	Journal of Advanced Research	10.5
4	Sensors and Actuators: B Chemical	8
5	International Journal of Biological macromolecules	7.7
6	ACS sustainable Chemistry and Engineering	7.1
7	ChemCatChem	5.5



**JOIN THE DEPARTMENT OF CHEMISTRY AT JIIT –
SHAPE THE FUTURE OF CHEMISTS WITH US!**

Department of Chemistry,
Jaypee Institute of Information Technology (JIIT),
Noida, Uttar Pradesh, India



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PHOTO GALLERY

DEPARTMENT OF CHEMISTRY
JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY, NOIDA
 is Organising

ONE DAY WEBINAR

Careers in Chemistry: From Lab To Industry and Beyond

- Discover Diverse Career Paths after Bsc Chemistry.
- Learn How Chemistry Leads to Industry, Academia & Startups.
- Explore Interdisciplinary Opportunities in Chemistry.
- Get Inspired by Talks from Top Scientists & Industry Leaders.

Opening Remarks

12 JUNE 2025
10 AM ONWARDS

Welcome Address



Prof. B. R. Mehta
Hon'ble Vice Chancellor,
JIIT, NOIDA



Prof. Pammi Gauba
HoD Chemistry, JIIT, NOIDA



Prof. R. K. Parashar
Chemistry Dept.
Delhi University



Prof. S. K. Mehta
Chemistry Dept.
Panjab University



Dr. Ravindra Singh
Head and Director R&D
Merck, Bangalore



Prof. Sudha Srivastava
Coordinator, Chemistry
Dept., JIIT, NOIDA

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For Any Query: E-mail or 9773967200

SCAN ME



Opening Remarks: Hon'ble Vice Chancellor, JIIT, NOIDA



Prof. B. R. Mehta
Hon'ble Vice
Chancellor,
JIIT, NOIDA

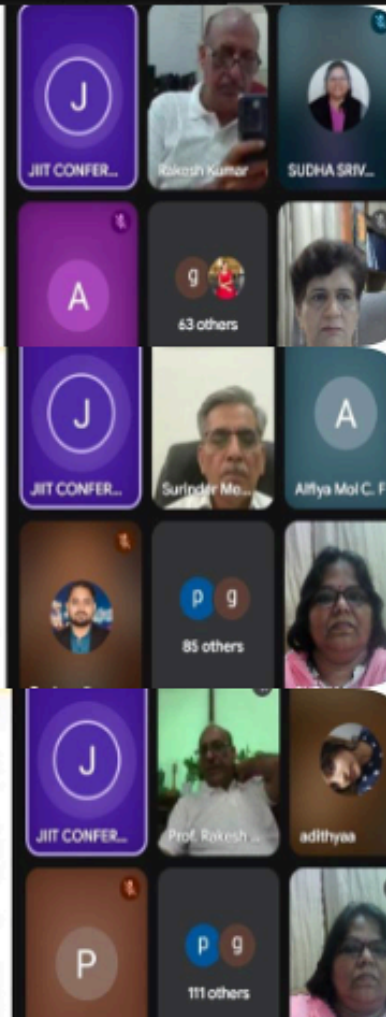
- Prof. Bodh Raj Mehta has been working as **Vice Chancellor** since **February 2023** at JIIT.
- Before joining Jaypee university system, he has about **37 years of teaching, research and administrative** experience at **Indian Institute of Technology Delhi** and has worked as **Dean (Research and Development)** and **Schlumberger Chair Professor**.
- He has received **life-time achievement award 2021** from IIT Delhi for his outstanding contributions to scientific research and teaching.
- He has supervised about **40 Ph.D scholars** during his stay at IIT Delhi. He has published about **250 manuscripts** in **peer reviewed international journals** and about **300 publications** and invited lectures in **national and international conferences**.
- He has successfully completed **55 sponsored research projects** from national and international funding agencies.
- In addition to VC at JIIT, he is also looking after the **research and innovation activities** at all the **Jaypee Universities** as **Director, the Directorate of Research, Innovation and Development**.



9:36 AM | uvd-ozcz-ibo

Professor Rakesh Kumar is a distinguished **Professor of Chemistry** at the University of Delhi, specializing in **Synthetic Organic Chemistry, Medicinal Chemistry, and Chemosensors**.

- He holds a **Ph.D. from the University of Delhi (1990)** and completed his M.Sc. and B.Sc. from **Guru Nanak Dev University**.
- Prof. Kumar has received prestigious fellowships, including **Postdoctoral Fellowships in Portugal and Spain**, as well as **CSIR (NET) JRF & SRF awards**.
- His research focuses on the development of **heterocyclic compounds, glycosidase inhibitors, anticancer agents, and chemosensors for metal ion and biomolecules detection** in biological and environmental samples.
- With **over 30 years of teaching experience**, he has supervised **14 Ph.D. scholars** (8 ongoing) and contributed to **70+ research**.



Dr. Ravindra Vikram Singh, Ph.D., FRSC (UK)
 Director and Head-India R&D, Technology and Innovation

- Dr. Ravindra is a dynamic, results-oriented leader with nearly **30 years of research experience**, including **25+ years of industry expertise** (post-Ph. D).
- Known for driving business transformation, innovation, and value creation, his expertise spans **R&D, Manufacturing, and Technology Development**.
- He earned his **M.Sc. and Ph.D. from Lucknow University (1999)** and began his career at **Lupin Pharmaceuticals**.
- He later held key roles at **GE India Technology Centre (2002-2007)**, **Jubilant Life Sciences (2007-2010)**.
- He joined **Sigma Aldrich Chemicals** (an affiliate of Merck KGaA, Darmstadt, Germany), Bangalore in 2010 as **Principal Scientist**, and presently he is serving as its **Director and**

Dr. Surinder Kumar Mehta is a distinguished **Professor in the Department of Chemistry at Panjab University, Chandigarh, India**.

- He holds an **M.Sc. and Ph.D. from Panjab University** and specializes in physical chemistry, with a focus on **nanochemistry, colloidal chemistry, and drug delivery systems**.
- He served as the **Chairman of the Department of Chemistry** from 2011 to 2014, as the **Director of the Sophisticated Analytical Instrumentation Facility (SAIF)**, Panjab University, from 2015 to 2019 and **Vice-Chancellor of the University of Ladakh**, from 2021 to 2025.
- Over **463 publications**, four patents and **36 book/chapters**. He has an **h-index of 70** and more than **17350 citations**.
- His work has been recognized internationally, earning him fellowships from the **German Academic Exchange Service (DAAD)** and the **Japan Society for the Promotion of Science (JSPS)**, as well as awards such as



Panel Discussion: Careers in Chemistry

