



## Continuing Education Programme Indian Institute of Technology Kharagpur

QIP program- Sponsored by AICTE

Website: <https://erp.iitkgp.ac.in/CEP/courses.htm>  
<https://sites.google.com/view/bharathhaithal/home>

### QIP Short Term Course On **Remote sensing, GIS and Image Processing using FOSS for Urban Planning** 05 – 10 March 2018

#### **Introduction**

Remote sensing, geographic information system (GIS) and global positioning system (GPS) provides extremely useful tools for Urban, environmental and natural resources management. They are widely recognized as supporting tools for the planning, monitoring, and management of the appropriate utilization of resources at the country, regional and global levels. This course provides an overview of the key concepts and principles in areas of Remote Sensing, GIS and Image processing to understand the genesis of urban issues. Various tools (Free and open source GIS), that can be used to address environmental problems and the role that the professionals can play in managing environment in their respective areas.

#### **Course content**

Principles of Remote Sensing, spectral characteristics of earth's surface [5 hours]

GIS introduction [3 hours]

Image processing basics [8 hrs]

Spatial data pre-processing, classification, land use land cover analysis, accuracy assessment, change detection, Applications to resources inventorying, monitoring and management. Ground truth data. Applications of Remote Sensing: urbanization, spatial metrics, Ecological Modelling, Landuse/landcover dynamics, working on Free and open source software: QGIS, Grass, GeoServer, R programming [36 hrs]

#### **Whom will the course benefit?**

Faculty from Universities, Engg. And Science Colleges, Industries, Non-governmental organization, consultants working in the area of image processing for various applications

#### **Faculty**

Lectures will be delivered by Indian Institute of Technology Kharagpur faculty members, Guest experts from IISc, IIIT Hyderabad and Industry.

This course is meant for teachers of engineering colleges recognized by All India Council for Technical Education (AICTE) Applications need to be sent through proper channel. There is no course fee for AICTE affiliated colleges. Selected teachers will be paid TA at actuals subject to the limit of Three tier AC train/bus fare by the shortest route from the place of work to Kharagpur and back. However, the maximum TA payable is Rs.3000/-. They will be provided with boarding and lodging as per QIP rules (Max 7 days). The total number of seats are limited to 60 for applying and 30 candidates will be selected for the course. Course fees include(s) tea and snacks during lecture schedules only (twice a day).

In addition, non-sponsored AICTE approved college teachers and other self-support teachers, scientists from research labs, practicing engineers from industries and other interested are eligible. They should pay the fees along with the application as under.

Students (Outside Kharagpur): 10000/-  
Students (IIT Kharagpur):10000/-  
Industry: 25000/-  
Non faculty/Self-support candidates: 12000/-

They will be entitled to participate in the course and receive the course material. Single room accommodation is available on the Institute campus at Technology Guest house. The participants have to request in advance along with the registration form for such accommodation. The lodging charges will be Rs.1500/- per day and Rs.1500+18%GST per day for Industry participants, subject to availability of accommodation. Course fees include(s) tea and snacks during lecture schedules only (twice a day).

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**Last date of application: 31<sup>st</sup> January 2019**  
**Intimation to Participants selected for the course:**  
**10<sup>th</sup> February 2019**

Apply at online by clicking "APPLY for CE Events" under EVENTS section in the Institute website  
[www.iitkgp.ac.in \(https://erp.iitkgp.ac.in/CEP/courses.htm\)](https://erp.iitkgp.ac.in/CEP/courses.htm)  
Non AICTE-QIP participants should pay their course fees online

**Note:**

- 1. Only selected participants would be informed by E-mail.**
- 2. You may bring Laptop on your own responsibility for hands on sessions.**