Institute of Photogrammetry & Geo Informatics (IPGI)

Remote Sensing | Photogrammetry | GIS / Web GIS | LiDAR | GPS/Survey

Post graduate diploma in "Geo-Informatics"

New emerging technologies like GIS and RS helps in solving complex man made world issues and touching all aspect of life. The role of a Geospatial expert is becoming more and more important in the decision making process. A practical knowledge is very crucial in order to understand the concept deeply to explore the innovative use of the technology and its application areas.

Who should attend this course?

This course is relevant for the students / professional graduate in earth Sciences (Geography, Geology, Environment, Disaster management) and for the students from other field like B.sc, computer science, engineering, architecture, agriculture, and mining who wish to build their career in geospatial industry and want to be proficient in applying geo- information science in their respective field.

What will be achieved?

The objective of the course is to develop an understanding and competence in, Geo spatial technology.

- Analyze geo-information problems encountered in professional domain and develop, apply the appropriate methods for studying and/or solving the problems
- Learn different technologies for collecting, acquiring and verifying spatial data
- Different Technology to generate, integrate, analyze and visualize spatial data
- Apply practical skills by working on international standard projects
- To carry out an independent final project and presentation

Why choose this course?

If your interest goes beyond existing academic education and you want to know more about the latest technology which can boost your career then this programme is for you.

The courses are uniquely designed by industry top technical experts to ensure the meaningful skill development which enables the candidates to gain insight about technology and make them ready to start / accelerate their carrier immediately after completing this course.

Course Duration

1 Year (9 Months training with 3 months Internship)

Eligibility criteria

Graduation/ (10+2+3) or higher degree from any discipline (Science, Geography, Geology, Environment, Disaster Management, Engineering, Computer science, Planning and architecture) with Basic computer knowledge

Key Features

- IPGI helped 300+ students and working professionals from diversified fields to enhance their skills and to accelerate their career since 2006.
- IPGI believes in innovation and including latest technologies in its courses. First time in India, IPGI started offering the practical knowledge of the latest technologies like UAV Photogrammetry, Lidar and HRSS and many more topics in its courses.
- All course are designed with 60-70% practical based learning
- Training by industry professionals
- Live projects training on international projects in inputs
- Emphasis on domestic and international mapping methods

Complete curriculum

- **Geo Informatics - science and technology:**
Geographic Information Systems (GIS), Earth Observation (EO), relation to 'System Earth' and the user

- **Application of Geo Informatics**
This module deals with the Principal, designing, Acquisition, processing, analyzing of the different technologies.
  - Photogrammetry (Aerial / Satellite / UAV)
  - GIS (Geographical Information System)
  - Remote Sensing
  - LIDAR
  - Traditional technology

- **Project work**
  Hands on experiences (Latest tools, techniques, Software's) from application Area you can choose from.

Fee Structure
  64,000 (INR) (Installments option is also available)

Course Content

Photogrammetry

- Principles of Photogrammetry and Aerial Photography
- Remote sensing and GIS
- Stereo Photogrammetry
- Concept of orientation and Aerial Triangulation
- Digital Terrain Modeling\Digital Elevation Model \Digital Surface Model
- 3D Feature Extraction.
- 3D city modeling
- 3D GIS and spatial analysis
- Digital Ortho Photo
- International Mapping Standards and Quality Management
- Application of Photogrammetric product

GIS

- Fundamental of GIS & Mapping
- Recent trends and scope
- GIS components.
- Data Structure
- Spatial Data, Non- Spatial Data
- Projection System-and scaling
- Data sources
- Layerisation (Making Layers)
- Digitization (Point, Line, Polygon)
- Geo-coding
- Drawing Clean Up (Removing Errors)
- Map Composition
- GIS operations
- Topology
- Data linking to spatial data
- Analysis (Report, Print)
- Web GIS
- Programming for GIS applications

Remote Sensing

- Monitoring of changes in land use/ land cover using multi- sensor satellite data
- Forest covers monitoring
- Change detection Analysis
- Satellite data classification
- Monitoring/Evaluation of watersheds using multi temporal remote sensing data
- Digital Cartographic database

LIDAR

- Introduction of LIDR
- Data acquisition and calibration
- Lidar Data Processing and Products
- Lidar Application and Analysis

SURVEYING (GPS / DGPS / Total Station / Level)

- Survey introduction and converting survey data in GIS
- Satellite Based Global navigation (GPS/DGPS)
- GPS Survey
- Topographical Survey (Land Survey, Tank Survey, Power line Survey, Lake Survey,
- Pipeline Survey, As Built (Layout Survey

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