About IIT Kharagpur









Kharagpur - a dusty town tucked away in the eastern corner of India, famous until 1950 as home to the longest railway platform in the world - became the nursery where the seed of the IIT system was planted in 1951. IIT Kharagpur started its journey in the old Hijli Detention Camp in Eastern India, where some of the country's great freedom fighters toiled and sacrificed their lives for India's independence. Spurred by the success of IIT Kharagpur, four younger IITs sprouted around the country in the two following decades, and from these five came thousands of IITians, the brand ambassadors of modern India. It was the success of this one institution at Kharagpur that wrote India's technological odyssey.

Program Features / Structure

Class activities: 60%

Evaluation: 20%

Assignment: 20%

Program Schedule and Venue

12-hour, 1-credit course, with one 1-hour lecture per day, conducted across the period of 1-31 March 2027.

Humanities and Social Sciences, IIT Kharagpur (Online Mode)

Program Fee

IIT Kharagpur Faculty- 3000

IIT Kharagpur Non-Faculty- 2500

IIT Kharagpur Student- 1000

Industry- 5000

Outsider student- 1500

Researchers- 1800

Volunteers- 1000

Who will benefit (Eligibility)

BTech	MPhil
BSc	PhD
BA	Educators
MA	Teachers
MSc	Working
MBA	Professionals

Anyone interested in water policy studies

Last date of registration

28th February 2027

Accommodation

The course will run in online mode.
Accommodation is not needed.

The Institute takes pride in its relentless effort to provide the best platform for both education as well as research in the areas of science and technology, infrastructure designs, entrepreneurship, law, management, and medical science and technolog

Short-Term Self-Sponsored Course On Urban Water Systems: Governance And Interventions

Indian Institute of Technology, Kharagpur

1 Credit Course, 1 Hour Class A Day
12 Classes (Total 12 Hours) between:

1st-31st March 2027

How to Apply

Use the link to apply ONLINE:
https://erp.iitkgp.ac.in/CEP/courses.htm

Signup → Login → Profile Fillup → Choose a Program → Apply Now

Payment if applicable is to be done ONLINE after getting short listed for the program.

Introduction / Overview

This course explores urban water systems as socio-technical, political, and ecological systems, focusing on cities in the Global South. It examines how infrastructure, governance, inequality, and informality shape water access amid urbanization and environmental stress. Key themes include water insecurity, sanitation, environmental justice, climate change, utility pricing, informal systems, and sustainable water management. Indian cities such as Delhi, Chennai, Kolkata, and Bengaluru, alongside cases from Africa and other Global South regions, provide comparative contexts. The course bridges engineering and humanities perspectives, introducing digital, data-driven, and AI-based approaches while considering their social and institutional implications.

Program Objectives

- Understand urban water systems, governance, and inequality.
- Examine water access and insecurity in the Global South.
- Analyse informality, sanitation, and environmental justice.
- Explore climate change and sustainable water management.
- Understand water pricing, utilities, and resource governance.
- Examine AI and digital technologies in water management.
- Develop interdisciplinary and policy-oriented approaches to urban water challenges.

What You Will Learn

- Understand urban water systems and their links with urbanization and governance.
- Examine water insecurity, inequality, poverty, and access in the Global South.
- Analyse gender, water access, and labour, especially under conditions of scarcity.
- Evaluate informal water practices alongside formal water services.
- Understand water markets, utilities, pricing, affordability, and cost recovery.
- Analyse the political economy of urban water, including state, market, and community roles.
- Examine climate change, vulnerability, risks, and adaptation in urban water systems.
- Explore sustainable water management, including circular, integrated, nature-based, and decentralized approaches.
- Assess digital technologies and AI in urban water management, including their limitations.

Course Coordinator:

Dr. Amrita Sen



Contact:
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Dr. Amrita Sen is an Assistant Professor of Sociology at the Indian Institute of Technology Kharagpur. Her research interests include cultural and political ecology, politics of forest conservation, urban environmental conflicts, and Anthropocene studies. In 2019, she received the 'Excellence in PhD Thesis Award' from the Indian Institute of Technology Bombay for her doctoral research on conservation politics in the Sundarbans. She was recently awarded a Junior Core Fellowship by the Central European University, Budapest, to work on environmental social science issues.

Key Resource Person:

Dr. Anindita Sarkar



Prof. Dr. Anindita Sarkar is a geographer, Professor of Geography at Miranda House, University of Delhi, and Senior Researcher at the Center for Development Research (ZEF), University of Bonn. Her research focuses on water governance, just transitions, climate risk and resilience, gender, inequality, water justice, and urban water insecurity. With a focus on South Asia and Africa, her work integrates political ecology, climate justice, and socio-technical perspectives to address sustainable development, water security, and governance.