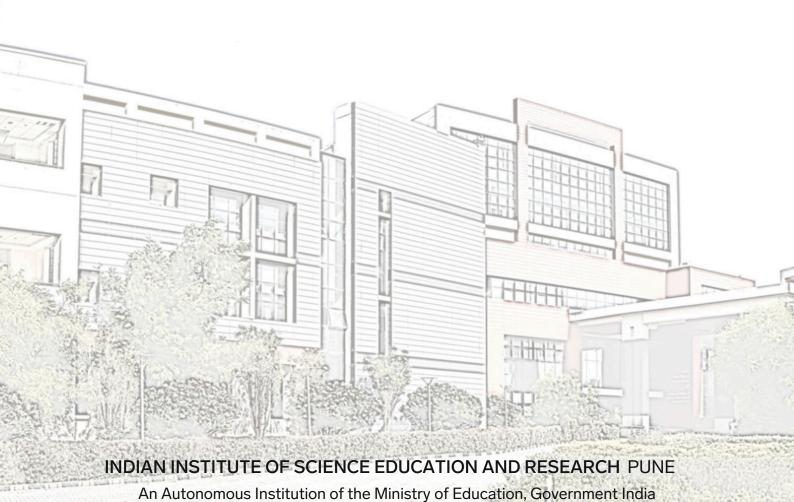


# 2025 INSTITUTE PROFILE AT A GLANCE







The Indian Institute of Science Education and Research Pune is a premier institute dedicated to research and teaching in the basic sciences. IISER Pune is an autonomous institution of the Ministry of Education and was established in 2006. In 2012, IISER Pune was declared as an Institute of National Importance by an Act of Parliament.

As a unique initiative in science education in India, IISERs were set up with the aim of integrating research with undergraduate education. As of 2025, there are seven IISERs across India, each of which function independently and award their own degrees. In a short span of time, IISER Pune with other IISERs have changed the face of undergraduate education in India, by having research-based learning in the laboratory complement traditional classroom learning.

IISER Pune now enters its 20th year, and as a teaching and research organisation with a focus on hands-on research at the undergraduate level, IISER Pune has made significant strides in capacity building of researchers and developing a culture of academic and research excellence in India. IISER Pune offers BS-MS dual degree programme, and MSc/MS, Integrated PhD, and PhD programmes. The PhD programme is open for international students and for professionals from R&D organisations and industries. Across our eight departments, faculty members actively pursue research in frontier areas and teach at the UG and PG levels.

Read on to learn more about our academic and research programmes, campus, and activities.

### **IISER PUNE IN NUMBERS**

Faculty Members: 139

Visiting, Emeritus, Guest, and Adjunct Faculty: 27

BS-MS Students: 1233 MS/MSc Students: 73

PhD Students: 520

Integrated PhD Students: 153

Fellows, Project Scientists, Postdoctoral Fellows: 61

Non-Teaching Staff: 133 Students Graduated: 2349

Numbers are as of March 31, 2025

### **IISER PUNE'S RANKINGS**



Ranked 42 in the Overall category and 29 in the Research category by the NIRF 2024 India Rankings



Ranked 1201-1500 in Times Higher Education (THE) World University Rankings 2025



Listed 13 in India, 167 at the Asia-Pacific level, and 439 globally on the 2024 Nature Index Tables for research output

# **CAMPUS AND FACILITIES**













IISER Pune has state-of-the-art research infrastructure including laboratories, equipment, and computational facilities. This has ensured that faculty members have timely access to the necessary facilities for setting up their laboratories and for planning and executing experiments. Supporting the teaching, learning and research programmes on campus is the Srinivas Ramanujan Library on campus. With over 30,000 print books, 4000 online journals, and over 6000 e-books, the library facilitates access to electronic, print and multimedia resources.

The institute campus has hostels for students, residential apartments for faculty and staff, and a guest house for visitors. A host of sports facilities, campus clinic with ambulance facility, provisions store for daily requirements are a few other amenities on campus. Through organised efforts including the climate action and sustainability committee, the institute campus and activities work towards incorporating sustainable practices.

Located in the Pashan area of Pune and spread over a 98 acre area, the IISER Pune campus is in close proximity to a few other educational institutions and a few minutes walking distance from the busy commercial establishments in the Baner and Aundh areas of Pune city.



Faculty members at the institute investigate and teach a wide spectrum of topics in the basic sciences as well in applied areas of research. Apart from classroom instruction, IISER Pune builds student skills in areas such as scientific inquiry, problem solving, communication skills, computational sciences, electronics and instrumentation and workshop practices. IISER Pune has advanced teaching and research labs where students have the opportunity to pursue experiments as well as advanced research under the mentorship of world-class faculty.

### **BS-MS Programme**

BS-MS is the flagship programme of IISERs. The defining feature of the programme is that undergraduate students have the opportunity to combine formal learning in the classroom with practical learning via research projects in state-of-the-art laboratories. This is a five-year long programme leading to the BS and MS degrees.

Basic training in various areas of the sciences, mathematics, and humanities and social sciences is imparted in the first three semesters. Faculty members at the institute involved in active research teach these courses. In the next five semesters, students can choose courses offered by one or more departments according to their liking and future career perspective. The seventh and eight semesters are allocated to a research project or an internship, leading to a thesis.

Students are admitted after class XII by national level selection through the IISER Aptitude Test (IAT) which is conducted jointly across all IISERs through this portal: https://iiseradmission.in/

# **Master of Science Programme**

IISER Pune initiated a new Master of Science programme from the 2022-2023 academic year in these subjects: Chemistry, Geology, Mathematics. From the 2024-25 academic year, a new Master of Science programme in Quantum Technology has been introduced.

# **Integrated PhD Programme**

The Integrated PhD (i-PhD) programme established in 2011 is aimed at highly motivated students who wish to pursue a career in research. Students with an excellent academic record can apply for the Integrated PhD programme upon completion of a Bachelors' degree in any branch of science. This 6-year course combines curricula for masters and doctorate degrees into a single integrated programme with a blend of course work and research projects. The Integrated PhD programme is currently offered in the departments of Biology, Mathematics, and Physics. Admissions to the Integrated PhD programme are carried out separately by each department once a year.

# **ACADEMIC PROGRAMMES**











### PhD Programme

The PhD programme was formally initiated in 2007, one year after the establishment of IISER Pune. The PhD programme is a 5-year programme open for students with MSc or BTech degrees.

Research at IISER Pune covers a wide range of research areas in Biology, Chemistry, Data Science, Earth and Climate Science, Humanities and Social Sciences, Mathematics, and Physics. In addition, we actively encourage research initiatives that span multiple disciplines.

Over the last decade, IISER Pune has established a brand value that has attracted large numbers of talented students to the Institute, from all parts of the country. In addition to writing their PhD thesis, PhD students contribute to the majority of the research publications from the institute. The Ministry of Education has included the IISERs in the group of institutes where PhD students can compete for and hold the Prime Minister's Research Fellowships.

Admission to the PhD programmes at the institute are conducted separately by each department.

### For International Students

IISER Pune encourages international students to apply for the institute's PhD or the Integrated PhD Programmes. Students can enroll either through a direct admission to IISER Pune or through the Study in India Programme supported by the Ministry of Education.

### **Externally Funded PhD**

Professionals engaged in R&D work in technical / scientific institutions / industries or R&D establishments are welcome to apply for a PhD at IISER Pune. In this mode of entry, the candidate is officially sponsored by their employing organisation.

# **Short Term Courses and Summer Programme**

Apart from the full-fledged academic programmes at the undergraduate and PhD level, the institute offers short and intensive courses to widen knowledge and enhance the skills of both academic and industry professionals in focused areas. As of now, there is one course in this category. Offered once every year since 2017 over 3-4 days, the "Biostatistics: a user perspective" is now being held online. The institute offers a summer research programme for external students at the undergraduate and postgraduate levels.

For information on admission to one or more of our programmes, please visit our website www.iiserpune.ac.in



Research at IISER Pune is conducted through eight departments: Biology, Chemistry, Data Science, Earth and Climate Science, Humanities and Social Sciences, Mathematics, Physics, and Science Education. Research groups are led by faculty members, and PhD students and undergraduate students contribute to the research carried out in these research groups. The Post-doctoral training programme brings additional research expertise to the institute. Research Centres at the institute facilitate focused efforts in certain areas of research and involve researchers from across the institute as well as from elsewhere.

Publications in peer-reviewed journals and patents on new and innovative research are among the major outcomes of the research being carried out at the institute. Our members have been publishing ~500 research papers each year. The patents applied for and published have been on the rise.

Our faculty members are recognised for their research contributions through various awards and honors at the national and international platforms. Collaborations with national and international partners, garnering research funding through extramural agencies are other indicators of our research potential and outcomes. The institute has collaborations with over 30 national and international organisations towards academic and research cooperation. Every year, our faculty members garner funding for ~30-40 new research projects from extramural funding agencies.

Publications can be viewed on our institute library repository http://dr.iiserpune.ac.in:8080/xmlui/



### **PUBLICATIONS**

~ 5000 and counting



Follow this QR code for a pdf document with list of patents applied/granted

### **PATENTS**

Applied: 102 | Published: 79 | Granted: 46

Numbers are as of December 2024

# RESEARCH CENTRES AND INITIATIVES













### IISER Pune hosts the following research centres and initiatives on campus:

### **CENTRE FOR ENERGY SCIENCE**

Set up under the Department of Science and Technology's Nanomission, the Centre is comprised of a team of about 15-20 faculty members from the Physics and Chemistry Departments at IISER Pune working in areas such as advanced functional materials and storing and conserving the available clean and renewable energy resources.

### **CENTRE FOR WATER RESEARCH**

Drawing upon expertise from faculty across different departments at the institute, the Centre aims to study water systems, including their history and heritage, resource management and sustainable use.

### **CENTRE FOR INTELLIGENT SOLUTIONS**

Launched in September 2024, this Centre addresses industry-focused problems lying broadly within the markers of data, algorithms, models, applied mathematics, computation/simulation, and digital transformations. The Centre brings together more than twenty researchers of IISER Pune.

### **BIOINFORMATICS CENTRE**

Funded by the Department of Biotechnology, this Centre was set up in 2023 with the aim to create a database of structures/models of molecular interactions, and make use of software tools to integrate experimental data into the modelled interactions.

### I-HUB QUANTUM TECHNOLOGY FOUNDATION

The I-Hub is a Section-8 company at IISER Pune set up with support from Government of India's Department of Science and Technology. The aim is to develop quantum computers and novel quantum materials for day-to-day applications. Led by members from the Physics department of the institute, this hub has participation from up to 13 research groups from the institute and will network with over 20 participating institutes from within the country and with several collaborators from foreign universities and institutions.

### ATAL INCUBATION CENTRE

IISER Pune SEED Foundation is a technology business incubator, hosted and promoted by IISER Pune. Incorporated as a Section-8 company, AIC-SEED is supported by the Atal Innovation Mission, NITI Aayog, Government of India.

# NATIONAL FACILITY FOR GENE FUNCTION IN HEALTH AND DISEASE

This is a state-of-art animal house facility established at IISER Pune with funding from the Department of Biotechnology. It is a well-equipped functional facility for animal experimentation and generation of transgenic mice models.

Our researchers address challenging problems in various branches of biological sciences encompassing a wide breadth from molecules to ecosystems. The mission of the teaching activities at the Biology Department is to provide students with a unique appreciation and understanding of the living world.

FACULTY: REGULAR 31; EMERITUS, VISITING & ADJUNCT 6 | STUDENTS: PHD 158, INT. PHD 62 FELLOWS, PROJ. SCIENTISTS & POSTDOCS: 16 **NON-TEACHING STAFF: 19** 

### **Research Areas**

Biomolecular Structure, Function and Organization | Cell, Organismal and Developmental Biology

Chromosome Biology and Epigenetic Regulation | Ecology and Evolution

Computational Biology | Neurobiology and Behaviour

The faculty members in Biology have been able to secure research funding from a number of funding agencies including the Department of Science and Technology, Department of Biotechnology, Council for Scientific and Industrial Research, Wellcome Trust-DBT India Alliance, Howard Hughes Medical Institute, Human Frontier Science Program, and others including few private sources.

The department has also been awarded infrastructure funds under the FIST programme of the Department of Science and Technology; and by the Department of Biotechnology to set up a state-of-the-art animal facility for studying disease models.

Further, through membership to International Mouse Phenotyping Consortium, IISER Pune is one of the 20 major mouse genetics centres worldwide. This membership provides IISER Pune access to transgenic and knockout lines, and promote ways to share information and resources with the scientific community across India.



Visit the Biology department at www.iiserpune.ac.in/research/department/biology Here are a few major projects and activities hosted at the department through extramural funds garnered by our faculty members (along with collaborating institutions).

National Facility for Gene Function in Health and Disease: A dedicated facility with state-of-the-art infrastructure that will import, maintain from a repository and supply transgenic and knock-out rodents/zebrafish and Drosophila for biomedical research in Indian academic and industrial R&D centres.

Pune Biotechnology Cluster: Spearheaded by the National Centre for Cell Science (NCCS) and IISER Pune, the programme aims to develop technology platforms that will catalyse interactions between institutions and biotech companies.

Bioinformatics Centre: Funded by the Department of Biotechnology, this Centre aims to create a database of structures/models of molecular interactions, and to integrate experimental data into the modelled interactions.

The Biology department hosts Molecular Biology for Everyone workshop series held in summer every year and aimed at various target groups from school students to postdoctoral fellows. This activity is supported by CSR grants from KK Nag Pvt. Ltd. and Praj Industries Ltd.



The Department of Chemistry at IISER Pune was established to conduct cutting edge research in frontier areas of chemical science and technology. The department offers an important link between physical sciences, materials sciences and biological sciences.

FACULTY: REGULAR 30; VISITING & ADJUNCT 2 STUDENTS: PHD 184, INT. PHD 22, MSC 24 PROJECT SCIENTISTS & POSTDOCS: 12 NON-TEACHING STAFF: 15

### **Research Areas**

Advanced Spectroscopy and Molecular Biophysics | Electrochemistry, Energy, and Environment

Organic Chemistry and Chemical Biology | Solid-state Chemistry and Materials Science

Synthesis and Catalysis | Theoretical and Computational Chemistry and Biophysics

Areas of work in the Chemistry department include frontier traditional areas of chemistry as well as chemical physics, biophysics, chemical biology, and computational science.

Several of our colleagues have found new materials that can trap greenhouse gases such as carbon dioxide; new chemical tools to understand fundamental biological processes; new methodologies to probe weak interactions that drive assembly; new models for understanding interactions between small molecules and macromolecules; new synthetic tools to efficiently prepare small molecules; probe the molecular-level interactions that contribute to stability.

Faculty members who are conducting research on materials and with the aim of addressing the clean energy needs of modern society are part of the Centre for Energy Science and the Centre for Water Research at the institute.

Chemistry faculty members have been able to secure research funding from a number of funding agencies including the Department of Science and Technology, Department of Biotechnology, Council for Scientific and Industrial Research, Department of Atomic Energy, Wellcome Trust-DBT India Alliance and others. These peer-reviewed and highly competitive grants have provided seeding for running research projects in frontier areas.

The department has also been awarded the Fund for the Improvement of S&T infrastructure in universities & higher educational institutions (FIST) by the Department of Science and Technology; and by the Ministry of Human Resource Development (now renamed Ministry of Education) through a Centres of Excellence in Frontier Areas of Science and Technology Grant.





Established in 2021, the Data Science department is actively building its faculty and researcher base across both theoretical and applied aspects of data science. The department envisions a synthesis of the three foundations of data science: statistics and probability, applied mathematics, and computer science.

FACULTY: REGULAR 3; VISITING, ADJUNCT & GUEST 7 | STUDENTS: PHD 3
NON-TEACHING STAFF: 1

### **Research Areas**

**Dynamical Systems, Data Assimilation** 

Machine Learning, Statistical Algorithms, Computational Biology

Mathematical Modelling of Complex Phenomena such as the Monsoons

The department focuses on a three-tiered strategy of education, research, and innovation, for developing capacity in theoretical underpinnings, development of new methods, and a variety of applications. It seeks to cultivate collaborations not only with other departments in the institute but also more widely, including industry. The department members are associated with the newly initiated Centre for Intelligent Solutions.

The department of Data Science (DS) is actively seeking to expand in the areas of artificial intelligence & machine learning, optimisation, statistical methods & theory across the disciplines of computer science, mathematics, and statistics. The department aims to develop applications of data science in three broad areas: DS for scientific discovery; DS for social good; DS for innovation and industry.

The faculty of the data science department work closely with a core group of faculty members from other departments of IISER Pune in the development of the department. In addition, the department frequently consults members of its International Advisory Committee: Prof. R. Karandikar, Chennai Mathematical Institute; Prof. Madhav Marathe, University of Virginia; Anand Deshpande, Persistent Systems; Dr. Mukund Sundararajan, Google; and Prof. Hema Murthy, Indian Institute of Technology Madras.

IISER Pune is actively recruiting faculty (Assistant Professor / Associate Professor / Professor) in all foundational areas of data science. Visit our website for details on applying for faculty positions at IISER Pune.



# EARTH AND CLIMATE SCIENCE

### **Department Overview**

Established in 2014, the Earth and Climate Science department has grown substantially over the past years with addition of new members and research activity. The research focus of the department is to understand the natural processes that shape the Earth over a wide range of spatial and temporal scales.

FACULTY: REGULAR 12; EMERITUS & VISITING 2

STUDENTS: PHD 33, MSC 9

POSTDOCS: 3

**NON-TEACHING STAFF: 3** 

### **Research Areas**

Earth Structure and its Evolution

Surface Processes | Climate Dynamics

Paleoenvironment and Paleoclimatic Evolution

Research questions at the ECS department span over interacting spheres, from the deep earth study to atmospheric dynamics.

The research activity is primarily funded by extramural support from a number of funding agencies including the DST, MoES along with funds from IISER Pune. The department has also been awarded the FIST fund for the infrastructural development. Members have been successful in publishing in highly reputed Nature index journals. The academic contribution of the faculty members of ECS has been recognised by a number of national academic organisations reflected in a variety of awards/membership including National Award in Geoscience and Technology, INSA Young Scientist Award, Young Associate of the Indian Academy of Sciences.

Along with the research activities, the department envisages creating a cadre of students with a broader perspective of the Earth System and in-depth knowledge of a few subsystems.

The teaching in the Earth and Climate Science programme at IISER Pune can be broadly divided into three streams. These are Geology, Geophysics, and Climate Science, with no strict compartmentalisation, giving students the flexibility to graduate by choosing electives from any of the streams.





# **HUMANITIES AND SOCIAL SCIENCES**



The department has a mandate to provide larger academic and critical contexts to knowledge production in the sciences on the one hand and on the other, to foster interdisciplinary as well as independent research in the core disciplines of the humanities and social sciences (HSS).

FACULTY: REGULAR 6; VISITING, ADJUNCT & GUEST 4 | STUDENTS: PHD 19

NON-TEACHING STAFF: 1

### **Research Areas**

History | Architecture

Political Science | Development Studies | Economics

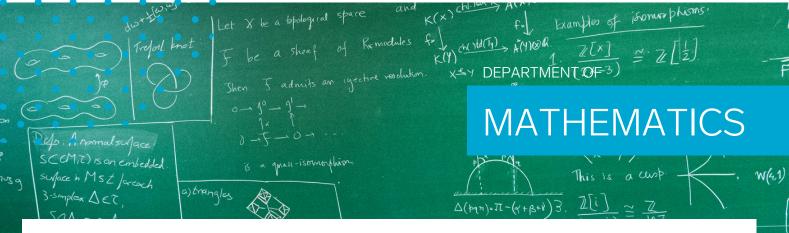
English Literature and Language | Media and Film Studies

The main thrust of IISERs is on science education and research; however, the presence of humanities and social sciences serves profoundly to inculcate a much-needed augmentation of the vision of the sciences. Alongside research in any scientific discipline, it immensely benefits students and researchers to critically examine accepted beliefs regarding the processes and implications of this research through the lens of historical, philosophical, sociological, anthropological, psychological, economic, socio-cultural, political, literary, and artistic contexts. Simultaneously, the HSS disciplines also benefit from their conversations with the natural sciences. In effect, a space is created for interactions across disciplines, without losing sight of the core of each discipline.

The department offers courses in cinema studies, cultural studies, history of architecture, history of astronomy, history of mathematics, history of science and technology, law and society, literature and literary theory, economics, development studies, environment and society and numismatics. In the past, the department has also hosted courses in ecology, philosophy, sociology, and theatre.

The HSS department hosts the Centre for Water Research which draws upon expertise from faculty across different departments at the institute. The Centre aims to study water systems, including their history and heritage, resource management and sustainable use.





The Mathematics Department of IISER Pune includes strong research groups in all the core areas including Algebra, Analysis, Applied Mathematics, Discrete Mathematics, Geometry-Topology and Number Theory. **FACULTY: REGULAR 25** 

STUDENTS: PHD 37, INT. PHD 17, MSC 9

FELLOWS & POSTDOCS: 15 NON-TEACHING STAFF: 2

### **Research Areas**

Algebra, Number Theory and Representation Theory

Analysis and Differential Equations | Geometry and Topology

Discrete Mathematics | Applied Mathematics

The Department of Mathematics at IISER Pune offers nearly 100 different courses to BS-MS, MSc, and PhD students. The department has faculty members covering most of the major research areas in algebra, analysis, topology, probability and statistics, differential equations, discrete and applied mathematics. The department has actively organised conferences involving international experts.

Every year, the department organises a Mathematics Symposium, a 2-day event in which department members give short talks on their ongoing research. In addition, the department sponsors numerous activities around the 14th of March each year to celebrate the Mathematics Day, in which the Maths Club run by the students play a major role.

Some of our faculty members are active members of the Centre for Intelligent Solutions, launched in September 2024 to address industry-focused problems lying broadly within the markers of data, algorithms, applied mathematics, and more.

For developing infrastructure, the Mathematics department was awarded a FIST grant from DST. This grant has been used to build a computer laboratory, to supplement library funds, and to procure a high performing computing cluster (HPC). The HPC is expected to be useful to the entire Institute, fostering a culture of interdisciplinary studies.

The research and other scientific activities of the department members have received generous support from various national and international funding bodies that include the CEFIPRA, CIMPA, CSIR, DST, DAAD, ICTP, INSA, MPIM, NBHM, SERB, USIEF, etc.

In addition to the research and teaching activities at IISER Pune, faculty members of the mathematics department actively participate in outreach activities and in the organisation of workshops for training of teachers and students throughout the country.



The Physics department has a diverse faculty pool in several contemporary research areas. We are committed to high-quality teaching and advancement of knowledge.

FACULTY: REGULAR 33, EMERITUS & ADJUNCT 4 STUDENTS: PHD 84, INT. PHD 52, MS 31 FELLOWS, PROJ SCIENTISTS & POSTDOCS: 15 NON-TEACHING STAFF: 11

### **Research Areas**

Astrophysics and Cosmology | Condensed Matter, Statistical, and Nonlinear Physics

Atomic, Molecular, and Optical Physics | Physics of Soft and Living Matter

Quantum Information and Quantum Dynamics | Gravity and High Energy Physics

The department covers most contemporary front-ranking research topics, both experimental and theoretical.

The department hosts the following research centres and initiatives.

Centre for Energy Science includes members from the Physics and Chemistry departments at IISER Pune conducting research with the aim of addressing the clean energy needs of modern society.

I-Hub Quantum Technology Foundation is a Section-8 company at IISER Pune set up with support from Government of India's Department of Science and Technology. The aim is to develop quantum computers and novel quantum materials for day-to-day applications.

Centre for Intelligent Solutions includes members from various departments from the institute including from the Physics department. The Centre aims to address industry-focused problems lying broadly within the markers of data, algorithms, models, computation/simulation, and more.

The department is a member of the CMS collaboration at the Large Hadron Collider at CERN in Geneva. Research is carried out at the highest collision energies achieved in a laboratory by humanity focusing on understanding phenomena beyond the standard model.

The research conducted by the faculty members is strongly supported by extra-mural funding. Current active grants include those from diverse national funding agencies such as DAE, DST, DBT, SERB, ISRO, international grants such as from CEFIPRA, UKIERI, IUSSTF as well as some industrial grants. Projects range from specific problems supporting personnel to multi- PI grants supporting large-scale infrastructure development. In addition, a FIST grant was received for the installation of a closed-cycle liquid helium facility.





The Department of Science Education was established in 2021 at IISER Pune with the belief that critical interventions are required in the yet-underdeveloped field of science education in India.

The Department of Science Education is being developed by a Coordination Committee of **IISER** Pune faculty members and an Advisory body consisting of senior faculty, researchers, and teachers. The department currently hosts two Visiting Faculty members.

### Research Areas to be pursued

Methodologies and Practices of Science Pedagogy

Socio-Cultural Frameworks of School and College Classrooms

Curriculum Development and Policies on Science Education in India

Science Education as a discipline is still in its nascent stages in India, and IISER Pune is uniquely poised to take it ahead in a formal and informed manner since it is already wellestablished in the field of teaching and research in the natural sciences.

The Department of Science Education is keen to engage with all aspects related to science education and seeks faculty applicants who are interested in the theory and praxis of science education, especially at the undergraduate level, in the Indian context. The department is equally committed to research and practice, and considers the two inextricably intertwined.

For queries related to the Science Education Department, please write to sci-ed.coordinator@iiserpune.ac.in

The department is currently being developed by a Coordination Committee comprising these faculty members of IISER Pune: Prof. Bhas Bapat (Chairperson); Dr. Anirban Hazra; Dr. Aparna Deshpande; Dr. Joy Monteiro; Dr. Pooja Sancheti; and Dr. Supriya Pisolkar.

An Advisory Board of senior faculty, researchers, and teachers is helping the process of designing short and long-term projects, initiating collaborations, creating a curriculum, and hiring fulland part-time faculty members. The current members of this Advisory Board are: Dr. Ashok Rao (Former Head, Network Project, DESE, IISc, Bangalore); Dr. Jyotsna Vijapurkar (formerly at HBCSE, Mumbai); Mr. Kamal Mahendroo (Vidya Bhavan Society, Udaipur); Dr. Padma Sarangpani (Tata Institute of Social Sciences, Mumbai); and Dr. R. Ramanujam (formerly at IMSc, Chennai)





IISER Pune strongly believes that there is a larger commitment towards society and engages with the local and global community through various activities. The Institute's outreach programmes offer training and capacity building among teachers at the school and college level across the country. IISER Pune reaches out to internal and external audiences via the institute website and social media portals to make research more accessible to students and members of the public.

# **Smt Indrani Balan Science Activity Centre**

Established in 2017, the Smt Indrani Balan Science Activity Centre (SAC), focuses on Science education and popularisation. The centre designs and develops innovative science toys with easily available material to teach and learn science in an effective way. The Centre engages with teachers, students, and science enthusiasts all round the year through workshops, hands-on sessions, and demonstrations through both in-person and on its YouTube channel. In August 2024, with CSR support from Tata Technologies and in collaboration with Pimpri Chinchwad Science Park, IISER Pune set up the Kalpakghar Community STEM-Tinkering Centre at the Science Park. This has been engaging students, educators, and members of the public through various activities since then.

### Science Media Centre

Established in 2012, Science Media Centre is a multifaceted unit at IISER Pune that emphasises on science communication and popularisation in many ways: workshops on scientific communication, science writing, production of videos for science popularisation, etc. The centre also provides faculty members with cover art and animations for the research publications and supports the institute through event documentation.

# **Project-led Initiatives**

Between 2015 to 2021, the Centre of Excellence in Science and Mathematics Education (CoESME) hosted at IISER Pune reached out to school college teachers through hands-on workshops and training sessions, and set an example for several academic outreach programmes that followed on the campus.

Inspiring India in Research, Innovation and STEM Education Programme (iRISE): a multi-partner collaboration initiated in 2021; focus on enhancing student innovation and creativity through teacher training at school level

Maharashtra State Development of Educators and Enhancement in Delivery (MS-DEED) Programme: project initiated in 2021 in collaboration the Maharashtra State Faculty Development Academy (MSFDA); focus on faculty development in universities and colleges

Molecular Biology Workshops held with CSR support for school and college students from institutions where lab facilities are lacking to enhance theoretical understanding Yusuf Hamied Chemistry Camp for students from local

Yusuf Hamied Chemistry Camp for students from local PMC schools

Malaviya Mission Teacher Training Programme in collaboration with the UGC and Ministry of Education to spread awareness about National Educational Policy 2020 through online NEP orientation and sensitization programme

# **OUTREACH ACTIVITIES**

# Industry-Academia Interaction, Corporate Engagement

To consolidate our relationship and partnership with the Indian Industry, targeted efforts are made at IISER Pune. These efforts intend to bring together industry leaders, professionals, and academics who have a shared interest in scientific research and development. The 'IISER Pune-Industry Conclave' is an Annual Event of the institute which facilitates interaction with industry leaders.

IISER Pune collaborates with the industry through following avenues:

### **CONTRACT RESEARCH**

With the best research facilities and qualified technical expertise, our scientists design and execute experiments to give the data that an Industry needs before their product is taken to the market.

#### COLLABORATIVE RESEARCH PROJECTS

From nanomaterials to biosensors, scientists at IISER
Pune are working at the front line of many different
domains. We collaborate with interested industries to
explore fresh avenues and develop the next new product in
the line of business.

### **CONSULTANCY**

Our highly qualified scientists could be consulted to troubleshoot technical glitches in the product or process adopted in an Industry.

### SPECIALISED TECHNICAL SERVICES

We have several state-of-the-art research facilities operated by people with the requisite technical expertise, these facilities could be availed by the external agencies for experimental measurements and analyses.

### **CORPORATE-SUPPORTED OUTREACH ACTIVITIES**

We collaborate with the corporate world and attempt to spread the excitement of science amongst science enthusiasts. We make the expertise and facilities at IISER Pune available to the science and education community to strengthen teaching and learning of science and mathematics.

### STUDENT INTERNSHIPS & PLACEMENTS

At IISER Pune, research is closely integrated with education. Our flagship BS-MS programme incorporates research into the curriculum right from the second year through short and long duration projects in the labs of faculty scientists. Along with a thorough understanding of concepts, our students thus receive hands-on laboratory training and exposure to research. The fifth year of the programme is entirely dedicated to a research project, often resulting in authorship on research publications for the students. Since they work on 'live' research problems from day one, all our students are trained not only in hands-on use of sophisticated equipment but also in trouble shooting, problem solving and evolving new research ideas. We have a fully industry-ready workforce, ready to start working in industry as soon as they graduate.

#### **EXTERNALLY FUNDED PHD**

This programme is meant for professionals engaged in R&D work in technical / scientific institutions/ industries or R&D establishments. In this programme, the candidate is officially sponsored by their employing organisation.

### **DONATIONS AND ENDOWMENTS**

IISER Pune has been fortunate to win the trust and support of corporate organisations. The industry support through endowments and donations have been helping us to further our research agenda.

IISER Pune is registered under section 12A of the Income Tax Act, 1961. Donations qualify for deduction under section 80 G (5)(vi) of the Income Tax Act, 1961.



The IISER Pune campus houses residential buildings for about 1500 students and about 150 faculty and staff members. All undergraduate students and many PhD scholars stay on campus and enjoy a life full of extracurricular activities in a vibrant and culturally diverse atmosphere. Several of our students in IISER Pune are actively involved in these activities via the framework of student clubs, which offer opportunities to explore and participate in sports, theatre, literature, music, dance, art, environmental and social causes, and more.

### **SPORTS CLUB**

One of the biggest clubs at the institute in terms of participation from the campus community, the Sports Club organises various sports events through the year, and also participates in inter-college sports events and Inter-IISER sports festival, which is held every year in one of the IISERs/NISER. The campus houses a gymnasium and indoor and outdoor sports facilities including basketball, badminton, and tennis courts and football and cricket fields.

#### **DISHA**

Disha is a student-run organisation to foster socioeconomic equality through the means of education. Disha's programmes reach out to students from underprivileged backgrounds from within and outside the campus by supplementing their school education through evening and weekend classes. Once a year, Disha volunteers local villages over three weekends to conduct science popularisation and career counselling sessions. Disha brings out an annual magazine, Pahal, with a compilation of Disha's activities through the year.

### MIMAMSA SCIENCE QUIZ

Organised completely by IISER Pune BS-MS students, Mimamsa is a college level pan-India annual science competition running for the past 14 years, with the latest two editions being held in partnership with an industry partner (Praj Industries). The competition spans Biology, Chemistry, Mathematics, and Physics. Four competing teams selected after a nation-wide preliminary round that is conducted in multiple cities with around 500 teams registering to participate.

### **PRUTHA**

Prutha aims to inculcate environmentally conscious behaviour across the IISER Pune community. Prutha's activities are broadly two-fold: appreciation of nature and waste management on campus. Periodic tree-planting drives and regular bird-watching sessions are conducted in a scientific manner to encourage participants to enjoy themselves while at the same time learning ecological details of their observations. Prutha also conducts campus cleaning and clothes donation drives.

# STUDENT ACTIVITIES









#### **PERFORMING ARTS**

Student clubs for dance, drama, art, and music come together to perform during institute events such as Independence Day and Republic Day and at the Karavaan annual student festival on campus.

#### SPICMACAY AT IISER PUNE

The Society for the Promotion of Indian Classical Music And Culture Amongst Youth (SPICMACAY) at IISER Pune brings best of Indian classical music, dance, and art to IISER Pune through concerts and performances by distinguished artists nationwide. The team organises an an annual overnight concert titled 'Parijat' on the campus featuring accomplished artists.

### LITERARY CLUB AND KALPA MAGAZINE

The literary club organises debates on relevant current topics in science and society. These events are popular with students. The clubs work together to publish an annual literary magazine called Kalpa. The 2016 edition of Kalpa won the second runner-up prize in 'educational institutes' category at this year's In-House Communication Excellence (ICE) Awards.

### **SCIENCE CLUB**

Science Club conducts student talks and colloquia by faculty from IISER Pune and elsewhere. The Club organises annual Nobel Evening talks that explain the work that has received the Nobel Prize during the year. They bring out "Helicase" magazine which contains interesting articles on current science and events in the scientific world.

#### **KARAVAAN**

Karavaan is the flagship cultural event for students which happens in the August semester. The festivities of Karavaan consist of evening activities centered on performances such as singing, choreographed routines, as well as impromptu musical jams on stage. During the day, various activities such as debate competitions, mockhypothesis defenses, and carnival games take place. In addition, thought-provoking sessions take place during town hall meetings where interesting and eminent professionals from outside IISER Pune are invited to discuss a theme, and where students can interact with them. During and before the event, several social activities are carried out such as clean-up drives around Pune, or blood-donation drives which help to raise awareness about specific causes as well as IISER Pune.

### **QUIZ CLUB**

Quiz club has maintained a regular enthusiastic schedule throughout each of the semesters. The club typically ends the semester with a mega event that is very popular with the students.

This is not an exhaustive list of the student club activities. While a few clubs are highlighted here to offer a flavour of the campus ambience, there are several more student clubs that engage the IISER Pune community through the year.

# **CONTACT DETAILS**



### **ACADEMICS**

BS-MS and Master's Programmes graduatestudiesoffice@iiserpune.ac.in

Doctoral Programme (PhD and Integrated PhD) doctoral office@iiserpune.ac.in

Centralised BS-MS Admissions https://iiseradmission.in/

### STUDENT PLACEMENT RELATED QUERIES

cdc@acads.iiserpune.ac.in

### **DONATE TO IISER PUNE**

giving-to@iiserpune.ac.in

### **COLLABORATIONS / INDUSTRY PARTNERSHIPS**

dean.iro@iiserpune.ac.in

### RESEARCH AND DEVELOPMENT PROJECTS

dean.rnd@iiserpune.ac.in

### FOR USE OF MAJOR RESEARCH EQUIPMENT

skills@iiserpune.ac.in

### INTERNATIONAL RELATIONS

iro@acads.iiserpune.ac.in







# INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH PUNE

Dr. Homi Bhabha Road, Pashan, Pune 411008, India Phone: +91-20-25908001 | Website: www.iiserpune.ac.in



in Linkedin.com/school/iiserp

o Instagram.com/iiser.pune

