

## INTERNATIONAL INSTITUTE OF **INFORMATION TECHNOLOGY BANGALORE**

Graded A+ by NAAC









- Post Graduate Education and world-class research in Information Technology (Computer Science, Data Sciences, Networking & Communication, VLSI, Mathematics and Basic Sciences and IT & Society)
- World-class faculty, vibrant alumni community
  - Cutting-edge research
  - Close industry collaboration
- State-of-the-art campus
- infrastructure



Since its inception, IIIT Bangalore, with its unique model of education, research, and industry interaction, has grown in stature to become an institution of considerable repute in academic as well as corporate circles. The Institute works in partnership with the industry, while retaining the freedom of an academic institution. It is inspired by other renowned institutions, and strives to maintain an academic culture that is on par with the best.

## **Unique Factors**

There are several factors that position IIIT Bangalore as a unique brand in the field of IT education and research. Some of them are:

**Broad academic philosophy** with regular curriculum review and appropriate use of technology which includes learning management systems (LMS), lecture capture solutions, automated assessments and so on.

Practice-oriented learning through project electives, lab work and internship.

**Emphasis on research** through centres of research such as E-Health Research Centre (EHRC), Centre for Data Sciences (CDS) and Centre for Information Technology and Public Policy (CITAPP) that foster multi-disciplinary research.

Entrepreneurial support through the Innovation Centre and startup ecosystem.

Excellent peer group with exclusive merit-based intake.

**Global exchange** and collaboration with universities including MIT, Boston; University of Berlin; Hof University, and others of international repute.

**Student development** through participation in initiatives such as alumni programmes, branding, placement, chhayachitra, magazine committee, comic club, theatre and art club.

## Leadership

The governing body of IIIT Bangalore consists of eminent personalities from the industry and reputed institutions from across the world. They come from diverse cultures, bring unique perspectives and together, they focus on a single goal — for the institute to play a key role in the global IT scenario with a focus on world-class education and research, entrepreneurship and innovation.



Mr. S. Gopalakrishnan is the Chairman of IIIT Bangalore's Governing Body. He holds a Masters degree in Physics and Computer Science from IIT Madras. He along with Mr. N.R. Narayana Murthy and five others founded Infosys in 1981.

**Mr. S. Gopalakrishnan**Chairman Governing Body, IIIT Bangalore



Dr. Debabrata Das is serving as Director of IIIT Bangalore (IIITB). Before joining IIITB in 2002, he had served at G S Sanyal School of Telecommunication at IIT Kharagpur and later at Kirana Networks in New Jersey, USA. He is Principal Investigator and nodal officer of project under National Mission for Interdisciplinary Cyber Physical Systems in the areas of Advanced Communication System, from DST, Govt of India. He is CoPI of a project from Tejas Networks on network node reliability. He was PI of multiple sponsored projects from Intel, Hewlett Packard, Microsoft, Motorola Research, Nokia, Govt. of India on the areas of Broadband Wireless MAC/QoS/Energy-saving, IMS. His main areas of research interest are IoT and Wireless Access Network's MAC, QoS, Power saving. Dr. Das received his Ph.D. degree from the Indian Institute of Technology Kharagpur. He was awarded the Prestigious Prof. SVC Aiya Memorial Award 2022 for research guidance in the areas of Telecommunications.

**Prof. Debabrata Das**Director, IIIT Bangalore

"IIITB focuses on the fundamentals of learning and kindles inquisitive minds into new areas by some of the finest faculty members who are deeply involved in world class teaching and state-of-art research in a conducive campus environment."

#### **ACADEMICS**

In 2005, IIIT Bangalore was recognised as a "Deemed University" by the University Grants Commission of India (UGC India). With the added benefit of being an autonomous institute, where the Senate approves degrees and curricula to stay up to date with trends, IIIT Bangalore has been at the forefront of ushering in the change. More than 3,500 students have graduated from the Institute since 1999, and serve in over 100 well-known IT product and services companies. The Institute alumni have also founded over 50 enterprises.

IIIT Bangalore follows a very broad academic philosophy with the 3-tier approach of programme, course, and teaching, which distinguishes it from other educational institutions and creates opportunities to make an impact on academics at various levels.

#### **Programmes**

- Strong curriculum design process
- Curriculum review every three years
- Feedback incorporated from past students, faculty members and industry

#### Courses

- State-of-the-art courses in line with the current trends in technology
- Core & elective courses
- Special topics in electives
- · Project electives
- Internships

#### **Teaching**

- Close interaction between faculty and students
- Innovative pedagogy principles
- Learning management system
- Lecture capture solutions
- Digital library

# **Academic Programmes**

Integrated Masters Programmes - 5-year full-time programme after class 12

Integrated M.Tech.
(Computer Science and Engineering)
Integrated M.Tech.
(Electronics and Communication Engineering)

**Post Graduate Research Programmes** - both
full-time and part-time (for
working professionals)

Master of Science by Research Ph.D

**Masters Programmes** 

- Programme after bachelors degree

M.Tech. (Computer Science and Engineering (CSE)- 2 years)

M.Tech. (Electronics and Communication Engineering (ECE) - 2 years)

M.Sc. (Digital Society - 2 years)

Sponsored M.Tech. (Computer Science and Engineering - 2.5 years) Continuing Professional Education - PG programmes designed for

programmes designed for working professionals

Executive Post Graduate Programme in Data Science Software Development Machine Learning & Artificial Intelligence

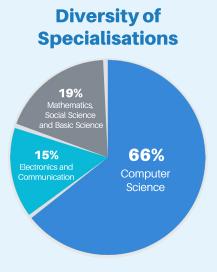
Advanced Programme in Data Science

Advanced Executive Program in Cybersecurity Advanced Certificate
Programme in
Data Science
Machine Learning & Deep
Learning
Machine Learning & NLP
in Big Data
Cloud Computing
Cybersecurity
DevOps
Blockchain

## **Faculty Members**

IIIT Bangalore prides itself in setting the highest standards in the selection of its faculty members, most of whom have international qualifications. All full-time faculty members have a Ph.D. followed by considerable work/research and teaching experience in leading institutions around the world. With highly dedicated and accomplished faculty members, students get exposure to real-world experiences that are brought into the classroom. The faculty members at IIIT Bangalore are at par with the best in the country and other leading institutes across the globe.

The faculty members at IIIT Bangalore have published papers in around 250+ journals (both national and international). Some of them include IEEE Systems Journal, The Journal of Organic Chemistry, American Journal of Engineering Education, Economic and Political Weekly, CSI, Journal of Computing, Telecom Business Review, Millennial Asia, Journal of the Ramanujan Mathematical Society, International Journal of Big Data Intelligence, The European Physical Journal E, MIS Quarterly and more.



# **University Exchange Programmes**

IIIT Bangalore has a very active and vibrant international student exchange programme. Faculty work with their counterparts in leading international academic universities funded by organisations such as National Science Foundation, USA (NSF), European Union (EU), Netherlands Organisation for Scientific Research, Netherlands (NWO), Research Councils UK (RCUK) and the World Bank. Students get a chance to visit international universities and work on interesting research projects. These universities are spread over different continents, from North America to Europe to Asia. Most of the student visits to these prestigious universities have been fully funded either by IIIT Bangalore or the host universities.













# **Industry Collaboration**

Since 1999, the industry has partnered with IIIT Bangalore and has played a crucial role in its growth. It has paved the way for research opportunities for both students and faculty members while engaging students as interns and sponsoring faculty research projects. Students gain exposure to the current trends and critical problems in the industry. IIIT Bangalore also offers short-term courses for industry professionals to promote their continued competence and career growth. The industry has accelerated the growth of the Institute in many ways:

- Providing adjunct faculty for teaching courses
- Offering internships and full-time placements
- Awarding student scholarships
- Engaging faculty members and students in joint research projects
- Sponsoring labs and software tools
- Supporting the Incubation Centre
- · Sponsoring Chair professorships
- · Supporting Centers of Excellence
- Funding corpus

## Scholarships

The selection for award of scholarship is done by the sponsor's representatives based on the academic achievements and/or financial need and interview performance of the student. Typically, scholarships are given in two categories – merit-based and need-based. The merit scholarships are awarded based on a student's academic achievements, scholarly research activities, research publications. Need-based scholarships are awarded based on financial requirements. The institute also facilitates several scholarships offered by various state governments as and when students apply.



Institute Scholarship Need-based and Merit-based

IIIT Bangalore Alumni Sponsored Scholarship Need-based

#### **Placements**

- IIIT Bangalore provides 100% internship for students in their final semester. The institute also provides a platform for placements support and has help most of the students get jobs in some of the best organizations in India and abroad.
- The Median Salary of IIIT Bangalore students is one of the best in our country. IIIT Bangalore students receive some of the best compensation in the industry.
  - The average compensation for 2022 graduates INR 25 Lakhs for CSE and INR 27 Lakhs for ECE)
- Our recruiters come from various domains such as E-Commerce, BFSI, Research & Development, IT Product, IT Services, Academics, Hardware, Networking and many more.
- Each year, over 100 top companies visit IIIT Bangalore to recruit our students.
- Every year some of our students who are interested in pursuing research have received admits to join top Universities and research groups such as Google Brain, Harvard, McGill University, Microsoft Research & CERN.

#### RESEARCH

## 7 Research Domains

At IIIT Bangalore, the faculty members are strongly encouraged to pursue research agendas that are relevant to the industry and society at large. The faculty members take proactive interest in pursuing open research problems that are relevant to different stakeholders, not only as a means of supporting their own research, but also to act as a catalyst of change in the society.

Research at IIIT Bangalore is divided into "Research Domains" corresponding to academic streams in which specializations are offered. Each research domain comprises multiple faculty members, who manage their own lab and each research lab has its own custom infrastructure to suit their research agenda. IIIT Bangalore also showcases its research to the outside world through its annual research event titled *Research, Innovation, Society and Entrepreneurship (RISE)*.

Computer Science - Algorithms, Cryptography,
Computational Biology, Computational Sustainability,
Services Computing, Intelligent Transportation
Systems, Optimisation, Artificial Intelligence, Natural
Language Processing, Computer Architecture, Robotics,
Feedback Control Systems, Computational Topology,
Computational Geometry. Geometric Computation,
Computational Modelling, Microprocessor Design,
Geometric Algorithms, Discrete Geometry, Model
Checking, Theorem Proving, Programme Analysis.

**Data Sciences -** Visual Analytics of Geospatial Data, Topological Data Analysis and Visualisation.

**Software Engineering** - Requirement Engineering, Software Testing, Verification and Validation, Model Checking, Theorem Proving, Software Architecture, Programme Analysis, Automated Assessment.

#### Mathematics & Basic Sciences - Chemistry:

Computational Chemistry, Electronic Structure Calculations, Structure & Energetics of van der Waals Complexes.

Mathematics: Number Theory; in particular, Algebraic Number Theory, Diophantine Equations, Galois Module Structure and Elliptic Curves.

Physics: Dynamical Systems Theory, Complex Systems and Soft Matter Physics including Complex Fluids, Cavitation & Bubble Dynamics, studies of Instabilities & Synchronization in Nonlinear Systems (both physical, biological, and polymeric systems); 3D Simulations and Modeling of Hydrodynamic and Magnetohydrodynamic Turbulent Flows (involving research in fundamental physics / astrophysics / mechanical engineering).

**Networking, Communication & Signal Processing -**Software Defined Networking, Internet of Things,
Network Optimization, Communication for IoT, Security
and Privacy for IoT, Speech Processing.

**VLSI Systems** - Model Based Hardware-Software Co-Synthesis of Embedded Systems, Assistive Wearable Medical Devices, Mixed-Signal Circuit Design, in particular high speed & resolution ADCs, Microprocessor Design.

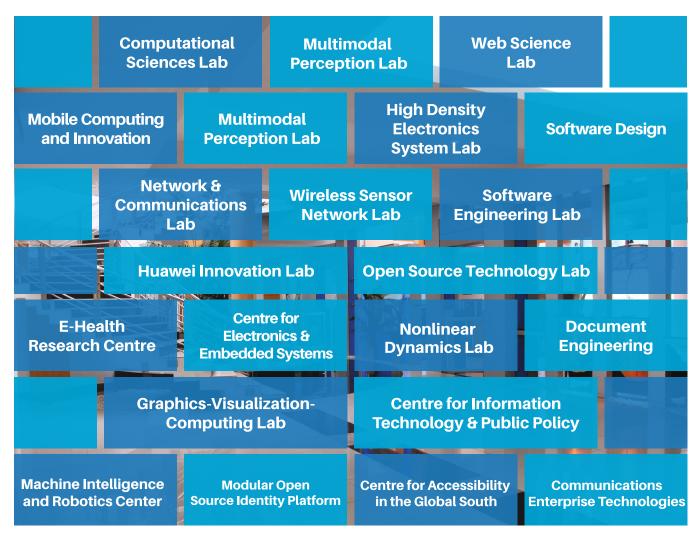
Information Technology & Society -ICT for
Development, Open Development, e-Governance,
Biometrics and Digital Identities in Governance, Governance
Analytics and Toolkits, ICT and Health (specifically related
to aspects concerning household data, community/frontline
workers and the public health system), Gender and ICTs,
Social Media, Public Information Infrastructure, Innovation
Systems in the ICT Industry, ICT and Work Practices in
Organisations, Political Economy of Information.

# **High Points**

There are various examples that showcase IIIT Bangalore's expertise in the research arena. Some of the notable achievements of the Institute are:

- Ramanujan, Math and IT (RMIT) Conference held annually.
- Annual Summer School on Theoretical Computer Science.
- EMPOWER Assistive Technology Conference held annually.
- Web Science for Development (WS4D) since 2019. It has participation from researchers in India, UK and US so far.
- ACM CODS COMAD, Premier Data Science Conference hosted by IIITB in 2021 & 2022.

## Research Centres & Labs



## **Sponsored Projects**

IIIT Bangalore has strong research groups that have been developed in the years since attaining the deemed university status. The Institute has taken up research projects funded by notable organisations and institutes of repute.

Some of the ongoing projects of 2016-17 are sponsored by

- Microsoft Research Labs
- EMC India
- Science & Engineering Research Board, New Delhi
- Department of Electronics & Information Technology
- Indian Institute of Management IDEA Telecom Centre of Excellence (IITCoE)
- University of California, Irvine
- SIRC Singapore Internet Research Centre
- Mphasis Limited, Bangalore
- TU Delft, The Netherlands
- Siemens Technology and Services Private Limited, Mumbai
- National Institute of Mental Health and Neurosciences (NIMHANS)
- DST Young Scientist Scheme
- The Royal Academy of Engineering
- CISCO
- CGI

- DRDO Defence Project
- Board of Research in Nuclear Sciences (BRNS)
- Ministry of Social Justice and Empowerment (MSJE)
- Digital India Corporation, GoK
- Google Inc
- Tata Trust
- Omidyar Networks
- Bill and Mellinda Gates Foundation
- Norwegian Agency for Development Cooperation
- Oxford Internet Institute Workshop FCRA
- University of Duesto
- IBM
- Gooru Labs R&D
- Sonata Software Ltd
- Facebook Research Grant
- Huawei Project ICT Innovation
- Fidelity

## Infrastructure

The Institute offers world-class infrastructure and an ambience perfectly conducive to teaching, learning and research for both students and faculty. The main campus area of 9.002 acres has five main buildings and is well planned with facilities like Innovation Centre, academic blocks, research labs, state-of-the-art classrooms, playground, library, food court, medical room and multipurpose hall.



Smart classrooms, with high-speed data networks



WiFi enabled campus



24x7 security



Separate hostels and gymnasium for both boys and girls



Uninterrupted power supply



Solar power panels



In-house Sewage Treatment Plant (STP)



90,000 sq. ft. of air-conditioned space

The campus is equipped with sports facilities for outdoor activities like Jogging, Cricket, Football, Basketball, Volleyball, Lawn Tennis, Throwball, and indoor activities like Badminton, Table Tennis, Carom, Chess.



**FOOD COURT** 



**TENNIS AND BASKETBALL COURTS** 





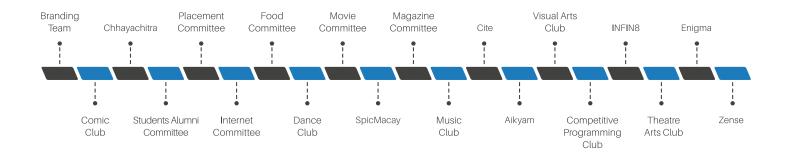
## Campus Life

IIIT Bangalore has a thriving residential student community and a campus that features lush green lawns and a musical fountain, providing an ideal learning environment to stimulate intellectual and personal growth. Students forge great relationships and grow by joining various activity-based clubs, playing sports and truly enjoying their campus life.

The campus is diverse, energetic, and constantly alive. It reflects the dynamic aspect of the student community, with celebrations of regional festivals. The Institute has a relaxed, friendly atmosphere, but with a constant buzz of excitement.

Students get many opportunities to participate in conferences, seminars, guest talks, and to interact with many well-known and accomplished visitors, including Nobel laureates, renowned scientists, eminent persons from the industry, the government, and reputed institutions from around the world.

IIIT Bangalore believes that student clubs are an integral part of the total education programme. Students can join various clubs which provide forums for discussion and opportunities to pursue a particular interest, to celebrate culture or just to have fun!









**MIMEACT** 



LIGHTING CRACKERS TO CELEBRATE DEEPAVALI



POOKALAM FOR ONAM CELEBRATION

### **Student Achievements**

#### 3500+ students

IIIT Bangalore has a proud history of garnering student recognitions in various spheres. The Institute helps each student set, strive for and achieve personal goals of excellence in all they do.

Students get opportunities to participate in various clubs and committees of the Institute, as well as in events and competitions around the country and internationally. Some of the recent notable student achievements are:

1<sup>st</sup> place in DeFi Blockchain hackathon hosted by the Finance Club of **IIT Bombay in 2022** 

Won the NetApp Academia Hackathon in 2022

Won 1<sup>st</sup> place in Dolat Capital's Hackathon 2022

Selected out of 7 teams in AI in Fashion and Design Hackathon organized by the French Institute in India & Consulate General of France in Bangalore in 2022 • 1<sup>st</sup> place in Praxis Data Science Students Championship 2022

 1<sup>st</sup> prize for Moralis sponsored track in Hackathon "Road to web3" in 2022

1<sup>st</sup> prize in Basketball in a sports event, **Olympiada by SIBM** on January 18, 2019.

1<sup>st</sup> prize in debate competition at **Rotary Club, Bangalore** on February 25, 2019.

11 girls selected for **Girlscript Summer of Code** (**GSSoC**), a month long open source programme.



### **Alumni**

IIIT Bangalore alumni consisting of over 3,500 graduates (as on December 2021) are the true ambassadorsof the Institute. They occupy key positions in major Indian and international corporations and are actively engaged in mentoring current students on the campus.

- ABB
- Amazon
- Apple
- ByDesign
- Cisco
- Cognizant
- Covansys
- Daimler Chrysler
- Dataweave
- · Delphi

- D-Link
- Fiberlink
- Flipkart
- GE
- Google
- HP
- Huawei
- IBM
- i-flex Solutions
- Infosys
- Intel

- Microsoft
- Mathworks
- Morgan Stanley
- NetApp
- Novell
- Nvidia
- Oracle
- Oracle
- Qualcomm
- Sandisk
- Samsung
- SAP

- Sasken
- Sifive
- Sprinklr
- Tata Consultancy Services
- ThoughtWorks
- Rubrik
- Walmart
- Western Digital
- Wipro
- ZenSar Technologies

## **Innovation Centre**

IIIT Bangalore Innovation Centre is a hub for Information and Communication Technologies (ICT) research, innovation and entrepreneurship. It supports and incubates new ventures from startup entrepreneurs working on innovative ideas. It promotes commercialization of IP generated by faculty and students of the Institute by incubating their ventures.

The Innovation Centre has a close association with the industry with the latter setting up R&D Centres for collaborative research. Supported through government funding and CSR initiatives of the



corporate companies, the Innovation Centre has a vibrant end-to-end ecosystem - office infrastructure, mentorship, and access to the industry - for incubating new age companies.

#### Incubation

A Section 25 company under the Companies Act, the Innovation Centre provides an end-to-end ecosystem for incubating technology-driven startups. Over the years, the Innovation Centre has incubated a number of successful startups.

Startups	60+	80+	New products/services brought to market
Full-time jobs created	300+	10+	Startups raised funding



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