



CENTRE FOR CAREER DEVELOPMENT
INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

DEPARTMENT OF CHEMISTRY.

Batch of 2027 | Department Placement Brochure

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About IIT Guwahati

Established in 1994, Indian Institute of Technology Guwahati is the sixth member of the IIT fraternity and one of India's premier institutions for higher education, research, and innovation.

Within a short span, the Institute has emerged as a global centre of excellence in science, technology, management, and design.

The picturesque campus spans 285 hectares on the northern bank of the Brahmaputra River, approximately 20 km from the heart of Guwahati city.

Surrounded by scenic hills and open spaces, it offers a perfect environment for learning, research, and holistic development.

IIT Guwahati offers a wide array of academic programmes including B.Tech., B.Des., BSc (Hons), M.Tech., M.Des., M.Sc., MBA, M.A., MS(R) and Ph.D.

across 11 departments, 9 interdisciplinary centres, and 5 schools, covering major disciplines in engineering, science, humanities, healthcare, and management.

The Institute has built world-class infrastructure and

houses state-of-the-art laboratories and National Centres of Research that support cutting-edge research.

Students are encouraged to take up interdisciplinary coursework, pursue minor degrees, and choose from a rich variety of open and interdepartmental electives.

IIT Guwahati has signed MoUs with top international universities, facilitating semester exchanges and summer internships, thereby broadening students' global exposure.

Our students regularly intern at leading global firms and research institutions, gaining invaluable real-world experience.

Ranked among the top 100 world universities under 50 years by Times Higher Education (THE), IIT Guwahati continues to excel globally.

The Institute was ranked 42nd globally in 'Research Citations per Faculty' and 344th overall in QS World University Rankings.



Director's Message



Indian Institute of Technology Guwahati was established in 1994 by an Act of Parliament. The academic programme started with 65 students in three undergraduate programmes in 1995. The institute is growing steadily and the total number of students in eleven departments, nine academic centres and five schools in numerous undergraduate and postgraduate programmes is now around 8600. The institute has excellent infrastructure for the all round development of its students. The institute has full-fledged Technology Incubation Centre and Research Park to promote entrepreneurship activities.

IIT Guwahati continues to maintain its superior position in various International and National Rankings. IIT Guwahati secured the 8th position among the top engineering institutions in India in the NIRF 2025 Rankings, released by the Ministry of Education.

Additionally, IIT Guwahati has been ranked as the 11th best university in the country. IIT Guwahati has been ranked 2nd in the 'Swachhata Ranking' conducted by the Govt. of India. IIT Guwahati has been ranked as the topranked university in 2019 for IT developers by HackerRank in the Asia-Pacific region. IIT Guwahati gained 42 position globally in the 'Research Citations per Faculty' category and overall 344 rank in the QS World University Rankings 2025 released recently. Also, IIT Guwahati ranks 6th globally in Sustainable Development Goal 7 (Affordable and clean energy) of the Times Higher Education Impact Rankings 2023.

With Best Wishes,

Prof. Devendra Jalihal

Director, IIT Guwahati

The institute has a very good central library, which provides library and information services to support teaching, learning, and research activities by creating state-of-the-art facilities. It is housed on a four-storey building having a floor area of about 7500 sq. meter. Inhouse services of the library are fully computerised and wi-fi facility is provided within the library building for connecting to the internet and accessing the Institute's electronic resources. The sports facilities of the institute are of international standard. The students graduating from this institute are motivated, bright, and very eager to perform after they graduate.

IIT Guwahati has extensive facilities for cultural and creative activities too. For example, the Technical Board promotes technology, creativity and innovation. IIT Guwahati helps in shaping up bright minds with proper perspectives. IIT Guwahati hosts two supercomputing facilities PARAM-Kamrupa (838 TF) and PARAM-ISHAN (250TF) to carry out research activities in various scientific domains including forecasting of weather and climate, bioinformatics, computational chemistry, molecular dynamics, artificial intelligence (AI) and machine learning and especially data science.

Because of the excellent performance of the students of IIT Guwahati in all the fields of study and research, guided by the dynamic faculty members and with the full support of the non-teaching employees, IIT Guwahati could feature in the coveted list of young universities (under 50 years of age) of the world selected by the Times Higher Education (THE) magazine. IIT Guwahati is the only Indian entry to this elite list. I cordially invite all prospective employers to visit IIT Guwahati and to participate in the on-campus placement and internship processes.

About the Department

The Department of Chemistry, Indian Institute of Technology Guwahati, is a globally recognized and emerging center of excellence in science and technology, with numerous national and international accolades. Established in 1995, the Department covers major areas of Chemistry, including inorganic, organic, physical, and theoretical chemistry. It offers chemistry courses to B.Tech. students in Chemical Science and Technology (CST), advanced courses to M.Sc. students and Ph.D. scholars, and actively pursues research in frontier areas of topical importance through sponsored research projects.

The Department of Chemistry at IIT Guwahati is a vibrant hub of scholars, researchers, and students. Guided by a commitment to academic excellence and scientific innovation, our faculty are both leading researchers and dedicated educators, shaping the next generation of engineers and researchers.

With state-of-the-art laboratories, interdisciplinary courses, and hands-on research opportunities, the students gain both deep subject expertise and practical skills. Through projects, internships, and industry collaborations, they are well-prepared to excel in diverse professional arenas.

Our goal is to provide students with a strong foundation in chemistry while fostering analytical thinking, problem-solving, and practical skills. Through rigorous coursework, laboratory training, and project-based learning, students develop the ability to apply scientific and quantitative principles to complex problems.

This broad analytical skill set prepares graduates for diverse opportunities not only in core chemical sciences and technology, but also in software engineering, data science, consulting, analytics, and other fields that demand strong problem-solving and quantitative abilities.



Head of Department's Message



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For over three decades, the Department of Chemistry, IIT Guwahati, has been a preferred choice for aspiring scientists and technologists. We offer B.Tech. in Chemical Science & Technology, M.Sc. in Chemistry, and Ph.D. programs, designed to equip students with strong scientific expertise and industry readiness. Our graduates benefit from: Interdisciplinary training & hands-on projects Exposure to modern analytical techniques Industry collaborations across pharmaceuticals, agrochemicals, biochemical R&D, materials science, and IT-driven innovations With a consistent placement record of 80%+, our alumni reflect the department's academic and professional excellence. We invite you to engage with our talented graduates, who are ready to contribute their knowledge, creativity, and skills to your organization.

With Best Wishes,

Dr. Biplab Mondal

Head of Department · Chemistry

Programmes Offered

Bachelor of Technology (B.Tech)

ADMISSION VIA JEE ADVANCED

The B.Tech. program in Chemical Science and Technology combines core chemistry with interdisciplinary learning across science, engineering, and technology. This broad academic foundation has enabled students to pursue diverse roles in **Machine Learning, Data Science, Software Engineering, Product Management, Consulting, and Business.**

Alongside this interdisciplinary exposure, students build expertise across key chemical domains such as **Applied Catalysis, Drug Design & Medicinal Chemistry, Nanomaterials & Nanoscience, Fine & Bulk Chemicals, and Green Chemistry & Sustainable Practices**, while gaining practical exposure through internships and projects. This combination of chemical expertise and interdisciplinary analytical skills prepares graduates to excel across both core industries and emerging technology-driven fields.

Master in Science (M.Sc)

ADMISSION VIA JAM

The M.Sc. programme in Chemistry at IIT Guwahati provides rigorous postgraduate training across inorganic, organic, physical, analytical and interdisciplinary chemistry, combining advanced theoretical coursework with extensive laboratory and research exposure. The four-semester curriculum covers areas such as **quantum chemistry, group theory and spectroscopy, organic and inorganic reaction mechanisms, chemical dynamics, electrochemistry, thermodynamics and computational chemistry**, while providing hands-on training through specialized chemistry laboratories.

Alongside this strong foundation, students can specialize through advanced electives in **organometallic chemistry, inorganic clusters, modern organic synthesis, supramolecular chemistry, chemical biology, solid-state and interfacial chemistry, crystallography, molecular machines and molecular fluorescence**. The programme culminates in a Graduate Seminar and research project, equipping students with the theoretical, experimental and analytical skills needed to pursue R&D careers and opportunities across academia and the chemical industry.

Student Strength

PROGRAMME	GRADUATING YEAR	STUDENTS
Bachelor of Technology	Batch of 2027	057
Master of Science	Batch of 2027	058
Total		115



B.Tech Curriculum Highlights

10 COURSES

Core courses

Computational chemistry
Introduction to Computing in C
Quantum Chemistry
Modern Chemical Technology
Polymer Chemistry
Application of Nanomaterials
Frontiers of coordination chemistry
Chemical kinetics and electrochemistry
Spectroscopic Techniques in Chemistry

10 ELECTIVES

Electives

Machine Learning in Chemistry
Application of Statistical Mechanics to Chemistry
Quantum Molecular Dynamics
Drug Design and Development
Petroleum and Petrochemicals
Medicinal Chemistry
Organometallic Chemistry
Green Chemistry and Technology

10 LABS

Laboratory courses

Technical report presentation
Inorganic chemistry lab
Physical chemistry lab
Organic chemistry lab

M.Sc Curriculum Highlights

10 COURSES

Core courses

Thermodynamics

Bio-Inorganic Chemistry

Bio-Organic Chemistry

Pericyclic Chemistry

p and d-block Chemistry

Principles of Organic Chemistry

Quantum Chemistry

Group Theory and Spectroscopy

Computational chemistry

Chemical dynamics and Electrochemistry

Application of Spectroscopy

Organic Reaction mechanism

10 ELECTIVES

Electives

Advanced Organometallic Chemistry

Inorganic Clusters

Applied Inorganic Chemistry

Modern Reagents in Organic Synthesis

Methods in Organic Synthesis

Supramolecular Chemistry

Fundamentals of Chemical Biology

Solid State and Interfacial Chemistry

Concepts for Molecular Machine

Applied Crystallography

Advances in Biological Macromolecules

Advanced Quantum Chemistry

10 LABS

Laboratory courses

Organic chemistry lab

Inorganic chemistry lab

Physical Chemistry Lab

Relevant Research Areas

The Department’s key research areas span the intersection of chemistry, materials science, computation, and emerging technologies, with a strong emphasis on Drug Design, Machine Learning for Materials Science, Computational Chemistry, and Molecular Simulations, alongside research in conducting polymers, supramolecular materials, membranes, nanolithography, functional surfaces, and sustainable chemical processes.

Computational chemistry and simulations provide molecular-level insights into reaction mechanisms, molecular interactions, polymeric systems, supramolecular assemblies, and material properties, complementing experimental approaches.

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These efforts are supported by research on conducting polymers, metallo-supramolecular polymers, membrane technologies, nanolithography, porous surfaces, and advanced drug-delivery materials.

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Thrust areas

ML-Driven Materials Science & Functional Materials

ML-Driven Materials applies machine learning and data-driven methods to accelerate the discovery, prediction, and optimization of advanced materials.

Key directions include conducting polymers and composites, metallo-supramolecular polymers, superhydrophobic and slippery surfaces, porous micro-capsules, membranes, and functional materials, with applications in electronics, energy, surface engineering, and drug delivery.

Computational Chemistry, Molecular Simulation & Advanced Chemical Processes

Computational Chemistry uses molecular simulations, quantum-chemical methods, computational modelling, and theoretical approaches to understand chemical reactions, molecular interactions, and material properties at the molecular level.

Applications extend to catalysis, fuel desulfurization and denitrogenation, polymeric systems, supramolecular assemblies, and reaction mechanism studies, complementing experimental research.

Drug Design & Molecular Discovery

Drug Discovery explores the design, synthesis, and computational evaluation of novel molecules with potential therapeutic and pharmaceutical applications.

Research includes molecular modelling, structure-based drug design, amyloid disruption, bioactive molecules, and smart drug-delivery systems, combining chemical insight with computational approaches to understand molecular interactions and optimize candidate compounds.

Sponsored Projects

- Desulfurization and Denitrogenation of Diesel (IOCL sponsored)
- Conducting Polymer Films, Fibers and Composites (DST sponsored)
- Synthesis of Novel Conducting Polymers for Application in Organic Light Emitting Diodes (DST sponsored)
- Development of Metallo-supramolecular Polymers (DST sponsored)

- Unsupported Membranes: A Simple Approach (CSIR sponsored)
- Nanolithography in Color and Design of Microfluidic Devices (DST sponsored)
- β-Breaker Dipeptides: Development of a Novel Approach for Amyloid Disruption (BRNS sponsored)
- Multilayer of Porous Micro-Capsules to Develop Robust Slippery Liquid-Infused Porous Surface (SLIPS)

Instruments & Facilities

The Department houses state-of-the-art analytical and research facilities supporting advanced investigations across chemistry, materials science, drug discovery, and interdisciplinary research. Its sophisticated instrumentation enables molecular characterization, structural elucidation, spectroscopy, chromatography, electrochemical studies, thermal and surface analysis, microscopy, and computationally informed materials research. Together, these facilities support the synthesis, characterization, analysis, and performance evaluation of novel molecules and functional materials, spanning areas such as drug design and delivery, polymers and nanomaterials, catalysis, supramolecular chemistry, energy and environmental applications, and biological studies.

Instrument name - ESTABLISHED

- Advanced FT-IR Spectrometer (Nicolet iS50) — 2025
- Low Pressure Gas Adsorption Analyser (Belsorp MINI X) — 2025
- High Purity Nitrogen Generator (Genius1053) — 2024
- Microwave Reactor (Discover Labmate) — 2024
- Multichannel Electrochemical Workstation (Autolab M204) — 2023
- UV-Visible Double Beam Spectrophotometer (Lambda 365+) — 2023
- GCMS System (Agilent G7082CW) — 2023
- Ice Flaker Machine (100 kg) — 2023
- Rotary Vacuum Evaporator (Heidolph) — 2023
- Analytical HPLC (Thermo Fisher Vanquish) — 2022
- Modular Circular Polarimeter (Anton Paar MCP 5100) — 2022
- Thermo Gravimetric Analyzer (PerkinElmer TGA4000) — 2021
- Single Crystal X-ray Diffractometer (Bruker D8 Quest) — 2021
- 500 MHz NMR Spectrometer (Bruker) — 2020
- HPLC System (Agilent 1260 Infinity II) — 2020
- Fluorescence Spectrophotometer for Solid and Liquid Samples (Fluoromax Plus) — 2019
- Refrigerated Centrifuge (Eppendorf 5910R) — 2019–20

Instrument name - ESTABLISHED

- UV-Visible Spectrophotometer (Hitachi U-2910) — 2018–19
- UV-Visible Double Beam Spectrophotometer (Agilent Cary 100) — 2018–19
- Atomic Force Microscope (Oxford Instruments) — 2018–19
- FTIR Spectrophotometer (PerkinElmer Spectrum Two, 2 Nos.) — 2018–19
- Ice Flaking Machine (IFM-150-Flake) — 2018–19
- High-Speed Refrigerated Centrifuge (Harmle Z36 HK) — 2017–18
- Digital SMU with Potentiostat (Keithley 2450 EC) — 2017–18
- Bench-Top Ion Meter (Thermo Scientific Orion Star A214) — 2017–18
- Automatic Potentiometric Titrator (Metrohm AG) — 2017–18
- Solvent Purification System (MBraun SPS-800) — 2017–18
- Pressure Vessel System (Parr 4792) — 2017–18
- Ozone Generator and Oxygen Flow Regulator (Eltech) — 2017–18
- Gas Chromatography System (PerkinElmer Clarus 590) — 2017–18
- 400 MHz NMR Spectrometer (Bruker AVANCE) — 2017–18
- CO₂ Incubator (Eppendorf Galaxy CO-170S) — 2017
- -80°C Deep Freezer (Eppendorf U410) — 2017
- Biosafety Cabinet Class II (Thermo Fisher FORMA) — 2017

Instrument name - ESTABLISHED

- Fluorescent Cell Imager (Bio-Rad) — 2017
- UV-Vis Spectrophotometer with Plate Reading (Thermo Fisher MultiskanGo) — 2017
- Bench-Top Powder X-ray Diffractometer (Bruker D2 Phaser) — 2010–11
- UV-Visible-NIR Spectrophotometer (PerkinElmer Lambda 750) — 2010–11
- PC-Controlled Double Beam UV-Vis Spectrophotometer (Shimadzu UV-1800, 5 Nos.) — 2010–11
- Magnetic Susceptibility Balance (Sherwood Mark-1, 3 Nos.) — 2000, 2009–10
- Double Beam UV-Vis Spectrophotometer (PerkinElmer Lambda 25) — 2009–10
- Olympus Upright Research Microscope (BX-51) — 2009–10
- Steady-State Fluorescence Spectrophotometer (Horiba Fluoromax-4) — 2009–10
- Semi-Preparative HPLC (Thermo Ultimate 3000) — 2014–15
- Circular Dichroism Spectrometer (Jasco J-1500) — 2014–15
- TCS PC Lifetime System with MCP Detection — 2014–15
- FTIR Spectrophotometer (PerkinElmer Spectrum Two) — 2013–14
- Differential Scanning Calorimeter (Mettler-Toledo DSC1) — 2013
- Nanoparticle Size/Zeta Potential/Molecular Weight Analyzer (Malvern Zetasizer Nano ZS90) — 2013–14

Achievements

J. C. Bose Research Grant

2025 · ANUSANDHAN NATIONAL RESEARCH FOUNDATION

Prof. Arun Chattopadhyay received the prestigious J. C. Bose Grant from the Anusandhan National Research Foundation (ANRF).

Newton International Fellowship

2018 · BRITISH ACADEMY, ROYAL SOCIETY, AND ROYAL ACADEMY OF ENGINEERING

Dr. Prasenjit Barman was awarded the prestigious Newton International Fellowship in 2018 to pursue postdoctoral research at Queen's University Belfast.

Faculty distinctions

Prof. Arun Chattopadhyay was elected as a Fellow of the Indian National Science Academy (INSA) in 2019 for his contributions to nanoscale material science and technology.

Prof. Bhisma Kumar Patel selected as fellow of the Indian National Science Academy (INSA) in 2026, for work in sustainable catalytic processes.

Prof. Bhisma Kumar Patel was elected as a Fellow of the Indian Academy of Sciences (FASc) in 2018, in addition to his fellowship of NASI.

Prof. T. Punniyamurthy was elected as a Fellow of the National Academy of Sciences, India (NASI) in 2018.

Dr. Uttam Manna received the NASI–Young Scientist Platinum Jubilee Award in Chemical Sciences in 2018.

Prof. Anumita Paul was elected as a Fellow of the Royal Society of Chemistry (FRSC) in 2018.

Prof. Arun Chattopadhyay's article was selected for the thematic collection of ChemComm's 60th Anniversary Historic Papers from India in 2024.

Dr. Kalishankar Bhattacharyya received the Young Scientist Award from the Society of Material

Student distinctions

Dr. Ravindra Kumar Gupta was awarded the prestigious JSPS Postdoctoral Fellowship in 2020.

Dr. Krishna Chaitanya Nadimpally was awarded the highly competitive CSIR–Nehru Postdoctoral Fellowship in 2014.

Dr. Krishna Chaitanya received the Gandhian Young Technological Innovation Award in 2014.

Dr. Himanshu Jena, Dr. Harisadhan Ghosh, and Dr. Ramesh Yella were selected for the prestigious JSPS Fellowships.

Dr. Subhasish Jana received the Sailife–NOST Best Thesis Award in 2017.

Dr. Atul K. Dwivedi received the 2nd Prize in the Lilly Outstanding Thesis Awards in 2013.

Dr. Narsimha Mamidi received the 2nd Prize in the Lilly Outstanding Thesis Awards in 2014.

Student Activities & Clubs

Beyond academics, the Department Chemistry fosters a vibrant student community that encourages creativity, leadership, collaboration, and personal growth. Through diverse student clubs, societies, and activities, students explore their interests beyond the classroom while developing communication, teamwork, organizational, and leadership skills.

Inter-IIT & Institute Representation

Podium finishes across diverse problem statements at the Inter-IIT Tech Meetss, alongside exceptional performances at the Inter-IIT Cultural Meets and Inter-IIT Sports Meets.

Institute Fests

Students have held key leadership positions including Conveners, Marketing, Public Relations and Media Heads, and other major responsibilities across Alcheringa, Techniche, Spirit, and Udgam— spanning cultural, techno-management, sports, and entrepreneurship domains.

Students' Gymkhana Council

Students take on managerial and technical responsibilities through the Student Senate, Technical Board and Students' Web Committee, contributing to the planning, execution, and technology-driven operations of institute activities.

Technical Clubs

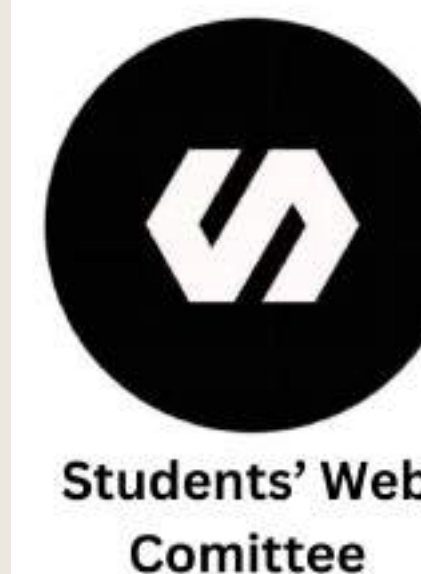
The Finance & Economics Club, Consulting & Analytics Club, Aeromodelling Club, and other technical student initiatives provide platforms to strength technical, analytical, managerial, and collaborative skills.

Welfare & Social Service

Students actively contribute to campus welfare through the Saathi Counselling Cell and Social Service Club, supporting student well-being and volunteering for community initiatives.

Cultural Activities

Students have served as Secretaries and major heads across Dance, Debate, Photography, Literature, and other cultural clubs, contributing to a vibrant campus community



Past Recruiters



...and many more

Meet Our Team



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Contact Us

We would be glad to host your team on campus. Reach the Centre for Career Development through any of the channels below.

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