About IIT Kharagpur

The Indian Institute of Technology Kharagpur is a first of its kind a public institution established in 1951. The Institute inaugurated by Maulana Abul Kalam Azad, was established to train scientists and engineers after India attained independence in 1947. However, over the years, the institute's academic capabilities diversified with offerings in management, law, architecture, humanities, etc. IIT Kharagpur has an 8.5 square km (2,100 acres) campus and about 22,000 residents. It is the first of the IITs to be established and is recognised as an Institute of National Importance. In 2019 it was awarded the status of Institute of Eminence. it has 19 academic departments, 17 multi-disciplinary centers/schools, and 13 schools of excellence in addition to more than 25 central research and development units.

Program Structure

Lectures from IIT Kharagpur faculties: 30%

Case study presentation from practicing Architects and Engineers: 20%

Site Visit with interactive Sessions: 30%

Workshop conducted by the faculty: 20%

Program Schedule and Venue

5-Days,22 – 26 June 2020 2019 (9 AM – 5PM)

Department of Architecture and Planning, IIT Kharagpur

Program Fee

Nil for TEQIP-III sponsored participants.

For others - INR 6,000/- (six thousand) including GST.

For Students - INR 3,000/- (three thousand) including GST.

Who will benefit (Eligibility)

Faculty from AICTE-TEQIP-III approved Engineering Colleges, School of Architecture, personnel from Government Institutions, Industry, and Research Organizations.

Last day of Registration

5

June 2020

Accommodation

Accommodation will be provided to the TEQIP-III sponsored participants at the campus Guesthouse. For other participants, the same will be provided on chargeable basis as per rule.

How to Apply

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

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

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

Contact Us

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NPIU

TEQIP-KIT

TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME FOR TEQIP KNOWLEDGE INCUBATION

NPIU - A Unit of MHRD, Govt of India for Implementation of World Bank Assisted Projects in Technical Education

Indian Institute of Technology Kharagpur

Structural Systems and Services for Special Buildings

5 Days
22-26 June 2020

Program Objectives

An architect usually is trained to design general buildings along with its relevant services and structural system. Common structural systems and its design like the load bearing wall or the beam column framed system of concrete or steel are known. Services form the lifeline of a building. A building can only be habitable when its services operate, be it water supply and sanitation or electrical services in case of a general building. However, this course targets audiences who are interested in structural services like civil engineering students, professionals apart from Architects. The course allows a training to design buildings of special use and of larger scale. The special services that are needed in buildings like airports, hospitals, auditoriums, and tall buildings. These services or structural systems are not covered in any of the architectural subjects usually offered in undergraduate curriculum. It is only learnt through design assignments from the codes and standards. This course will try to cover the services which are having specific application in buildings and its consideration in the design process. This will enrich one in the academia or in the profession.

Overview

The approach of the course would be to cover building services which special buildings require to function ideally. It will cover structural systems for different scales of building like tall buildings, large span buildings like auditoriums and airports. Vertical transport planning by elevators, principles of water supply and sanitation in multistoried building, ventilation and electrical routing principles in multiple use buildings will be included. Hospitals require special services in the operation theatres, the pathological laboratory, in-patient departments apart from the general services. Airport luggage movement is also an important service to be known to architects because considering the interlinked space between levels is the key for its functioning. Following the National Building Code for fire safety is a mandate however it should be known in much further detail when buildings are high-rise.

Course Outline

Long Span Structure Systems application in Stadiums and Airports

Air-conditioning System Design and Mechanical Services

Fire Safety and Protection guidelines and design solutions for special buildings

Vertical transportation design and Electrical Services in Tall buildings

Renewable energy generation in building and futuristic solutions

Structural Systems for Skyscrapers

Design guidelines and case study of Medical and Health care buildings

Special provisions and case study of Institutional buildings

Functional layout and Services Design for Airport

Auditorium and acoustical Services

Water supply in high-rise Buildings

Solid waste management in Hospitals, Hotels, High-rise Buildings

Department of Architecture & Regional Planning

In 1952, the Department of Architecture was conceived for ensuring a holistic integration of the development of science and technology with the normative and cultural dimensions of the human society and the region at large. The Department started offering Postgraduate Courses in 1958. The first Ph.D. degree from the Department was awarded in 1970. The Damodar Valley Plan, the first regional development plan of independent India, was formulated in this Department. The Department headed by Prof. Joy Sen is has been ranked 1st in NIRF for two consecutive years. The 16 faculty members of the department have regularly held positions of importance in professional bodies and with a team of research scholars contribute to labs as per their expertise in fields of housing, transportation, RS, GIS, disaster management, etc. Alumni of the Department are now well-established all over the globe and are source of immense inspiration. Their continual contribution to their alma mater, both in terms of experience and funding, makes the Department stronger.

About the Faculty

Dr. Shankha Pratim Bhattacharya

Dr Shankha Pratim Bhattacharya is presently an Assistant Professor in the Department of Architecture and Regional Planning, IIT Kharagpur. He is an Architectural Engineer by profession and has more than fifteen years of teaching experience. He did his masters in structural engineering and PhD on Modeling on Building Structure under Seismic Excitation. He has more than ten international papers and his area of academic and research interest includes earthquake-resistant building, building physics and energy-efficient design, building construction and management and structural systems.

Dr. Sumana Gupta

Dr. Sumana Gupta is presently working as an Assistant Professor in the Department of Architecture and Regional Planning, IIT Kharagpur. She completed her PhD in 2012 and joined the Institute after working for a brief period as an Urban Planner in a Consultancy Organization. She has worked in the area of facility planning for Indian railway stations. She also did her Master's degree in 2008 from the same Institute with a special interest in transportation and related planning. Prior to this she worked for fourteen years as a professional architect in Development Consultants Ltd and as a Lecturer in a Government Polytechnic College at Kolkata.