

# M.Sc. Digital Society PROGRAMME PROSPECTUS



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### PROGRAMME GENESIS

IIITB has been introducing innovative academic programs since its inception to meet the evolving requirements of IT research and practice in India and elsewhere. Keeping up with this tradition, in 2015, we added Master of Science in Digital Society (MScDT), an interdisciplinary academic program to its offerings to prepare new-age digital society professionals and researchers. This programme welcomes students from diverse academic backgrounds to learn together and help build an equitable, inclusive and sustainable digital society. We believe that this unique and cutting-edge academic programme would further consolidate IIITB's position as a leader in innovative ICT education.

# PROGRAMME OBJECTIVE

#### We train students in



Policy making and advocacy



Sustainable technology solutions across domains



Inclusive design for diverse populations



Interdisciplinary research

## PROGRAMME AT A GLANCE

# Learning Outcomes

- Identify the needs of the diverse users of ICT in different social and industrial contexts
- Understand technological possibilities and their potential to solve the problems
- Design solutions for the optimal adoption by heterogeneous user segments
- and the complex ways in which it shapes society, social institutions, and culture
- Visualize macro-level needs and design scalable technology to cater to large user segments in different contexts
- Analyze intricate
  relationships and practical
  choices at the intersection
  of technical design, policy
  frameworks, and ethics

#### Programme Overview

To the extent that the digital and the social fundamentally shape each other, our student composition and course offerings reflect this intertwining to a great degree. Our curriculum consciously engages with dimensions of both technology and social sciences in all its course and project offerings. Our students learn to design, develop and deploy digital technologies and evaluate their impact for diverse populations across domains like governance, healthcare, education, infrastructures, media to name a few.



# Who is this Programme For?

If you believe in building a career in technology that impacts society, this program is tailor-made just for you.

# PROGRAMME HIGHLIGHTS



Flexible Academic Approach



Globally Pertinent Research



Distinguished Faculty Network



Resourceful Collaboration Opportunities



Outstanding Peer Support



Interdisciplinary Curriculum

# COURSE DISTRIBUTION

COURSE	CREDITS
Preperatory Term	0
Core Courses	34
Electives	16
Thesis/Internship	16
Total	66

#### **Preparatory Term (2 weeks)**

This two-week orientation will consist of a series of sessions to expose students to the foundational logic of the programme and its interdisciplinary underpinnings. This will involve

- Technical Foundations (to cover programming and database fundamentals)
- Social Science Foundations (to cover some fundamental ideas in social science, reading comprehension and writing practice)

### CURRICULUM STRUCTURE

### **SEMESTER 1**

#### All core courses

- DT 102: Digital components of a connected society
- DT107: Application Development for a Connected Society
- DT 113: Qualitative Research Methods
- DT 308: Quantitative data analysis for public policy
- DT 104: Technology and society
- DT 110: Enterprise Software Development

### **SEMESTER 2**

#### **Core Courses**

- DT 205: Technology in development
- ICT Policy and regulation
- DT 204: Social complexity and systems thinking
- DT 108: Human Computer Interaction

#### Electives Offered (Any one to be chosen)

- DT 215: Digital sociology
- DT212: Techno-Economics of Networks
- DT 211: Dynamics of the Information Technology industry
- DT 216: News Media Literacies

### **SEMESTER 3**

#### **Electives Offered**

- DT 303: Advance qualitative research methods
- DT 385: Cyberspace, globalization and location
- DT 313: Technology Ethics and Artificial Intelligence
- DT 314: An Introduction to Accessibility in the Global South
- DT 306: Privacy in the digital age
- DS 703: Geographic information system (GIS)
- DT 312: Advanced Human Computer Interaction
- DT 307: The Web and the Mind
- DT 311: Software Product Management
- DT 219: Societal Platform Thinking

### **SEMESTER 4**

In the final term, students will be required to either:

- (a) work on a Master's thesis OR
- **(b)** undertake an internship to further sharpen their professional skills by applying the learnings from courses undertaken during the previous terms.

# SPECIALISATION TRACKS

Students may choose to specialise in three tracks. The programme's flexible approach allows for students to take up different pathways towards each specialisation based on their aspirations. Students can take upto five electives including taught courses, reading electives and project electives in different combinations from the available list of courses. The mapping of courses per specialisation track mentioned below are only indicative.

#### **Human-Centered Design**



#### **Data-driven Digital Design**



#### **Research and Policy Studies**



# CAREER OPPORTUNITIES

#### Our alumni have gone on to make their mark as



### in many notable organisations such as



# **CURRENT STUDENTS**& ALUMNI

At the M.Sc. Digital Society programme, the student community is diverse and intellectually driven. People from all walks of life have been part of the M.Sc Digital Society community in the past.

A few of these include:



#### HUMANITIES, SOCIAL SCIENCES & LAW

A number of students join from social science and economics backgrounds with a keen interest to step into understanding digital technologies through a multi-disciplinary lens.

Our alumni from such backgrounds have worked or continue working on a diverse range of areas - from Human-computer interaction to accessibility.



#### ARTS AND DESIGN

Given the correlation between technology and its end-users, students from arts and design bring vital contributions to the table.

Students from such backgrounds have gone on to explore areas with a focus on technology design such as user research, urban design, product analyst etc.



# ENGINEERING AND APPLIED SCIENCES

The fact that technology does not exist in silos is a well-understood fact today. Many from these backgrounds step into the programme with an aim to understand the inter-play of social, political and economic factors within our digital society

Graduates who came in with such backgrounds have found themselves as research scholars, policy researchers etc.

#### **Student Testimonials**



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What is great about the Digital Society programme is that it made me deal with tangible notions of what technology is and how people interact with it.

Tejas Pande, Class of 2017



66

This programme challenges you and pushes you to think of technology from various standpoints.

Priyanka Arora, Class of 2017



PP

I was interested in looking at technology through a lens different from a 'tech-forward' perspective. This programme allowed me to do that.

Pradyumna Taduri, Class of 2019

#### **International Students**

IIIT Bangalore has an ongoing collaboration with the Agency for Human Resources Development and Research on Communications and Informatics, Ministry of Communications and Informatics (MCIT), Republic of Indonesia. As part of this collaboration, MCIT has been sponsoring upto 10 Indonesian nationals, identified as potential future leaders of Indonesia, to go through the MSc (Digital Society) programme at IIITB every year since 2018.

### **FACULTY**

#### <u>Amit Prakash</u> *Associate Professor*

Research areas: ICT and Development (ICTD), e-Governance, Public Policy, Information Systems, Accessibility.

#### **Courses Taught:**

- DT 313: Technology Ethics and Artificial Intelligence
- DT 308: Quantitative Data Analysis for Public Policy
- DT 204: Social Complexity and Systems Thinking
- DT 314: An Introduction to Accessibility in the Global South



#### <u>Balaji Parthasarathy</u> *Professor*

Research areas: Globalization and Economic Development; Technological Change and Innovation Policy; Information and Communication Technologies for Development; Urbanism and Urbanization

#### **Courses Taught:**

- DT 211: Dynamics of the Information Technology Industry
- DT 385: Cybergeography, Globalization and Location
- HSS 108: The City: A Crucible of Innovation



#### <u>Bidisha Chaudhuri</u> *Associate Professor*

Research areas: Digital Governance and Infrastructure, Critical Data Studies, Technology and Work, Science and Technology Studies, ICTs for Development (ICTD)

#### **Courses Taught:**

- DT 104/HSS 104A: Technology and Society
- DT 215/HSS 106: Digital Sociology
- DT 313: Technology Ethics and Artificial Intelligence
- HSS 109: A History of Ideas



#### Janaki Srinivasan Associate Professor

Research areas: Political economy of information-based development, privacy, critical social theory, algorithmic management of work, politics of work automation, situated learning at work, financial inclusion, ICTD

#### **Courses Taught:**

- DT 306: Privacy in the Digital Age
- DT 303: Advance Qualitative Research Methods
- DT 205: Technology in Development



# Preeti Mudliar Assistant Professor

Research areas: Human Computer Interaction (HCI), ICT and Development (ICTD), gender, infrastructures, biometric systems, platform economies, and news processes.

#### **Courses Taught:**

- DT 113: Qualitative Research Methods
- DT 108: Human Computer Interaction
- DT 312: Advanced Human Computer Interaction
- DT 216/HSS 107: News Media Literacies



# V. Sridhar Professor

Research areas: Techno-economic growth modeling of telecommunication networks and services; Radio spectrum allocation, management and policy; Telecommunications, Internet and Privacy policy issues in developing countries; Management of Distributed Software Projects

#### **Courses Taught:**

- DT 306: Privacy in Digital Age
- DT308:Quantitative Data Analysis for Public Policy
- DT212/ DS/NC 615: Techno-Economics of Networks
- DT203: ICT Policy and Regulation
- HSS101: Economics



#### <u>Chandrashekar Ramanathan</u> <u>Professor</u>

Research areas: Data Sciences, Software Architecture and Technology for, Software Engineering, Enterprise Content Management and Knowledge, Semi-structured Databases

#### **Courses Taught:**

• DT 110: Enterprise Software Development



#### Jaya Sreevalsan Nair Associate Professor

Research areas: Spatial big data analytics (multivariate/tensor/network data modeling and visual analytics)

#### **Courses Taught:**

- DT107: Application Development for a Connected Society
- CS855: Data Visualization



#### <u>Srinath Srinivasa</u> *Professor*

Research areas: Web Science, Text mining, Network analysis, Multi-agent systems

#### **Courses Taught:**

DT 307: The Web and the Mind



# T K Srikanth Professor

Research areas: Mobile and cloud applications, Geometric modeling and graphics, 3D printing, Distributed computing, eHealth, Data privacy

#### **Courses Taught:**

- DT 306: Privacy in the Digital Age
- DT 102: Digital Components of a Connected Society



# RESEARCH AND INNOVATION



### CENTRE FOR ACCESSIBILITY IN THE GLOBAL SOUTH (CAGS)

Centre for Accessibility in the Global South (CAGS) is a research and outreach unit at IIIT Bangalore, established in partnership with researchers and practitioners at Microsoft Research India and Vision Empower.

The Centre strives to Research, Rethink and Respond to Disability. We engage in insightful research relating to disability and accessibility in the global south. .



# CENTRE FOR IT AND PUBLIC POLICY (CITAPP)

The Centre for Information Technology and Public Policy (CITAPP) at IIIT Bangalore is an interdisciplinary think-tank set up to focus on the policy challenges and the organizational demands made by technological innovation.

Of particular interest to the Centre is how technological advances, along with institutional changes that harness the legitimacy and the powers of bureaucracies and market, address the needs of underserved communities.





The E-Health Research Center (EHRC) is an interdisciplinary Research Center that spreads across all areas of research interests in the institute towards doing applied research in the use of Information & Communication Technologies (ICTs).

The centre focuses on the healthcare needs of the underserved and marginal population groups in India and similar regions across the world, with an objective of improving affordability, accessibility and availability of technology solutions covering [medical] devices, [health] data, and delivery [platforms and models].



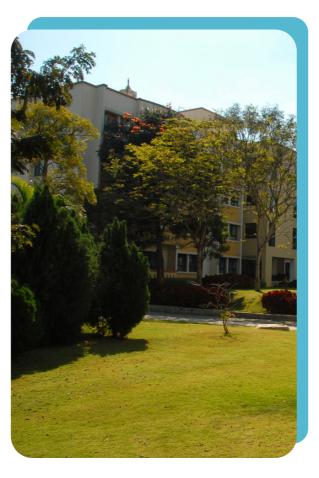
### IIITB INNOVATION CENTRE (IC)

IIITB Innovation Centre brings together startups, government agencies, corporate and institutional partners, industry mentors, and eminent academicians from its parent institution IIITB.

The Centre collaborates with exceptional researchers, innovators and communities to co-create innovation, startups, knowledge and socially-relevant solutions using digital technologies, for a range of problems. It has contributed to the growth of the startup ecosystem in Bengaluru.

# **LIFE ON CAMPUS**

IIIT Bangalore campus is designed to provide an immersive college experience to its students, inside and outside the classroom. It is a fully residential campus, located in Electronic City, Bangalore.







### **FOOD & LIVING**

The institute is home to an ever expanding menu of fresh and inventive dining. Healthy nutrition is needed for all round performance and hence, the cafeteria has menus offering nutritious and wholesome food to ensure a well-balanced diet. The menu is curated monthly by students' food committee, keeping it in line with students' taste buds. The committee interacts with the food vendors for the mess and café to decide the menu and also inspects hygiene conditions, apart from seeking students' feedback about food quality.





IIITB campus is a home away from home for its students coming from across the country and abroad. The fully residential campus has two blocks of girls' hostel called Lilavati and two blocks of boys' hostel called Bhaskara and Visveshwara. There is round the clock security and all rooms are equipped with WiFi. The campus is well-connected to the rest of the city.





### **CLUBS AND ACTIVITIES**

Various student committees are active on the campus and look after specific aspects of student activities. A group of students also voluntarily get together to pursue an extra curricular or co-curricular activity with some broadly defined goals, and form a student club. Clubs on campus include:

- The Robotics Club
- Movies Club
- Chhayachitra- Photography Club
- Art Club
- Music Club
- Zense Club Learning outisde classrooms

- Lean In Club Women in Tech
- Parvaaz Theatre Club
- 8bit Official Magazine of IIIT Bangalore
- Aikyam Social Wing of IIIT Bangalore
- Aksh Literature Club
- Debate Club
- Dance Club







### STUDENT ACTIVITIES COUNCIL (SAC)

The Student Affairs Council (SAC) is the apex students body at IIIT. It oversees the functioning of the various committees presides overall student and acts as a liaison between the student body and the administrative authorities of the college.

SAC engages with discussion with the Director, Deans, Registrar, Wardens, and Coordinator Student Affairs on academic and non-academic issues affecting the student body in general. The broad responsibility of SAC is to facilitate the smooth functioning of all the student activities at IIITB.

# **QUESTIONS?** CONTACT US.

Write to us at: admissions-ds@iiitb.ac.in

To know more, visit our **Admissions Page** and follow us on social media









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