

An Institution of National Importance established by an Act of Parliament



About AcSIR

The Academy of Scientific and Innovative Research established by an act of parliament as an Institution of National Importance under the guidance and strengths of the Council of Scientific and Industrial Research (CSIR). One of the important purpose of AcSIR is to achieve a seamless integration of intellectual strengths in multidisciplinary areas with societal needs.

The Mission of the Academy is to create highest quality personnel with cross-disciplinary knowledge, aiming to provide leaders in the field of science and technology

AcSIR is currently the largest educational institution in India for Doctoral Research in STEM, having awarded 624 Ph.D. degrees in 2023 and with more than 7500 students currently enrolled in the Ph.D. program

RANKING OF AcSIR in 2023









AcSIR AT A GLANCE



Largest Higher Education Institution in India (81 Campuses across India)



Joint PhD Program with International Universities (3 Universities from Australia)



~8000 students enrolled

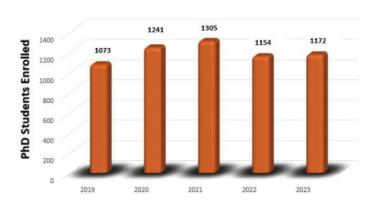


624 PhD awarded in 2023

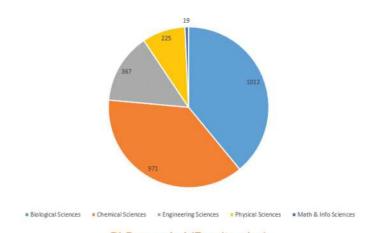


~5000 alumni

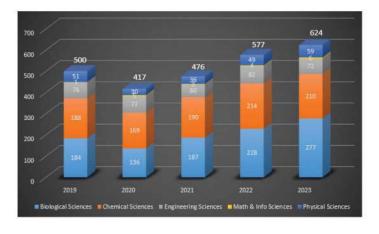
ACADEMIC OUTPUTS IN LAST 5 YEARS

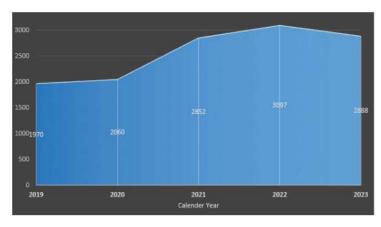


Enrollments of PhD students

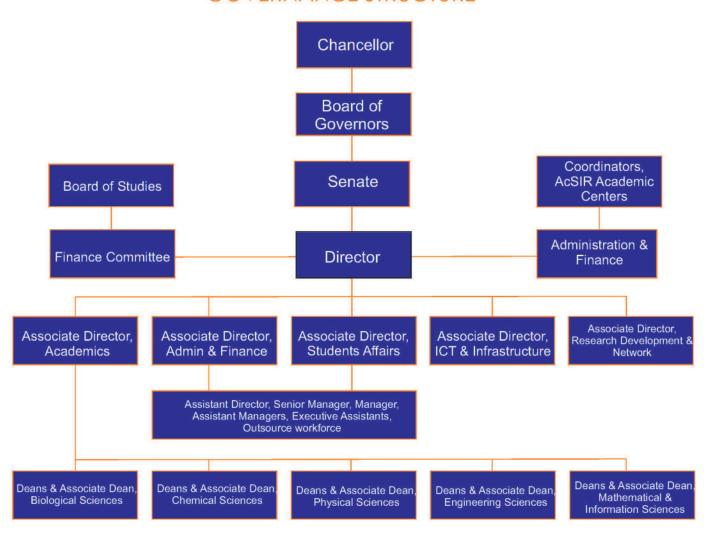


PhD awarded (Faculty wise)





GOVERNANCE STRUCTURE



Academy Professors (AcSIR Life time Professorship)



Prof. C.N.R. RaoHon. President, JNCASR, Bangalore, India



Prof. M.M. Sharma, Former Director, Institute of Chemical Technology (ICT), Mumbai, India



Late. Prof. R Narasimha
Former Director, CSIR-NAL



Prof. G.M. Whitesides Harvard University, Cambridge, USA



Prof. R.A. Mashelkar
National Research Professor and
Former Chairman & Board of Governors,
AcSIR



Prof. Samir K Brahmachari Former Director General, CSIR & Former Vice Chairman, AcSIR



Prof. Vijay Kumar Saraswat Member NITI Aayaog & Former Director DRDO, India



Prof. Anil K. GuptaFounder Honey Bee Network,



Shri N R Narayana Murthy Co-Founder, Infosys



Prof. K. K. Aggarwal
Chairman NBA &
Former Founder Vice-Chancellor,
GGSIPU India



Prof. Suresh Bhargava Deputy Pro Vice-Chancellor, RMIT Australia



Prof. Girish Sahni Former Director General, CSIR, & Former Secretary DSIR



Dr. Krishna EllaChairman & Managing Director of Bharat Biotech International Limited



Prof. K. Vijay Raghavan National Biological Research Centre, Tata Institute of Fundamental Research.



Dr. Surendra PalProf. Satish Dhawan Professor & Senior Advisor, ISRO Satellite Centre



Dr. Swati Ajay Piramal Director. Piramal Foundation



Dr. A. V. Rama Rao

Avra Laboratories Pvt Limited



Prof. Shekar C. Mande
Former Director General, CSIR &
Secretary DSIR

Distinguished Emeritus Professors



Dr. Vidyadhar Mudkavi Former Head, CSIR-FPI



Prof. Rakesh K. MishraFormer Director, CSIR-CCMB

Professor of Eminence



Prof. Kalaiselvi. N
Director General, CSIR & Secretary DSIR and Chairperson, Board of Governors, AcSIR

Outstanding Professors

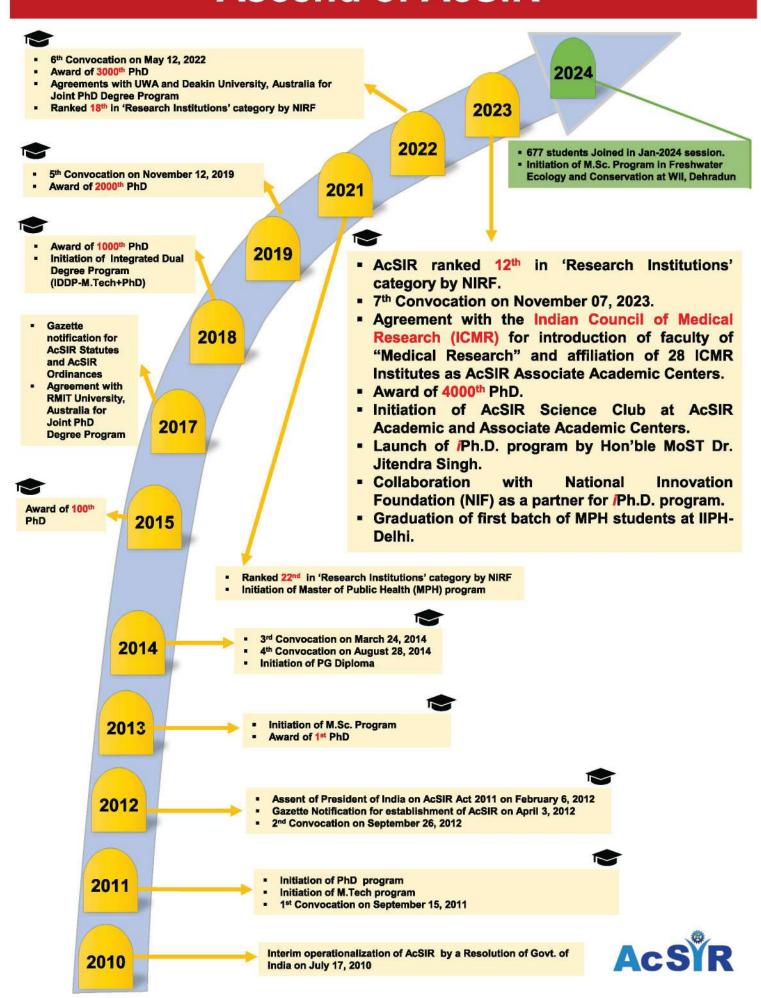


Prof. Manoj Kumar Dhar Director, AcSIR



Prof. Ajay Dhar Associate Director, AcSIR

Ascend of AcSIR



First of its kind in INDIA

PhD

imaginative, innovative, industry linked program



Student to Sciencepreneur

ACSIR-CSIR-INDUSTRY ECOSYSTEM

State of the art facilities

World class mentoring: CSIR & Industry Flexible learning: classroom, MOOCs, etc

Incubation Support Resources & Funding

HONING OF SKILLS





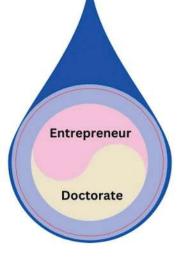
Embrace risk & learn from failure

OUTCOME & BEYOND

Product/ Technology Development Incubation Support & Venture Capital

TRANSFORMATION

Licensing/ Marketing





Agreement signed between AcSIR & NIRF
AcSIR - NIF Doctoral Innovation Fellowship

Features

Curriculum based on innovation and Entrepreneurship Backed by Industrial support Guided by competent mentors Worldclass research infrastructure Partner



National Innovation Foundation

Structure of the iPhD program

Program focus

Research to develop new product/ technology for the progress of the Nation and also for societal good

Eligibility

Master degree holder with entrepreneurial mindset

Mentorship

selected candidates shall jointly be supervised for Ph.D. by the faculty of AcSIR and scientists/technologists of NIF

Coursework

- •Minimum credit requirement of 18 credits
- Built-in flexibility for completing the specially designed courses, related to innovation & entrepreneurship, within 3 years of enrolment apart from few compulsory courses on Research Methodology, Research & Publication Ethics, etc.

Monitoring:

- Monitoring Committee (having industry experts as members) shall review the progress of the student every 6 months.
- Monitoring Committee shall be constituted by the Director, AcSIR and shall also serve as Doctoral Advisory Committee (DAC).
 Comprehensive Examination: Evaluation of progress in technology at the end of 3rd year

Comprehensive Examination

Evaluation of progress in technology at the end of 3rd year

Residency

Student shall have flexibility to work in different Labs (industrial or scientific) and/or remain in field

Program Duration

The PhD. degree program shall be for a minimum duration of three (3) years, including course work and a maximum of six (6) years from the date of admission to the PhD. program

Thesis submission pre-requisites

Filing of two Patents shall be mandatory before submission of Ph.D. thesis.

Award of Ph.D. degree

Thesis on TRL 4 level technology and its evaluation by Technologists/ industry Experts for the award of the PhD degree.

Post Ph.D. Support

Support with respect to incubation of business idea, etc.



Memorandum of Agreement between AcSIR and ICMR

Indian Council of Medical Research (ICMR) is the apex body in India for formulation, coordination and promotion of biomedical research. ICMR is mandated to conduct, coordinate and implement medical research for the benefit of the Society; Translating medical innovations in to products/processes and introducing them in to the public health system.



A new chapter in the history of AcSIR was added on December 13, 2023, with signing of Memorandum of Agreement with the Indian Council of Medical Research (ICMR) and a new faculty of "Medical Research" was created at AcSIR.

This is a significant development towards making AcSIR a multi-disciplinary Research Institution for promotion of cutting-edge research in cross-disciplinary areas.

This would provide much needed impetus to the medical research in the country.

Introducing

Faculty of Medical Research



The agreement was signed by Prof. N. Kalaiselvi, Chancellor, AcSIR, DG, CSIR & Secretary, DSIR and Prof. Rajiv Bahl, DG, ICMR & Secretary, DHR in presence of Prof. Manoj K. Dhar, Director, AcSIR, among others, at a function held at ICMR-NIMR

| S. No. | Name of ICMR Institute | Research Areas |
|--------|--|---|
| 1 | The Indian Council of Medical Research (ICMR) Hars. New Delhi | Formulation, coordination and promotion of biomedical research Translating medical innovations in to products/processes and introducing them in to the public health system |
| 2 | ICMR-National JALMA Institute for Leprosy & Other Mycobacterial Diseases, Agra | Leprosy Tuberculosis Mycobacteriosis HIV Filariasis |
| 3 | ICMR-National Institute of Occupational Health, Ahmedabad | Environmental stressess/ factors at Workplace Occupational Health |
| 4 | ICMR-National Centre for Disease Informatics and Research, Bengaluru | Cancer Diabetes CVD Stroke |
| 5 | ICMR-Bhopal Memorial Hospital & Research Centre, Bhopal | Clinical Research Epidemiological Research |
| 6 | ICMR-National Institute for Research in Environmental Health, Bhopal | Environmental Health Epidemiological Research |
| 7 | ICMR-National Institute of Epidemiology, Chennai | Epidemiological Research Leprosy |
| 8 | ICMR-National Institute for Research in Tuberculosis, Chennai | Tuberculosis |
| 9 | ICMR-National Institute for Research in Tribal Health, Jabalpur | Tribal Health |
| 10 | ICMR-National Institute of Nutrition, Hyderabad | Eliminiation of Malnutrition |
| 11 | ICMR-National Animal Resource Facility for Biomedical Research, Hyderabad | Developmental BiologyReproductive BiologyNeurobiologyBehavioural SciencesCardiologyStem CellMolecular Cell BiologyImmunologyVirology |

| S. No. | Name of ICMR Institute | Research Areas |
|--------|---|---|
| 12 | ICMR-National Institute of Cholera and Enteric Diseases, Kolkata | Diarrhoeal Diseases Typhoid Fever |
| 13 | ICMR -National Institute of Immunohaematology , Mumbai | Hematology Tranfusion Medicine Immunology |
| 14 | ICMR-National Institute of Malaria Research, New Delhi | Malaria Eradication: Basic, applied and operational field research |
| 15 | ICMR-National Institute of Pathology, New Delhi | Molecular Pathology Genetics Immunodiagnostics Vaccine development Environmental Bio-monitoring |
| 16 | ICMR-National Institute of Medical Statistics, New Delhi | Medical Statistics Bio-medical and bio-behavioral research |
| 17 | ICMR-National Institute of Cancer Prevention and Research, Noida | Cancer: Uterine Cervix, Breast and Oral cavity |
| 18 | ICMR-Rajendra Memorial Research Institute of Medical Sciences, Patna | Visceral Leishmaniasis (Kala-azar) HIV/AIDS Tuberculosis |
| 19 | ICMR-Vector Control Research Centre, Puducherry | Vector borne diseases: LF, Dengue, JE, Malaria, KFD, Scrub typhus |
| 20 | ICMR-National Institute of Virology, Pune | Cell Repository Electron Microscopy Rickettsioses Hepatitis Influenza and related viruses Clinical Virology Biochemistry Virus Registry Biostatistics |
| 21 | ICMR-National AIDS Research Institute, Pune | HIV/AIDS |
| 22 | ICMR-National Institute of Traditional Medicine, Belagavi | Traditional Medicine: lifestyle and metabolic diseases, geriatric and mental disorders, viral infections |
| 23 | ICMR-Regional Medical Research Centre, Bhubaneswar | Lymphatics filariaisMalariaDiarrhoeal disordersTuberculosisHIV/AIDSHaemoglobinopat hiesHypertensionDiabetesTribal Health |

| S. No. | Name of ICMR Institute | Research Areas |
|--------|--|---|
| 24 | ICMR-Regional Medical Research Centre, NE Region, Dibrugarh | Mosquito borne diseases HIV and drug abuse Trematode infection Haemoglobinopathies Cancer nasopharynx, oesophagus, stomach Cardiovascular diseases Medicinal plants of NE India Nutrition |
| 25 | ICMR-Regional Medical Research Centre, Gorakhpur | Acute Encephalitis Syndrome (AES) HIV Multi drug resistant (MDR) Tuberculosis Vector borne diseases like JE, Dengue, and filariasis Juvenile diabetes and myocarditis Child and maternal health |
| 26 | ICMR-National Institute for Implementation Research on Non- Communicable Diseases, Jodhpur | Cardiovascular diseases Chronic respiratory diseases Environmental health Nutritional disorders Cancers Injury & trauma Mental illnesses including substance abuse Genetic diseases |
| 27 | ICMR-Regional Medical Research Centre, Port Blair | Communicable and Non-communicable diseases |
| 28 | ICMR-National Institute for Research in Reproductive & Child Health, Mumbai | Reproductive Health |

Ph.D.

Doctor of Philosophy

PhD

PhD

PhD

Pho

Chemical Sciences

Physical Sciences

Mathematical & Information Sciences

Engineering Sciences

Medical Research

Eligibility for PhD

1. PhD Sciences (Biological Sciences, Chemical Sciences, Physical Sciences and Mathematical & Information Sciences):

Regular

Masters degree in Science with minimum 55% marks (without rounding off) or equivalent grade for General (UR)/General-EWS and minimum 50% marks (without rounding off) or equivalent grade for OBC (NCL)/SC/ST, Third gender and Persons with Disability (PwD).

A valid tenable National-level Fellowship (JRF/ SRF of any funding agency, e.g. CSIR, UGC, DBT, DST, etc.) or any other equivalent fellowship like DBT-BET, INSPIRE, RGNF, etc. or apply for institutional fellowships (of BSIP, IASST, WII, TIGS, TCG-CREST).

OR

Project Assistants, Senior Research Fellows, Group-IV Scientists and Group-III Technical Staff of CSIR and other Associate Academic Centers of AcSIR having Masters degree in relevant science discipline are eligible to apply. NOC from the current employer is mandatory.

Sponsored

Masters degree in Science with minimum 55% marks (without rounding off) or equivalent grade for General (UR)/General-EWS and minimum 50% marks (without rounding off) or equivalent grade for OBC (NCL)/SC/ST, Third Gender and Persons with Disability (PwD). Endorsement (NOC) from the current employer is mandatory.

2. PhD (Engineering):

Regular

Masters degree in Engineering or Technology (after a four year engineering/technology degree or with an integrated 5 year B.Tech./M.Tech. degree or equivalent) with minimum 55% marks (without rounding off) or equivalent grade for General (UR)/General-EWS and minimum 50% marks (without rounding off) or equivalent grade for OBC (NCL)/SC/ST, Third gender and Persons with Disability (PwD).

OF

Project Assistants, Senior Research Fellows, Group-IV Scientists and Group-III Technical Staff of CSIR and other Associate Academic Centers of AcSIR are eligible to apply. NOC from the current employer is mandatory

Sponsored

Masters degree in Engineering or Technology (after a four year engineering/technology degree or with an integrated 5 year B.Tech./M.Tech. degree or equivalent) with minimum 55% marks (without rounding off) or equivalent grade for General (UR)/General-EWS and minimum 50% marks (without rounding off) or equivalent grade for OBC (NCL)/SC/ST, Third Gender and Persons with Disability (PwD). Endorsement (NOC) from the current employer is mandatory.



Faculty of Studies

Areas of Research

CSIR - Advanced Materials and Process Research Institute, Bhopal



Biological Sciences

Biomedical
Environmental Industries
Automotive and Transportation
Energy Industries
Aerospace and Defense

CSIR - Central Building Research Institute, Roorkee



CSIR-CBRI, ROORKEE

Biological Sciences

Biological Sciences Developmental Biology Structural Biology Genomics and Epigenetic Regulation Cell and Stem Cell Biology Microbes and Biology of Infection Wildlife Conservation and Ecology Crop Improvement Innovation and Technology Development

CSIR - Centre for Cellular & Molecular Biology, Hyderabad



Biological Sciences

Developmental Biology
Structural Biology
Genomics and Epigenetic Regulation
Cell and Stem Cell Biology
Microbes and Biology of Infection
Wildlife Conservation and Ecology
Crop Improvement
Innovation and Technology Development

CSIR - Central Drug Research Institute, Lucknow



CSIR-CDRI, LUCKNOW

Biological Sciences

Malaria and other Parasitic Diseases
Antimicrobial Resistance
Virus Research & Therapeutics Cancer Biology
Neuroscience & Ageing Biology
Cardiovascular system Disorders
Bone Health & Metabolic Bone Diseases
Reproductive Health Research
Pre-clinical studies & Translational Research

Chemical Sciences

Organic & Medicinal Chemistry Natural Product Chemistry Chemical Biology Spectroscopy & Its applications Crystal Engineering

CSIR - Central Electrochemical Research Institute, Karaikudi



Engineering Sciences

Corrosion and Materials Protection
Electrochemical Power Sources
Electroplating & Metal Finishing
Electrodics & Electrocatalysis
Materials Electrochemistry
Electrochemical Process Engineering

CSIR - Central Electronics Engineering Research Institute, Pilani



Physical Sciences

Semiconductors and optoelectronics
Semiconductor Sensors and Microsystems
Advanced Information Technologies
Integrated Circuits and Systems
Microwave
High frequency components

Devices and systemsHigh-Power Microwave Systems

Engineering Sciences

Semiconductor-based sensors and microsystems
Semiconductor Processes Technologies
Advanced Information Technologies
Integrated Circuits and Systems
Vacuum Electron Devices
High-Frequency Devices and System
High-Power Microwave Systems

CSIR - Central Food Technological Research Institute, Mysuru

Biological Sciences



CSIR-CFTRI, MYSURU

Chemical Sciences

Engineering Sciences

Biochemistry
Molecular Nutrition
Food Science and Technology
Packaging Technology
Flavour Chemistry
Natural Product Chemistry
Synthetic Organic
Bioactives from Food Sources
Specie Chemistry

Biotechnology

Microbiology

Food Engineering
Environmental Engineering
Design and Fabrication
Food Science and Nutrition
Fruit and Vegetable Technology

CSIR - Central Glass & Ceramic Research Institute, Kolkata



Engineering Sciences

Orthopaedic, dental and maxillofacial implants/materialsElectrochemical Power Sources Tissue engineering & drug delivery Reconstructive and Trauma materials Coatings
Ceramic materials polycrystalline diamond materials for electron tubes

CSIR-CGCRI, KOLKATA

CSIR - Central Institute of Medicinal & Aromatic Plants, Lucknow



Biological Sciences

Bio-Prospection & Product Development
Plant Biotechnology
Crop Protection and Production
Plant Breading & Genetic Resource Conservation
Technology Dissemination and
Computational Biology

Phytochemistry

CSIR - Central Institute of Mining and Fuel Research, Dhanbad



Chemical Sciences

Clean Coal technology Carbon Capture, Utilization and Storage (CCUS) Earth and Environmental Sciences

Engineering Sciences

Mining Engineering
Mine Mechanization and Automation
Rock Excavation Engineering
AI & ML in Mining
Environmental Engineering & Management
Mining Machinery

CSIR - Central Leather Research Institute, Chennai



Chemical Sciences

Novel polymeric materials for leather.
Plastic electronics.
Conjugated polymers.
Synthesis of liquid crystalline molecules
Single-walled carbon nanotubes
Ionic liquid crystalline polyurethane blends, composites and foam composites.
Supramolecular polymers
polyurethane-drug conjugates in drug delivery.
Thermoresponsive polymers
Nanoclays for filling cum retanning in leather

CSIR - Fourth Paradigm Institute, Bangaluru

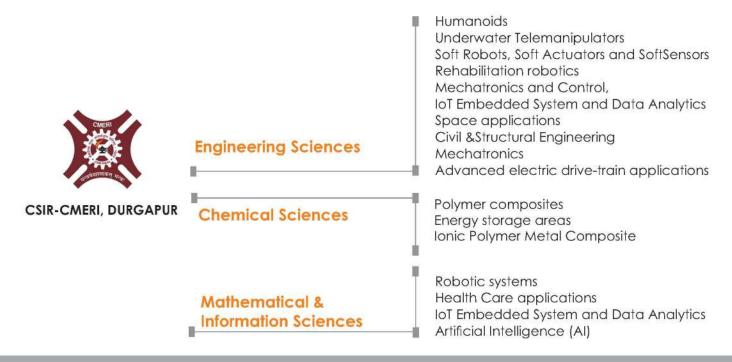


Mathematical & Information Sciences

Data Science and Supercomputing Earth & Engineering Sciences

CSIR-4PI, BENGALURU

CSIR - Central Mechanical Engineering Research Institute, Durgapur



CSIR - Central Road Research Institute, New Delhi



Bridge Engineering and Structures Geotechnical Engineering Pavements & Evaulation Traffic Engineering and safety Transport Planning and Environment

CSIR - Central Scientific Instruments Organisation, Chandigarh



Biological Sciences



Chemical Sciences

Seaweed biotechnology Seaweed metabolomics and nutraceuticals marine biology Alaal biostimulant & biofertilizer Plant Abiotic stress

Plant proteomics & metabolomics

Plant Biotechnology & Plant Molecular Biology

Soil/ marine microbiology

Plant Tissue Culture

Seaweed cultivation

Plant gene cloning & genetic engineering

Plant transgene technology

Plant genome editing

Marine environmental monitoring

Microalgae: value addition and processing

Plant Physiology

Breeding & Genetics

Phytoremediation

Waste land reclamation & management

Saline agriculture

Inorganic Metal Complexes synthesis Electrochemical Energy Conversion Organic transformations

Heterocycle Synthesis & Functionalizations,

C-H Functionalization

Asymmetric synthesis

Ion Exchange Membranes

Thin Film composite

Nano filtration & Hollow fibre Membrane Reverse and forward Osmosis membrane science & technology conducting polyme

Water Treatment

Separation Technology

Ionic liquids

Solution thermodynamics

Computational Chemistry Salts and

Marine Chemicals

Electrochemical & Optical sensors

Elecro & Photo catalysis

Heterogeneous & Homogeneous catalysis

Seaweed Polysaccharides

Natural product chemistry Analytical

Chemistry- Method Developments

Seaweed Functionalization

Coordination chemistry

Chemical process development

and engineering (speciality

and other salt & marine chemicals)

Porous metal-organic and

covalent-organic frameworks

Metallopolymeric matrix/ael

Zeolite & Silica based Materials

C02 capture & utilization

Chemical biology



Engineering Sciences

CSIR-CSMCRI, BHAVNAGAR

Valorization of biomass Fermentation Technology Marine Environmental monitoring Reverse and forward Osmosis membrane -science & technology Chemical process development -and Engineering Heat & Mass transfer Fluid mechanics Renewable energy Analytical and Process control -instrumentation Civil Engineering and Engineering aspects of Solar Salt Works

Embedded systems Cooling Crystallization

CSIR - Institute of Genomics and Integrative Biology, New Delhi



Biological Sciences

CSIR-IGIB, NEW DELHI

Genomics and Molecular Medicine Cardiorespiratory Disease Biology Chemical and Systems Biology Informatics and Big Data Integrative and Functional Biology Immunology and Infectious Disease Biology

CSIR - Institute of Himalayan Bioresource Technology, Palampur



CSIR-IHBT, NEW DELHI

Biological Sciences

Agriculture Sciences **Biochemistry** Biotechnology Microbial Biotechnology Fermentation Technology **Bioinformatics** Computer Science Scientific Computing Data Science Artificial Intelligence Botany Entomology

Forestry & Environmental Sciences Food Science

Food Technology

Genetics and Plant Breeding Plant Molecular Biology

Floriculture

Microbiology

Industrial Microbiology Medical Microbiology Molecular Microbiology Molecular Biology Nanotechnology Nano biosciences Plant Science Plant Pathology Plant Physiology Pharmaceutical sciences

(Pharmacology &

Pharmacology & Toxicology) Zoology

Human Genetics

Virology

Traditional Medicine

Natural Resource Management

Statistics

Remote Sensing & GIS

Chemical Sciences

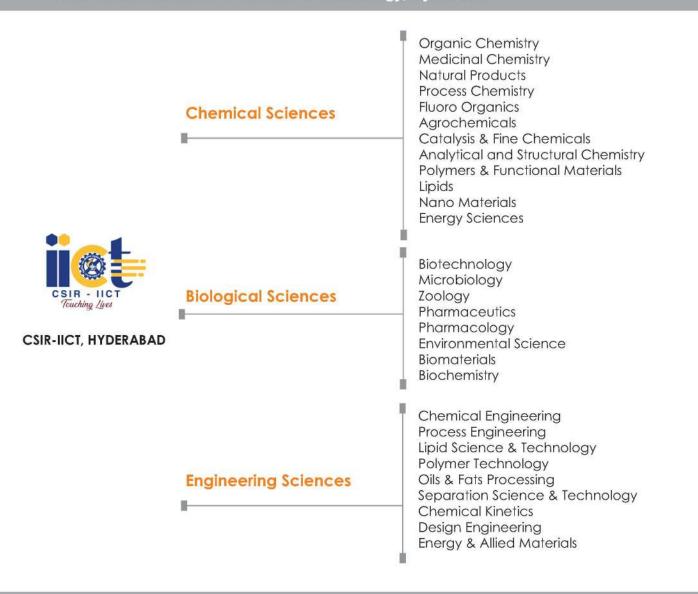
Organic Chemistry **Analytical Chemistry** Inorganic Chemistry Physical Chemistry Chemistry Pharmaceutical Chemistry



Biological Sciences

Cancer Biology & Inflammatory Disorder Cell Biology & Physiology Infectious Diseases & Immunology Molecular Genetics Organic & Medicinal Chemistry Structural Biology & Bioinformatices

CSIR - Indian Institute of Chemical Technology, Hyderabad



CSIR - Indian Institute of Integrative Medicine, Jammu



Biological Sciences

Natural Products & Medicinal Chemistry Fermentation and Microbial Biotechnology Infectious Diseases Plant Sciences and Agrotechnology (PSA) Pharmacology

Quality Management & Instrumentation

Chemical Sciences

Catalysis
Catalytic Processes
Reforming
Syngas Chemistry
Biogas
Advanced Functional Materials
Adsorption and Absorption
Carbon Nanomaterials
Fuels and Energy
Biofuels
Lignin Valorization through chemical
bio-chemicalthermal conversions
Life cycle analysis
Petrochemicals
Green Chemistry

CO2 capture and utilization (ccus)
Chemicals and Energy
Waste-to-Wealth
(Waste Plastics, ewaste)
Hydrogen energy
Petro-refining Processes
Hydroprocessing
Heavy Oil Processing
Reaction Engineering
Fluid Catalytic Cracking
Analytical Methods Development

Biological Sciences

Biomass to Chemicals Environmental Science Microbial Biotechnology Industrial ecology Waste water processing Microbial Fermentation Oleaginous Fermentation Material Resource Efficiency Circular economy Carbon flux assessment Microbial-omics Nutraceuticals and API Bio-remediation Enzymology Bio-manufacturing Biofuel Bioethanol (1G, 2G, 1.5G)



Specialty Chemicals

Solvent Extraction

Lubricants and Additives

CSIR-IIP, DEHRADUN

Physical Sciences

Photovoltaic (PV)
Batteries
Solid state hydrogen
-storage material

Engineering Sciences

Mass Transfer
Process Intensification
Material characteristics
Lubricant materials
Tribology
High entropy alloy

CSIR - Indian Institute of Toxicology Research, Lucknow



Biological Sciences

Toxicoinformatics & Industrial Research Environmental Toxicology Food, Drug & Chemical Toxicology Systems Toxicology & Health Risk Assessment Regulatory Toxicology

CSIR-IITR, LUCKNOW

CSIR - Institute of Minerals and Materials Technology, Bhubaneswar

Physical Sciences

Physics Electronics Geology Materials sciences Nano-sciences



Biological Sciences

Biology (Plant sciences/Botany, Animal sciences/Zoology) Environmental Sciences Microbiology, Biotechnology

Mathematical & Information Sciences

Information

Chemical Sciences

Chemistry (Physical/Organic /Inorganic /analytical) Materials Environmental Nano-sciences

Engineering Sciences

Metallurgical Engineering
Chemical Engineering
Mineral Engineering
Mechanical Engineering
Electronics Engineering
Electrical Engineering
Computer Science Engineering
Information Technology Engineering

CSIR-IMMT, BHUBANESWAR

CSIR - Institute of Microbial Technology, Chandigarh



Biological Sciences

Virology Microbiome Biotherapeutics and Metabolics Microbial Type Culture Collection **Biochemical Engineering** Diagnostics Bioinformatics and Big Data Analytics Screening Platforms Genomics and Structural Biology Instrumentation & Core Facilities Medicinal Chemistry IT Facilities

Antimicrobial Research

iCARE

CSIR-IMTECH, CHANDIGARH

CSIR - National Aerospace Laboratories, Bengaluru



CSIR-NAL, BENGALURU

Engineering Sciences

Corrosion & Tribology Energy **Function Materials** Nanoscale Architecture Sensors Structural Ceramics Aircraft Radome Technology **Autopilot Systems**

CSIR - National Botanical Research Institute, Lucknow



CSIR-NBRI, LUCKNOW

Biological Sciences

Plant Molecular Biology **Biodiversity** Toxonomy **Environmental Science** Plant Microbe Interaction Phytochemistry Soil Science

CSIR - National Chemical Laboratory, Pune

Chemical Sciences



New catalytic materials Speciality chemicals Soft Condensed Matter Physics **Polymers** Polyolefin Science and Technology Polymer Membrane Technology / Fuel cell Conductive Polymers and Energy Materials Sustained and Controlled Release Technology Personal Protective Equipment (PPE) recycling Nano-materials & nanoparticles Medicinal chemistry Process chemistry Custom synthesis Isolation of natural products Total synthesis of natural products

Carbohydrate chemistry

Peptidomimetics Synthetic foldamers **Biocatalysis Photochemistry** Organo catalysis Homogenous catalysis Asymmetric synthesis Organic functional materials Organic dyes Entomology Bioorganic Chemistry Chemical Biology Computational Chemistry Quantum Computing

Oligonucleotides

Biological Sciences

Proteomics

Computational biology

Fermentation

Enzymology and microbiology

Plant biochemistry and molecular biology

Structural biology

National collection of industrial microorganisms

Biosimilars

Cellulosics

Microbiology and Microbial Diversity

Microbial Technology

Microbe derived Bioactive Molecules

Antimicrobial Resistance

Human and Animal Pathogen Surveillance

(Environmental and Clinical)

Drug resistance in Infectious Disease (Malaria)

Pathogen Biology

(Malaria, Toxoplasmosis, Salmonellosis)

Disease Epidemiology

Computational and Systems Biology

Genomics and Genome Editing

Plant Biochemistry and Plant Biotechnology

Plant-Pathogen Interaction studies

Bioprospecting of Biodiversity

Human Metabolic and Genetic Disorders

(Diabetes and Cancer)

Structure Biology (X-ray diffraction,

NMR and Cryo-electron Microscopy)

Protein Expression and Functional Characterization

Biomarker studies

Drug Discovery studies

Biotherapeutics Fermentation

Mammalian Cell Culture systems

Plant Natural Products

(biosynthesis pathway studies, isolation, characterization

-and applications)

Bio-Membrane Dynamics

Clinical studies using Omics approach

(Proteomics, metabolomics & Genomics)

Probiotics and Prebiotics

Bio-Nanomaterial and Nanobiotechnology

Drug Delivery systems (Nano and Polymeric)

Diagnostics (Aptamers, CRISPR,

Oxford Nanopore Sequencing, Mass Spectrometry)

Biocatalysis

Biomaterials (Cellulosics)

Physical Sciences

Theoretical computational chemistry

Materials science

Thermodynamics of chemical reactions and

-processes

Nanoscale science

Molecular modelling and simulations

Reaction Kinetics and reaction mechanism

Computational Physics

Quantum Computing
Computational Materials Science

Mathematical & Information Sciences

Machine learning

Artificial Intelligence

Natural Language Processing

Quantum Computing

Mathematical modelling

Systems and network modellingT

heoretical BiologyAI/DL models for materials design

Quantum computing

Engineering Sciences

Bio-chemical and biological engineering Bio-chemical and biological engineering

Process separations

Process modelling & engineering

Modular-agile-intensified continuous

(MAGIC) Processes

Continuous flow synthesis

Biochemical and biological engineering

Process Development and Scale-up

Catalysis

Reactors and Separations

Biochemical and Biological Engineering

Chemical Engineering

Polymer science

Plastic & polymer engineering

Nanotechnology

Bioinformatics

biotechnology

computational biology

Computer science

Material science & technology

Metallurgical and material science

& technology

Process modelling and simulation

advanced distillation configurations,

-flow chemistry

Bioengineering

Artificial intelligence

Oncology



CSIR-NCL PUNE



Engineering Sciences

Physical Sciences

Air Pollution Control
Environmental Impact And Sustainability
Cleaner Technology and Modelling
Waste Water Technology
Water Technology and Management
Environmental Biotechnology And Genomics
Climate Change and Green Material
Environmental Virology Cell
Health and Toxicity Cell
Environmental Audit and Policy Implementation
Chemical and Hazardous Waste Management
Sophisticated Environmental Analytical Facility
Waste Reprocessing
Energy and Resource Management

CSIR - North East Institute of Science & Technology, Jorhat

Biological Sciences

Zoology
Biotechnology
Molecular Biology
Botany
Pharmacology
Biomedical
Bioinformatics
Infectious diseases



CSIR-NEIST, JORHAT

Chemical Sciences

Advanced Material
Coal Chemistry
Chemical Engineering
Synthetic Organic Chemistry
Natural Product Chemistry
Analytical Chemistry
Polymer & Petroleum
Separation Science

Mathematical & Information Sciences

Artificial intelligence Machine Learning Big Data

Physical Sciences

Computational Seismology & Geophysics Geology Geochemistry

Engineering Sciences

Heat & Mass Transfer
Biomass and Solar Energy
Advanced Manufacturing
Mechanical Simulation & Modelling
Thermo Electric Devices

CSIR - National Geophysical Research Institute, Hyderabad



Physical Sciences

CSIR-NGRI, HYDERABAD

Airborne Geophysics

Computational Electromagnetics

Controlled Source Seismics and Gas Hydrates

Earth Process Modelling

Earthquake Hazard

Electrical and Heliborne Geophysics

Environmental Seismology

Geochemistry

Geochronology

Geology

Geomagnetism

Gravity and Magnetics

Instrumentation and Engineering Geophysics

Magnetotellurics

Paleo-Seismology

Planetary Sciences

Seismological Imaging

Shallow Seismics

Tectonic Geodesy



Chemical Sciences
Physical Sciences

Engineering Sciences

CSIR-NIIST, THIRUVANANTHAPURAM

Agroprocessing
Sustainable Energy
Environment Technology
Materials Science
Microbial Process
Artificial Intelligence & Machine Learning

CSIR - National Institute of Oceanography, Goa

Physical Sciences

Marine Geology Geophysics Physical Oceanography



CSIR-NIO, GOA

Biological Sciences

Marine Biology Marine Biotechnology Marine Ecology

Mathematical & Information Sciences

Applied Mathematics
Atmospheric Ocean Science
& Mathematics

Chemical Sciences

Biogeochemistry Marine pollution Marine Natural Products

Engineering Sciences

Ocean Engineering Marine Instrumentation

CSIR - National Institute Of Science Communication and Policy Research, New Delhi



CSIR-NISCPR

Mathematical & Information Sciences Innovation, Entrepreneurship, and
-Diffusion Research
Energy, Environment & Sustainability
Studies in Science Communication
Agriculture & Sustainable Rural Development
Inclusive Health & Traditional Knowledge
Global Governance & Science Diplomacy
Internatinal Popular Science

CSIR - National Metallurgical Laboratory, Jamshedpur



CSIR-NML, JAMSHEDPUR

Engineering Sciences

Mineral Processing
Process Metallurgy
Physical Metallurgy
Mechanical Metallurgy
Corrosion and Surface Engineering
Advanced material
Waste utilisation

Chemical Sciences

Sustainable materials for green energy
-conversion and storage
Surface chemistry and catalysis
Electrochemistryand corrosion
Waste utilization and recycling
Analytical and environmental chemistry
Functional nanomaterials and coatings
Theoretical chemistry including molecular
-dynamics and DFT simulation

Physical Sciences

Organic and Perovskite Solar cells/ Materials Science/Physics 2D materials for optoelectronic devices /quantum devices Laser induced white light Luminescent materials Perovskite Oxides and organic semiconductor devices /2D materials for device applications Quantum technologies Optics and instrumentation for laser -cooling of atoms Time & Frequency Metrology Boltzmann constant based -quantum standards Infrared thermometry 2D materials and Vacuum Metrology



CSIR-NPL, NEW DELHI

Chemical Sciences

Development of carbon materials for energy applications Indoor air pollution Bioaerosols Atmospheric deposition Atmospheric aerosols Metal organic framework for -hydrogen storage Measurement of GHC emission Organic and Perovskite -Solar cells/ Materials chemistry

Engineering Sciences

Industrial Engineering Recycling of E-waste and -Plastic waste to wealth for energy -and environmental applications Development of Interferometry based measurement system for 100 g -Kibble Balance High entropy oxides Computer Vision Smart Grid Microgrid Metrological characterization -of PMUs Application for monitoring Protection and control of -the power grid

Semiconductor for optoelectronic properties 3D Printed Electronics and -Electrochemical Devices Metal oxide/transition metal chalcogenides -thin films for gas sensor applications Stable LasersQuantum applications FPGA based Digital and RF signal generator Time and Frequency Metrology Semiconductor Thin Film Devices Physics of nanodevices Detection of low energy photons Fabrication of THz absorbers and detectors **Topological Quantum Materials** Including Superconductors/Magnetics Solar cell reliability Band engineering in alloys and

CSIR - Structural Engineering Research Centre, Chennai

-heterostructures of 2D materials 2D materials and phase transitions



Engineering Sciences

Advanced Materials for Sustainable Structures Disaster Mitigation Special and Multi-functional Structures Structural Health Monitoring & Life Extension

CSIR - Unit for Research & Development of Information Products, Pune



Mathematical & Information Sciences

Patinformatics Toxinformatics Phytoinformatics Cheminformatics



Biological Sciences

Nutrition Bio-Statistics Health Information System

PHFI-IIPH, DELHI

DST - Wadia Institute of Himalayan Geology, Dehradun



Physical Sciences

Earth and Environmental sciences -including Geophysics

MoEFFC - Wildlife Institute of India, Dehradun



Biological Sciences

Wildlife Science Biological Sciences

DST-Institute of Advanced Study in Science and Technology, Guwahati



DST-IASST, GUWAHATI

Physical Sciences

Biological Sciences

Basic and Applied Plasma Physics Advanced Material Sciences Traditional and Modern Drug Discovery -and Disease Diagnosis Biodiversity and Ecosystem Research"

DST-The Centre for Nano and Soft Matter Sciences, Bengaluru



Physical Sciences

Synthesis and characterization nanomaterials Device applications utilizing nanomatrials Liquid crystals Hybrid materials

DST-CENS, BENGALURU

DST-Indian Institute of Astrophysics, Bengaluru



DST-IIA, BENGALURU

Physical Sciences

Sun and Solar System Stars and Galaxies Cosmology and High-Energy Astrophysics Instrumentation and Data Analysis

MoHF-National Institute of Biologicals, Noida



Biological Sciences

Mechanisms of Quality Evaluation and -Development of Biologicals Development of National Reference -Standards

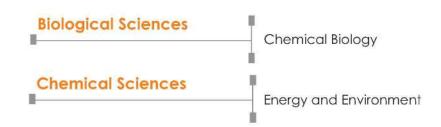


Biological Sciences

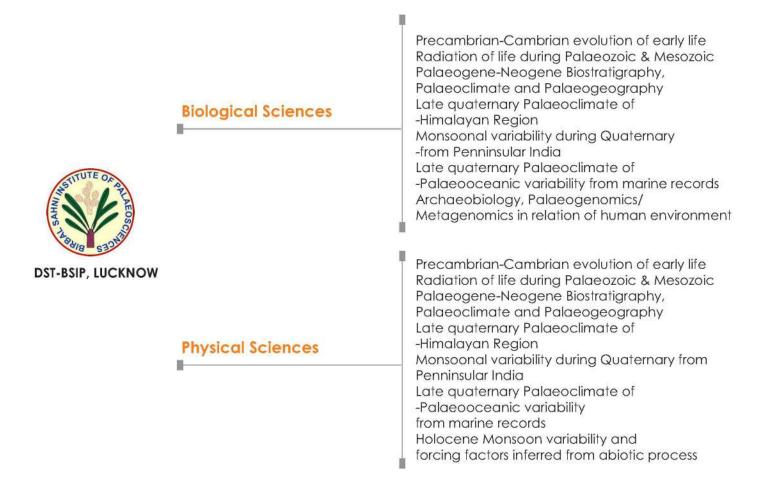
NCDs Infectious Diseases Oncology Molecular Diagnostics Clinical Research

DST - Institute of Nano Science and Technology, Mohali





DST-Birbal Sahni Institute of Palaeosciences, Lucknow



Centre of Biomedical Research, Lucknow





Molecular Synthesis & Drug Discovery NMR & Metabolomics Functional MRI

Engineering Sciences

Light-Weight Cryptography
Provable Security of Symmetric Key Cryptography
Design and Analysis of Authenticated Ciphers
Beyond Birthday Bound Security of
-Symmetric key cryptographic primitives
Symmetric key Cryptanalysis
Symmetric Searchable Encryption
Secure Cloud Computing
Blockchain Technology

Blockchain Technology

Quantum Cryptography and Computation

Lattice-based Cryptography
Post-Quantum Cryptography

White-Box Cryptography

Statistical Learning Theory

Deep Neural Networks Representation Learning

Deep Generative Models

Computer Vision

Natural Language Processing

Large Language Models

Climate Informatics

Al in Law

Privacy-preserving Learning

Mathematical & Information Sciences

Functional Analysis Operator Algebra Algebraic Topology Low Dimensional Topology Contact Topology **Knot Theory Topological Combinatorics** Structural Graph Theory Algebraic Graph Theory Combinatorial and Discrete geometry Discrete Morse Theory Enumerative and algebraic combinatorics Matroid Theory(Non-) associative Algebras Lie algebra and Lie Groups Deformation theory and Homotopy algebras Algebraic Geometry

Chemical Sciences

Batteries and Supercapacitors Hydrogen Energy Co2 Reduction and Clean Fuels



TCG-CREST, KOLKATA

Physical Sciences

Quantum Sensing and
-Computing using Cold Atoms
Photonic Integrated Circuits
-for sensing and computing
Quantum Computation with
-superconducting qubits:
Experiments

Biological Sciences

Psychiatry Neurology Molecular and Cell Biology Biochemistry Genetics Stem Cell Biology

ICMR - Regional Medical Research Centre, Dibrugarh





ICMR-RMRCNE, DIBRUGARH

Medical Entomology
Malaria and other vector borne diseases
Cancer Biology
Molecular Biology
Virology
Immunology
Communicable Diseases
Non-Communicable Diseases

Tata Insitute of Genetics & Society, Bengaluru



TIGS, BENGALURU

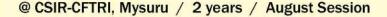
Biological Sciences

Infectious diseases
-(including antimicrobial resistance,
vector biology, and surveillance)
Rare genetic disorders (including diagnostics
-and therapeutics)
crop improvement

M.Sc

Master of Science

Food Technology



Eligibility

Regular:

A Bachelor's Degree in Science / Agriculture / Engineering / Technology with a minimum of 55% marks for General/ EWS/ OBC candidates/ Defence Personnel and 50% for SC/ST/PwD students from a recognized University (candidates waiting for final year results can appear for the entrance test, however, admission will be subjected to the above criteria).

Sponsored:

Bachelor's Degree in Science / Agriculture / Engineering /Technology with a minimum of 55% marks and two years industrial experience in a Food and allied industry.

FOUNDATION OF INDIA



Clinical Research

@ PHFI-IIPH, Delhi / 2 years / August Session

Eligibility

Graduate qualifications in: medical and allied fields like dentistry, AYUSH (Ayurveda, Yoga, Unani, Siddha and Homeopathy), pharmacy, physiotherapy, nursing, and veterinary science, biological and life sciences (microbiology, biochemistry, biotechnology, botany, zoology), basic sciences (chemistry), occupational therapy and biostatistics.



Health Informatics

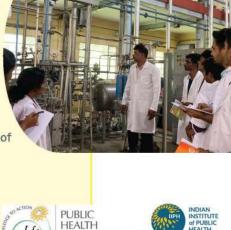
@ PHFI-IIPH, Hyderabad / 2 years / August Session

Eligibility

Bachelor's degree, in any science discipline under the 10+2+3 system.







M.Sc

Master of Science

Wildlife Science

@ Wildlife Institite of India, Dehradun / 2 years / August session

Eligibility

Bachelor's degree in Life Science, Medical Science, Engineering, Veterinary Science, Agriculture, Forestry, Pharmacy, Social Science and Computer Science or degrees recognized as equivalent thereof.

Minimum of 15 years of formal education (either 10+2+3 or 11+2+2).



Heritage Conservation and Management

@ Wildlife Institite of India, Dehradun / 2 years / August Session

Eligibility

Bachelor's Degree from a recognized University. Minimum of 15 years of formal education (either 10+2+3 or 11+2+2).



Freshwater Ecology and Conservation

@ Wildlife Institute of India, Dehradun / 2 years / August Session

Eligibility

Candidates having Bachelor's degree in Life Science (Botany, Zoology, Wildlife sciences and Forestry as one of the subjects) or allied subjects such as Veterinary Science, Agriculture, Biodiversity and Conservation Science, Sustainable Development, Biotechnology and Environmental Science from a recognized university by UGC.

Minimum of 15 years of formal education (10+2+3).



M.Tech

Master of Technology

Eligibility

M.Tech

- Bachelor's degree in Engineering or Technology following a four-year Engineering /technology or 4/5 year science degree or equivalent degree of not less than 4 years' duration. AND
- 2. At least one of the following:
- (a) Awarded a national-level fellowship tenable at CSIR institutes
- (b) Qualifying all the conditions required for eligibility for the CSIR-SRF, or CSIR-GATE-JRF
- (c) Qualifying the conditions for award of the INSPIRE fellowship
- d) Qualifying the conditions stipulated by AcSIR for industry-sponsored students
- (e) A valid GATE score, or CGPA ≥ 8.0 from a CFTI at the BE-level examination.

Specialization





Farm Machinery and Power Engineering



Design of Machinery and Equipment



Mechatronics





Computational Biology and Bio Engineering



Chemical Engineering



Polymer Engineering



Chandigarh



Advanced Instrumentation

IDDP

Integrated Dual Degree Program

Eligibility

Regular:

4-year undergraduate degree in Engineering (such as BE/BTech/BS) with minimum 55% marks (without rounding off) or equivalent grade for General (UR)/General-EWS and minimum 50% marks (without rounding off) or equivalent grade for OBC (NCL)/SC/ST, Third Gender and Persons with Disability (PwD).

OR

Project Assistants, Group-IV Scientists and Group-III Technical Staff of CSIR are also eligible to apply (as per relevant AcSIR rules).

Sponsored:

4-year undergraduate degree in Engineering (such as BE/BTech/BS) with minimum 55%marks (without rounding off) or equivalent grade for General (UR)/General-EWS and minimum 50% marks (without rounding off) or equivalent grade for OBC (NCL)/SC/ST, Third gender and Persons with Disability (PwD). Endorsement (NOC) from the current employer is mandatory.

Specialization

- Chemical Engineering
- Computational Biology and Bio Engineering
- Polymer Engineering
- Machine Design
- Mechatronics
- Advanced Electronic Engineering
- Materials Resource Technology
- Materials Science and Engineering
- Engineering of Structures
- -Chemical Engineering



M.Tech + PhD

@ CSIR-NCL, Pund

@ CSIR-CMERI, Durapur

@ CSIR-CFFRI Pilani

@ CSIR-IMMT, Bhuaneswar

@ CSIR-CGCRI. Kolkata

@ CSIR-SERC. Chennai

@ CSIR-IICT, Hyderabad

M.P.H

Master of Public Health

@ PHFI-IIPH, Delhi

2 years / August Session

Eligibility

Applicants with graduate qualifications in: medical and allied fields like dentistry, A YUSH (Ayurveda, Yoga, Unani, Siddha and Homeopathy), pharmacy, physiotherapy, nursing, and veterinary science.

Applicants with graduate qualifications in: biological and life sciences (microbiology, biochemistry, biotechnology, botany, zoology), basic sciences (chemistry), occupational therapy and biostatistics.

All applicants should have basic computing skills and proficiency in English language



@ MAX Healthcare, Delhi

2 years / August Session

Eligibility

Bachelor's Degree/ Graduation (with a minimum of 55% marks) from a recognised institute in Medicine/ AYUSH/ Dentistry/ Allied and Health Sciences/ Life Sciences/ Veterinary Sciences

Bachelor's Degree/ Graduation (with a minimum of 55% marks) from a recognized institute in Statistics/ Demography/ Population Studies/ Nutrition/ Sociology/ Psychology/ Anthropology/ Social Work/ Biostatistics

Graduates from other disciplines (other than mentioned above) may also be considered Work experience in a healthcare-related field is desirable



PGD

Post Graduate Diploma

Precision Measurement and Quality Control

@ CSIR-NPL, New Delhi / 1 year / August session

Eligibility

Eligibility B.Sc. (Physics and Maths) / B.Sc. Engg./ B.E./ B.Tech. in Mechanical/ Electrical/ Electronics/ Electronics & Communication/ Instrumentation

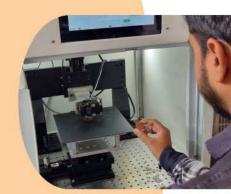


Advance Manufacturing Technology

@ CSIR-CMERI, Durgapur / 1 year / August Session

Eligibility

B.E./B.Tech/AMIE in Mechanical/Manufacturing/Production Engineering or Equivalent



Patinformatics

@ CSIR-URDIP, Pune / 1 year / August Session

Eligibility

- Master's degree in Science/Technology (Minimum 60% marks)
- M.Pharm. (Minimum 60% marks)
- B.E/ B.Tech. (Minimum 60% marks)
- L.L.B with graduation in Science (Minimum 60% marks at each degree)
- M.Lib Sci. with graduation in Science (Minimum 60% marks at each degree)
- MBA with graduation in Science (Minimum 60% marks at each degree)

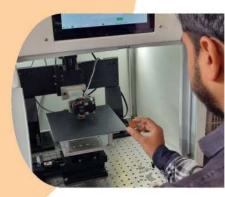


Advance Manufacturing Technology

@ CSIR-CMERI, Durgapur / 1 year / August Session

Eligibility

B.E./B.Tech/AMIE in Mechanical/Manufacturing/Production Engineering or Equivalent



INTERNATIONAL FELLOWSHIPS - JOINT PhD DEGREE (Cotutelle)

PhD students for a joint PhD degree (Cotutelle) program in one of the below-mentioned international universities.

- RMIT University, Melbourne, Australia
- University of Western Australia, Perth, Australia
- Deakin University, Geelong, Australia

The selected students, as a part of their AcSIR PhD enrolment, have to spend 1 year of research at one of the above universities. These fellowships are open to all PhD students, enrolled at AcSIR, who have successfully completed their comprehensive examination by the end of third semester of their PhD enrolment.



Features of AcSIR-RMIT Joint Ph.D. Program

- The Students enrolled at both institutions under joint supervision, spend the majority of their program at the host institute (AcSIR/RMIT), and come onshore to RMIT/AcSIR for upto 12 months
- On sucessful completion of requirements, the students will be awarded PhDs from both AcSIR and RMIT University
- Students after the completion of 2 years in the respective institutes (AcSIR/RMIT) are eligible for this program.

Advantages to Students

- Access to world class facilities at both Institutions (AcSIR and RMIT)
- Global expertise and dual supervision between AcSIR and RMIT
- Scholarship covering living and travel expenses in India and Australia
- Doctoral PhD degree awarded by both AcSIR and RMIT in cotutelle mode.

USP of this program

- Enable and empower students to take on global challenges
- Share their working at two institutes and two countries
- Exposure to different research environments and diversity.



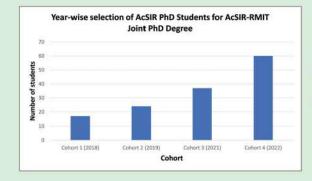


RMIT is a global university of technology, design and enterprise

Royal Melbourne Institute of Technology, focuses on applied research as well as outcome-related research and consultancy services, and has extensive partnerships with government and industry. It mainly focuses its research in the areas of design, technology, health, globalisation and sustainability.

Its Portfolio of Research and Innovation operates on a similar scale to its colleges, and also contains a specialist research school in order to foster excellence in research methodology and pedagogy. Over 50 research centres operate independently within RMIT's colleges and schools as well as a large number of smaller research groups.





way forward

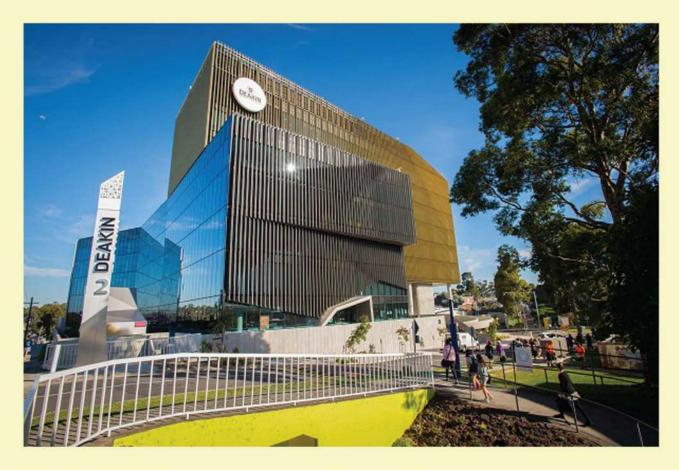
- 250 students in Joint Ph.D. program by 2027
- Ensure enrollment/participation of RMIT students in this Joint Ph.D. Program.



A world-class education for international students by Partnerships with industry and government

Deakin is home to four faculties, 14 schools and 13 institutes and strategic research and innovation centres. It offers a broad and exciting range of multidisciplinary projects across the vibrant research community.

Deakin researchers have access to national and international grants and schemes. These opportunities cover a wide range of disciplines and include funding from industry, government and commercial collaborations.



Deakin University's core research strengths:

- Energy
- Smart Manufacturing (smart materials)
- Future Sustainable Infrastructure
- Agriculture, Ecology, Water, Environment & Biotech
- Critical Technology
- Technology for Health care



Valued industry connections, innovative courses, commitment to student experience and high-impact research

Over the years the University has acquired an international reputation for excellence and enterprise. It is regarded as one of Australia's top research institutions, attracting researchers of world standing across the range of disciplines, with international leaders in many diverse fields.



Research strengths:

- Biological Sciences
- Physcial Sciences
- Chemical Sciences
- Mathematical Sciences
- Environmental Sciences
- Earth Sciences

- Agricultural & Veterinary Sciences
- Chemical Engineering
- Neurosciences
- Clinical Sciences
- Mechanical Engineering
- Oceanography







