Indian Institute of Remote Sensing

Dehradun, Uttarakhand

Placement Brochure 2017

- M.Tech.
- M.Sc.
- PGD

Vision

"Achieve excellence and remain in the forefront for capacity building in Remote Sensing & Geoinformatics and their applications"

Mission

"Transfer technology through capacity building and research in the field of Remote Sensing and Geoinformatics for sustainable development"

DIRECTOR'S DESK

Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organisation (ISRO), Department of Space, Govt. of India is a premier training and educational institute established in 1966 and committed to prepare Professionals in the field of Remote Sensing, Geoinformatics and GPS Technology for Natural Resources, Environment and Disaster Management. The Institute is also host for Centre for Space Science & Technology Education in Asia and the Pacific (affiliated to the United Nations) and conducts International Training Programmes.

The training and education programmes conducted by the Institute include: i)Post-graduate Diploma (PGD) in Remote Sensing and GIS in eight disciplines, ii) M.Tech. (RS & GIS) in eight disciplines conducted in collaboration with Andhra University, Visakhapatnam and iii) M.Sc. and PG Diploma courses in Geoinformatics conducted in collaboration with the Faculty of Geo-information Science & Earth Observation (ITC) of the University of Twente (UT), The Netherlands. The institute also conducts various other courses, namely i) Certificate programmes (including NNRMS-ISRO sponsored programme for University faculty), ii) Awareness programmes, and iii) Special on-demand/tailor-made courses. The Institute has so far trained 10,591 professionals including 1003 from abroad representing 95 countries from Asia, Africa and South America.

Under the Outreach Programmes, the Institute conducts several courses for working professionals, researchers and students through state-of-the-art studio and e-learning concept. Currently, 550 Institutes/Organizations spread across India are networked with IIRS. More than 33,000 participants have benefitted so far from IIRS Outreach Programmes.

The Placement Brochure of 2017 includes the skills acquired by IIRS students through training/education and project work that they have carried out as a part of their Course Curricula. I am sure that the Placement Brochure shall be helpful to the Geospatial Industries, Academia and other Institutions to pick the talent and also provide opportunities to the course participants for their placement.

I wish a splendid future for our students.

Dr. A. Senthil Kumar
Director, IIRS

PROFILE OF THE INSTITUTE

The Indian Institute of Remote Sensing (IIRS) - an ISO 9001:2008 institute, is a constituent unit of Indian Space Research Organisation (ISRO), Department of Space, Govt. of India. Since its establishment in 1966, IIRS is a key player for training and capacity building in geospatial technologies and its applications through training, education and research in Southeast Asia. The training, education and capacity building programmes of the Institute are designed to meet the requirements of Professionals at working levels, fresh graduates, researchers, academia, and decision makers. IIRS is also one of the most sought after Institute for conducting specially designed courses for the officers from Central and State Government Ministries and stakeholder departments for the effective utilization of Earth Observation (EO) data. About 40 courses are conducted every year and 10,591 professionals and students have been trained/educated so far. About 50 researchers who have worked under IIRS faculty have received PhD degrees till date from various Universities.

To widen its outreach, IIRS has started live and interactive Distance Learning Programme (DLP) since 2007. As on date, 550 Institutes/ Organizations are networked with IIRS and more than 33,000 participants have attended various basic and advanced courses conducted by the Institute. IIRS has also launched e-learning course on Remote Sensing and Geo-information Science since August, 2014.

The Institute has a strong, multi-disciplinary and solution-oriented research agenda that focuses on developing improved methods/ techniques for processing, visualization and dissemination of EO data & Geo-information for various societal applications and better understanding of Earth's system processes. Microwave, hyperspectral and high-resolution EO data processing and their applications is the main research focus, currently. State-of-the-art laboratory and field-based instrumentation and observatories network help meeting the research goals and objectives.

IIRS hosts headquarters of Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP), affiliated to the United Nations and provides support in conducting the Remote Sensing and GIS training and education programmes. IIRS also plays a key role in the activities of Indian Society of Remote Sensing (ISRS), which is one of the largest non-governmental Scientific Societies in the country.

Programme Planning and Evaluation Group

The Programme Planning and Evaluation Group (PPEG) coordinates the training, education and capacity building, human resources development, budget, hostel, library, placement, etc. activities of the institute. It also coordinates the inter-centre activities and liaison with other institutions in the country and abroad. PPEG also maintains the IIRS alumni database. It is also responsible for initiating and coordinating several other techno-managerial activities of the Institute.

Earth Resource and System Studies Group

The Earth Resource and System Studies Group (ER&SSG) of the Institute consists of five departments namely, 1) Agriculture & Soils, 2) Forestry & Ecology, 3) Marine & Atmospheric Sciences, 4) Urban & Regional Studies, and 5) Water Resources.

Agriculture & Soils Department

The Agriculture and Soils Department (ASD) is one of the oldest departments of the institute. ASD has carried out many R&D and consultancy projects in soil surveys, watershed prioritisation, land evaluation, agricultural resources inventory, agro-meteorology, soil moisture, etc. Some of the research projects (ongoing/ completed) at ASD are process based modeling for soil erosion, soil carbon sequestration, carbon accounting modeling by integrating flux observation, drought monitoring, etc. The department is equipped

with a variety of portable ground-truth equipment for quantitative measurements of bio-physical and physico-chemical properties of soils and crops, and a Soil Analysis Laboratory for the physico-chemical analysis of soils.

Forestry & Ecology Department

The Forestry and Ecology Department (FED) was established in 1966 with the aim of providing training and skills development on the utility of aero-space remote sensing for forest resource inventory, monitoring and management. Nationwide forest cover mapping and nationwide biome level characterization of Indian forests biodiversity at landscape level are the major projects planned and executed by the department. A few other important research projects carried out by the department are growing stock and biomass assessment, ecosystem dynamics, wildlife habitat modelling, ecological and wildlife corridor modelling and connectivity analysis, national level carbon flux measurement and modelling, grassland mapping and carrying capacity estimation, etc.

Marine & Atmospheric Sciences Department

The Marine & Atmospheric Sciences Department (MASD) was formed in year 1986 and offers training & education courses and provides research opportunities in the areas of coastal processes, marine resources, ocean and atmospheric sciences applications.The department has contributed in different research and operational projects of ISRO/DOS, such as Nationwide Land Degradation Mapping on 1:50,000 scale, Oceansat-II data utilization project, National Carbon Project (NCP), SARAL-AltiKa project, etc. Some of the research projects (ongoing/ completed) at MASD are atmospheric pollution modeling, extreme events forecasting, coastal hazards and their mitigation, ocean color and primary productivity, upper-ocean geophysical parameter retrieval, aerosol optical depth, etc.

Urban & Regional Studies Department

To meet the growing needs and challenges of urban areas and towards regional development, the Urban and Regional Studies Department (URSD) was established in 1983 in collaboration with ITC, the Netherlands. The department is working in close coordination with Town and County Planning Departments/ Urban Local Bodies with the aim to spread the benefits of remote sensing technology at grassroots level.It has developed expertise in the field of urban sprawl and growth modeling, urban environment analysis and regional analysis. Some of the research projects (ongoing/ completed) at URSD are urban micro-climate zonation for sustainable Smart City planning, modeling of urban air pollution, urban material detection using hyperspectralRS data, urban flooding modeling, solar energy potential assessment, etc.

Water Resource Department

The Water Resources Department (WRD) came into existence in 1986 and since then it is engaged in training, capacity building and research in hydrological modelling, flood risk mapping and zoning; watershed conservation, planning and management; snowmelt runoff modelling, irrigation command area inventory, geophysical product generation of hydrological parameters using EO data and water resources management. The department specializes in the areas of hydrological and hydraulic modelling, impact assessment of climate change in water resources, irrigation water management and drought assessment, snow and glacier studies, soil erosion, sediment yield modelling and reservoir sedimentation, surface and ground water hydrology, watershed assessment and management, etc.

Geospatial Technologies and Outreach Programme Group

The Geospatial Technologies and Outreach Programme (GTOP) Group comprises of three departments namely, Photogrammetry and Remote Sensing, Geoinformatics, and Geoweb Services, IT and Distance Learning Department.

Photogrammetry & Remote Sensing Department

Photogrammetry and Remote Sensing Department (PRSD) established in 1966 is imparting professional training in the field of

photogrammetry, cartography, remote sensing and image processing. It has successfully executed a number of studies/projects on large-scale surveys and preparation of photo-maps in different parts of the country, generation of national/global level database on land use/land-cover, augmentation of forest cover information in India and Myanmar, generation of land surface parameters for monsoon variability studies using Regional Climate Model, etc. The ongoing/ completed research projects at PRSD are UAV data Processing for terrain information extraction, LiDAR-RS, SAR Tomography, SAR Calibration, Hyperspectral Remote Sensing, Automated features extraction, Large scale mapping, etc.

Geoinformatics Department

This department was set-up in 1996 in collaboration with University of Twente, Faculty of Geo-information Science & Earth Observation (ITC), The Netherlands, for offering courses in the field of Geoinformation Science. The M.Sc. course in Geoinformation Science and Earth Observation (specialisation in Geoinformatics) is one of its major programme offered since 2002 as part of Joint Education Programme of IIRS and ITC, The Netherlands. Post-graduate Diploma course in Geoinformatics (as a Joint Education Programme of IIRS and ITC) is also offered by this department. GID conducts training, education and research in the field of GIS, DBMS, spatial analysis and modelling, Transportation GIS, 3D GIS, Spatial Data Mining, Health GIS and development of software tools using FOSS.

Geoweb Services, IT & Distance Learning

Geoweb Services, IT and Distance Learning (GIT&DL) Department is recently formed Department at IIRS to meet the increasing demand of capacity building, information dissemination and research in these areas. GIT&DL department is involved in capacity building & R&D activities in Web-GIS, Mobile GIS, Location Based Services (LBS), Cloud GIS, etc. It is also carrying out capacity building in Geospatial technologies through Distance Learning mode (Live & interactive and e-learning), R&D activities on active learning, Digital contents creation, R&D activities on 2D and 3D simulations and virtualization,etc. It is also carrying out the IT Infrastructure development, set-up and operations for the Institute.

Geosciences and Disaster Management Studies Group

The Geosciences and Disaster Management Studies Group (G&DMS) Group consists of two departments namely, i) Geosciences and Geohazards Department and ii) Disaster Management Sciences Department.

Geosciences and Geohazards Department

Geosciences and Geohazards Department (GSGHD), formerly known as Geosciences Division, was established in 1966 to provide professional training to technical staff of organisations dealing with earth sciences applications such as mineral and oil exploration, engineering geological survey and mapping, geological survey, groundwater exploration, etc. It has successfully executed a number of research, operational and consultancy projects in different fields of geological sciences.

Disaster Management Sciences Department

The Disaster Management Sciences (DMS) Department is dedicated towards capacity building and research in assessment, monitoring and modelling of natural and anthropogenic disasters with prime focus on prevention and mitigation measures leading to disaster risk reduction. Besides other courses of the Institute, the DMS also conducts PG Diploma in RS and GIS applications in Natural Hazards and Disaster Management Studies with specialisation in Hydro-meteorological (flood, drought and coastal) and Geological hazards (earthquake, landslides, mining related hazards, glacial lake outburst flood (GLOF), etc.). The ongoing/completed projects at DMS are landslide modelling, seismic microzonation, active fault mapping, liquefaction modelling, Differential Interferometric Radar (DInSAR) based land surface displacement modelling, storm surge modelling, extreme climate induced hazard analysis, multi-hazard vulnerability and risk assessment, etc.

TRAINING, EDUCATION & CAPACITY BUILDING PROGRAMMES

The training and capacity building programmes of the Institute are designed to meet the requirements of various target/user groups, i.e., for professionals at working, middle and supervisory levels, fresh graduates, researchers, academia and decision makers. The duration of courses ranges from one-week to two-years. The programmes are meticulously designed by the domain experts, and are then approved by the Board of Studies (BoS) and Academic Council (AC) consisting of eminent subject experts. A team of sixty-four dedicated scientists at IIRS contribute in delivering the course contents. Guest faculties from reputed organizations/ institutes in the country and abroad are regularly invited to share their knowledge and experience with the course participants. The training and education programmes conducted by the Institute include:

1. Post-graduate Diploma (PGD) in Remote Sensing and GIS in eight disciplines,
2. M.Tech. (RS & GIS) in eight disciplines conducted in collaboration with Andhra University, Visakhapatnam, and
3. M.Sc. and PG Diploma (PGD) in Geoinformatics conducted in collaboration with the Faculty of Geo-information Science & Earth Observation (ITC) of the University of Twente (UT), The Netherlands.

The institute also conducts various other courses, namely i) Certificate programmes (including NNRMS-ISRO sponsored programme for University faculty), ii) Awareness programmes, and iii) Special on-demand/tailor-made courses. The Institute has so far trained 10,591 professionals including 1003 from abroad representing 95 countries from the Asia, Africa and South America.

Under the Outreach Programmes, the Institute conducts several courses for working professionals, researchers and students through state-of-the-art studio and e-learning concept. Currently, 550 institutions and organizations spread across India are networked with IIRS. More than 33,000 participant have benefitted so far from IIRS Outreach Programmes.

The Institute also provides opportunities to external students to pursue their research under the guidance of IIRS faculty. IIRS is a recognized centre for carrying out research leading to PhD by Andhra University, Forest Research Institute (Deemed University), University of Pune, Doon University, Kumaon University, Uttarakhand Technical University and IIT, Roorkee. About 50 researchers who have worked under IIRS faculty have received PhD degrees till date from different universities. External Post-graduate/ Graduate students are also given opportunity to conduct their project work under the guidance of IIRS faculty

(http://www.iirs.gov.in/iirs/sites/default/files/pdf/Dissertation_Policy_May2016.pdf).

M.Tech. (RS&GIS)

The aim of the M.Tech. (RS&GIS) course is to provide in-depth understanding of remote sensing, satellite image analysis, Geographic Information System (GIS) and Global Navigation Satellite System (GNSS) technologies and their applications in natural resources survey and monitoring including Agriculture and Soils, Forestry and Ecology, Geology and Mineral Resources, Water Resources, Marine Resources, Urban and Regional Planning, Atmospheric Studies and Disaster Management.

It is a four-semester course in which first two semesters are devoted to exhaustive course work and other two semesters have a research project. The course work consists of 4 core papers in technology area, 4 core papers in subject specialization, 1 core paper in research skill development and four choice based elective papers. Out of the 4 elective papers, 3 papers are in advanced geospatial technology such as Web Technology, Geodata Visualization, Statistics & Programming of Geodata, Natural Resources Management, Environmental Monitoring, and Climate Change Studies. In the fourth elective paper, a candidate needs to carry out a theme-specific interdisciplinary case study out of the 60 topics offered from 8 specializations. During the course, a candidate can opt for one of the following 8 specializations-

- Agriculture and Soils
- Forest Resources & Ecosystem Analysis
- Geoinformatics
- Geosciences
- Marine & Atmospheric Sciences
- Natural Hazards & Disaster Risk Management
- Satellite Image Analysis & Photogrammetry
- Urban & Regional Studies
- Water Resources

M.Tech. Course Structure

Semester - I

Module – I (4.5 months)

Compulsory (Core) Papers
- Remote Sensing & Image Interpretation
- Digital Image Processing
- Geographic Information System
- Photogrammetry & Cartography

Elective Papers
- Statistics & Programming for Geodata
- Statistics & RS Applications in NRM

Semester - II

***Module – II (3 months)**

Each Specialization has 4 subjects
- Agriculture & Soils
- Forestry Resources & Ecosystem Analysis
- Geoinformatics
- Geosciences
- Marine & Atmospheric Science
- Natural Hazards & Disaster Risk Management
- Satellite Image Analysis & Photogrammetry
- Urban and Regional Studies
- Water Resources

Module – III (3 months)

Compulsory (Core) Papers
- Research Skills

Elective Papers
- Web GIS
- Geospatial Technologies for Environmental Monitoring
- Geodata Visualization
- Climate Change Impact on Natural Resources
- Theme Specific Case Studies

Semester - III & IV

Project Work (13.5 months)

Project Work and Defence

**Core papers under each specialization as per table given on page no. 17*

reddevilmandy@gmail.com

Abhishek Mandal

Qualification:
M.Sc. (Applied Geology), M.Tech.(RS&GIS) ongoing

Area of Interest:
Geodynamics, Engineering Geology, GNSS, SAR Remote Sensing

Software Skills:
Gamit/Globk, Bernese, Trimble Business Center, ENVI, ArcGIS,ERDAS IMAGINE, ILWIS,CorelDRAW, Snap,LPS,Generic Mapping Tool

Thesis:
Crustal deformation and seismic assessment using ground based GNSS observation data in North Western Himalaya

aimonbushra16@gmail.com

Aimon Bushra

Qualification:
M.Sc.(Biodiversity Studies and Management Sciences), M.Tech. (RS&GIS) ongoing

Area of Interest:
Biodiversity with keen interest in birds and species distribution modelling and mapping using optical remote sensing techniques and various statistical algorithms

Software Skills:
ArcGIS, ERDAS IMAGINE, QGIS, Fragstats and basic knowledge of R.

Thesis:
Predicting Patterns of Plant Richness in Alpine Pastures of Pithoragarh, Uttarakhand

anam.ahsan786@gmail.com

Anam Ahsan

Qualification:
M.Sc.(Biodiversity Studies and Management Sciences), M.Tech. (RS&GIS) ongoing

Area of Interest:
Forest type mapping using optical remote sensing, GIS analysis and graph theory for animal corridors study, game theory, animal movement prediction using shortest path and circuit theory algorithms

Software Skills:
Python, Gambit, Graphab, Conefor, Pajek, Linkmapper, ArcGIS, ERDAS IMAGINE, Circuitscape

Thesis:
Modeling tiger movement in central Indian landscape using prey-predator game theory approach coupled with network analysis

animesh.ce07@gmail.com

Animesh Kumar Upadhyay

Qualification:
B.E.(Civil), M.Tech.(RS&GIS) ongoing

Area of Interest:
Photogrammetry, GIS application, Point cloud, Image processing operations, Structural and geotechnical engg., planning and management.

Software Skills:
AutoCAD, Microstation, Terrasolid, STAAD PRO, ETABS, Leica Geosystems, Trimble Business Centre, ArcGIS, ERDAS IMAGINE, ENVI, CloudCompare, Agisoft Photoscan, PIX4D, Photomodeler, Python.

Thesis:
Precise terrain parameter extraction from UAV acquired data

eaineesh@gmail.com

Eaineesh Pundir

Qualification:
B.Tech. (Electronics & Telecommunication), M.Tech. (RS&GIS) ongoing

Area of Interest:
WebGIS, Database Management Systems, GIS

Software Skills:
HTML/JavaScript/PHP, Python, ArcGIS, ERDAS IMAGINE, PostgreSQL

Thesis:
Probabilistic Model Based Spatial Decision Support System For IBIN.

gaurav.200490@gmail.com

Gaurav Kumar

Qualification:
B.E. (Electronics & Communication), M.Tech. (RS&GIS) ongoing

Area of Interest:
Photogrammetry, Machine learning, remote sensing, GIS

Software Skills:
ERDAS IMAGINE, ENVI,ArcGIS, Microstation, Python, C++, eCognition, Mapinfo, QGIS, Global Mapper

Thesis:
Integration of temporal bi-sensor images for paddy crop identification

indranilnandi2011@gmail.com

Indranil Nandi

Qualification:
B.Sc.(Chemistry (H)), M.Sc.(Marine Science), M.Tech. (RS&GIS) ongoing.

Area of Interest:
Numerical weather forecasting and regional climate modeling applications in atmospheric sciences, Air quality modelling with full interaction of chemical species, Prediction of Ozone (O_3) and UV radiation as well as particulate matter (PM)

Software Skills:
Working experience in climate modeling using parallel computing system, WRF-Chem., ERDAS IMAGINE, ArcGIS, ENVI, MATLAB, SIGMA PLOT

Thesis:
Distribution of air pollutants over the Indian subcontinent: Investigation of source regions using WRF-Chem

jitu1231@gmail.com

Jitumoni Deka

Qualification:
B.Sc.(Life Sciences), M.Sc.(Environmental Science), MBA (Forestry and environmental management) M.Tech.(RS&GIS) ongoing

Area of Interest:
LiDAR, optical and hyperspectral remote sensing in ecology, climate change and forestry studies, integration of different satellites and machine learning based classificaiton

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, R, Matlab, FCD mapper, IDRISI, eCognition

Thesis:
Carbon Dynamics Assessment in tropical forests of Assam, Northeast India using Optical and LiDAR Data

jyotiprakashhati@gmail.com

Jyoti Prakash Hati

Qualification:
B.Sc.(Chemistry (H)),
M.Sc.(Marine Science),
M.Tech.(RS&GIS) ongoing

Area of Interest:
Air-sea gas exchange(CO_2 and CH_4) in coastal and mangrove areas
Climate Change and effects on phytoplankton, productivity, fishery sectors and sea-ice structure and depletion

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, Matlab, SeaDAS, Sigma plot, R

Thesis:
Effect of Climate Change in marine regions of Indian subcontinent

karunrdayal@gmail.com

Karun Reuel Dayal

Qualification:
B.E. (Civil),
M. Tech.(RS & GIS) ongoing

Area of Interest:
3D modelling and analysis using Close Range Photogrammetry and Terrestrial Laser Scanning, LiDAR in urban and forestry application, surveying, GNSS, GIS analysis, machine learning

Software Skills:
QGIS, ArcGIS, ERDAS IMAGINE, ENVI, PCL, CloudCompare, Meshlab, Photomodeler, Trivim, RiScanPro, eCognition, Microstation, Python, Matlab, AutoCAD

Thesis:
3D digital documentation and damage assessment of a cultural heritage site

kunjshethiya@gmail.com

Kunj K. Shethiya

Qualification:
M.Sc.(Geology), M.Tech. (RS&GIS) ongoing

Area of Interest:
LiDAR applications in disaster management, mining and urban management, GIS for natural hazards management, GIS applications, Geophysical & DGPS survey and processing.

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, SAGA GIS, QGIS, ILWIS, R , AutoCAD, GeoServer

Thesis:
Mapping and modelling of potential Avalanche Zones in parts of Uttarakhand Himalaya: An Earth Observation Initiative.

mayursharma1208@yahoo.com

Mayur Sharma

Qualification:
B.E. (Electronics & Telecommunication),
M.Tech. (RS&GIS) ongoing

Area of Interest:
GIS, WebGIS, Applications Development, Data Analysis

Software Skills:
ArcGIS, ERDAS IMAGINE, QGIS, Postgre SQL, Python, HTML/JS/PHP, Android, JAVA, C++, R

Thesis:
Framework for Web GIS Based Real-Time Road Traffic Information System Using Wireless Sensor Network.

mrinmoy0907@gmail.com

Mrinmoy Dhara

Qualification:
M.Sc.(Earth Sciences),
M.Tech.(RS&GIS) ongoing

Area of Interest:
Hyperspectral Image analysis, TIR based anamoly detection and mapping, Mineral exploration, Structural Geology, Landslide hazard mapping and monitoring.

Software Skills:
ENVI, ERDAS IMAGINE, ArcGIS, QGiS, R, ILWIS

Thesis:
Thermal anomaly detection and monitoring of coal fire in the Gondwana Coalfields of India from spaceborne TIR data

nehakshirsagar42@gmail.com

Neha S. Kshirsagar

Qualification:
Diploma (Electronics & Telecommunication),
B.Tech.(Electronics & Telecommunication)
M.Tech.(RS&GIS) ongoing

Area of Interest:
Image Processing, Electronics, Circuits & Networks

Software Skills:
Eagle, Eclipse, ERDAS IMAGINE, ArcGIS, eCognition, ENVI, R, JAVA, J2EE, MATLAB, SQL, PHP

Thesis:
Automated Approach For Urban Feature Interpretation and Classification Using High Resolution Data.

pgd31792@gmail.com

Payel Ghosh Dastidar

Qualification:
M.Sc. (Hons.) (Geography),
M.Tech. (RS & GIS) ongoing

Area of Interest:
Urban Planning, Growth modelling, Analysis of night lights, Urban micro-climate.

Software Skills:
ArcGIS, QGIS, ERDAS IMAGINE, eCognition, ENVI, IDRISI, LPS, GrADS, WRF Model, Cesium, Geoserver, PostGreSQL,
Python, MATLAB

Thesis:
Urban microclimate analysis and modeling using high resolution WRF model.

kurchi_9@yahoo.com

Prerna Sarkar

Qualification:
M.Sc. (Applied Geology),
M.Tech. (RS&GIS) ongoing

Area of Interest:
Geochemistry, Mineralogy, Hyperspectral Remote Sensing

Software Skills:
ENVI, ArcGIS, ERDAS IMAGINE, ILWIS, SNAP, LPS, Trimble Business Center

Thesis:
Role of space/field borne spectroscopy and hyperspectral techniques in characterization of Fe-Mn ore in parts of Northern Odisha: An earth observation initiative towards mineral exploration

pritam.rocky@gmail.com

Pritam Choudhury

Qualification:
M.Sc.(Geology),
M.Tech.(RS&GIS) ongoing

Area of Interest:
SAR remote sensing in disaster management study, Geodynamics, Hydrogeology, Geophysical investigations

Software Skills:
ENVI, SNAP, ERDAS IMAGINE, ArcGIS, ILWIS, QGIS, RES2DINV

Thesis:
DInSAR assesssment of Himalayan geodynamics in and around 2015 Nepal earthquake and Spatial Variation of damage intensity as a function of geological structure and geotechnical charateristics

rohitsinghsalyan@gmail.com

Rohit Singh

Qualification:
B.Tech.(Agricultural Engineering),
M.Tech. (RS&GIS) ongoing

Area of Interest:
Spatial Data Mining, Data Mining Techniques, Health GIS, WebGIS, DBMS, Watershed Hydrology, Farm Machinery and Equipment, Irrigation Management Practices

Software Skills:
Rapid miner, Python, QGIS, ArcGIS, PostgreSQL, ERDAS IMAGINE, HTML/JS/PHP, R

Thesis:
GIS Based Association Rule Mining From IDSP Data for Disease Outbreak Detection in Dehradun District.

ronak.ashar8399@gmail.com

Ronak Ashar

Qualification:
B.E. (Civil)
M.Tech. (RS&GIS) ongoing

Area of Interest:
Remote Sensing and GIS Applications in the field of Water resources, Hydrological modeling, WebGIS, GIS development

Software Skills:
Python, ArcGIS, QGIS, AutoCAD, PostgreSQL, HTML/PHP/JS, R, ERDAS IMAGINE

Thesis:
Online 3D simulation and virtual reality of disaster affected areas in hilly region

achssanjay@gmail.com

Sanjay P

Qualification:
B.Tech. (GeoTechnology & GeoInformatics),
M.Tech. (RS&GIS) ongoing

Area of Interest:
LiDAR, Microwave Remote Sensing, GIS application in Disaster Management Studies, Landslide hazard zonation mapping, (Intensity-duration) Rainfall threshold modelling

Software Skills:
ArcGIS, ENVI, ERDAS IMAGINE, QGIS, GeoCLIM, GeoWRSI, LPS, SURFER, SNAP, ILWIS, NEST, Microstation, Python

Thesis:
Rainfall threshold modelling and geotechnical characterization of landslides in parts of Alaknanda Valley.

shaliniraj.mgr@gmail.com

Shalini Raj

Qualification:
B.Tech.(Agricultural Engg.), M.Tech.(RS&GIS) ongoing

Area of Interest:
Watershed development & Soil conservation, Hydrological modelling, Hydrodynamic modelling, Climate change, Morphological study, Water resources, Irrigation technique and scheduling

Software Skills:
ArcGIS, ERDAS IMAGINE, ILWIS, SPSS, SWAT, HEC-HMS, HEC-RAS, AutoCAD (ProE)

Thesis:
Integrated Approach For Watershed Prioritization Using Remote Sensing and GIS

siddarora.civil@gmail.com

Siddharth Arora

Qualification:
B.E. Hons. (Civil), M.Sc. Hons. (Physics), M.Tech. (RS&GIS) ongoing

Area of Interest:
Water resources, Hydrology, Civil Engineering

Software Skills:
ArcGIS, MATLAB, ERDAS IMAGINE, AutoCAD, ILWIS, VIC Model, SWMM, Hec-HMS, Hec-RAS

Thesis:
Snow & Glacier melt modeling and forecasting in Bhagirathi river basin

shubh.awasthi@gmail.com

Shubham Awasthi

Qualification:
B.Tech.(Electronics & Communication)
M. Tech. (RS & GIS) ongoing

Area of Interest:
Microwave remote sensing, PolInSAR, SAR Tomography and backscatter modeling in cryosphere, forestry and urban domains, DInSAR application in land subsidence and glacial shift monitoring, digital signal and image processing

Software Skills:
PolSARPro, SARSCAPE SNAP, GAMMA, SNAPHU, RAT toolbox, ENVI, ArcGIS, eCognition, C, MATLAB, Python

Thesis:
Snow parameters retrieval using fully polarised TerraSAR-X data and RiSAT-1 hybrid data

sutapabhattacharjee22@gmail.com

Sutapa Bhattacharjee

Qualification:
M.Sc.(Geography), M.Tech.(RS & GIS) ongoing

Area of Interest:
Application of Remote Sensing and GIS in Urban Hydrology, Urban Planning and Urban Microclimate

Software Skills:
ArcGIS, QGIS, GRASS GIS, CAPRA GIS, ERDAS IMAGINE, eCognition, ENVI, IDRISI, TerraSolid, ArcHydro, HEC-GeoHMS, HEC-GeoRAS, EPA-SWMM, EPA NET, FLOOD MODELLER, Cesium, GeoServer, PostGreSQL

Thesis:
Urban flood risk analysis using hydrological modeling and geo-spatial approach.

haldersuvankar02@gmail.com

Suvankar Halder

Qualification:
B.Planning,
M.Tech. (RS&GIS) ongoing

Area of Interest:
Urban Studies, Urban Air Pollution Modeling

Software Skills:
ArcGIS, City Engine, ERDAS IMAGINE, LPS, QGIS, eCognition, HTML, PHP, GeoServer, Operational Street Pollution Model

Thesis:
Assessment of ambient air quality of urban areas in Dehradun using modeling approach

uzmagani61@gmail.com

Uzma Mohamed Gani

Qualification:
B.Planning,
M.Tech.(RS&GIS) ongoing

Area of Interest:
Urban studies and applied climatology (Urban climatology and environment)

Software Skills:
ArcGIS, City Engine, ERDAS IMAGINE, LPS, QGIS, eCognition, ENVI, ENVI-MET HTML/PHP, GeoServer,

Thesis:
Application of Geospatial techniques for urban climatic mapping

vimanyu.iirs@gmail.com

Vimanyu Sharma

Qualification:
B.Sc. (Geology), M.Sc. (Geology), M.Tech. (RS&GIS) ongoing

Area of Interest:
Microwave remote sensing, SAR data processing, Surface dynamics, Groundwater predictive modeling, Resistivity survey, DGPS survey and processing, Digital image processing, Hydro-geochemical Analysis

Software Skills:
ERDAS IMAGINE, ArcGIS, QGIS, ENVI, SAR scape, ILWIS, Geo Server, R, Knowledge of open source softwares for Remote sensing, image processing and GIS analysis

Thesis:
Assessment of groundwater depletion induced land subsidence in selective test sites of North West India by space borne DInSAR and DGNSS Observations

kameshvinjamuri@gmail.com

VVSAPM Kameswara

Qualification:
B.E. (Electronics & Communication),
M.Tech. (RS&GIS) ongoing

Area of Interest
Land-atmosphere interactions/modeling, Aerosol physics, GIS for urban management, Radiometric calibration, Radio-transients/Radio interferometer

Software Skills:
Python, R, ArcGIS, QGIS, MATLAB, GNU Octave, ERDAS IMAGINE

Thesis:
Spatio- temporal analysis of Aerosol parameters and type classification at global scale

yogeshjenv@gmail.com

Yogesh Joshi

Qualification:
B. Tech. (Environmental Engineering),
M.Tech. (RS&GIS) ongoing

Area of Interest:
Water Resources, Hydrodynamic Modeling, Hydrological Modeling, Ground Water Modeling, EIA, Environment/Climate Change Parameters monitoring and modeling, Water and Waste Water Treatment

Software Skills:
ArcGIS, DHI MIKE 11, QGIS, HEC-HMS, HEC-RAS, ILWIS, ERDAS IMAGINE, MODFLOW, SWAT, SWMM

Thesis:
Floodplain area zonation using geomorphology based methods and hydrodynamic modeling in hilly areas of Himalayan region and RiSAT-1 hybrid data

M.Sc. & PG Diploma in Geoinformatics

The Masters (M.Sc.) and Post Graduate Diploma (PGD) courses in Geoinformatics are offered within the framework of IIRS-ITC Joint Education Program (JEP). The M.Sc. Degree & PG Diploma in Geoinformatics are awarded by the University of Twente, Faculty of Geoinformation Science and Earth Observation, The Netherlands. The M.Sc course is of 18 months duration while PG Diploma is of 10 months duration. In M.Sc. course, the participants spend 4½ months at ITC, The Netherlands, while PG Diploma participants will remain at IIRS for the entire study period of the course (i.e. 10 months).

The M.Sc. and PGD is modular in structure and the modules are further classified into blocks. The Block-1 (Core Module) & Block-2 (Domain Specific Modules) are common to both M.Sc. and PGD courses. After the two blocks (Block-1 and Block-2), the M.Sc. and PGD students are isolated. The M.Sc. students proceed to ITC for advanced modules while PG Diploma students start their project work during Block-3. The Block-4 is exclusively for M.Sc.research work of 6 months duration undertaken at IIRS under the joint supervision of IIRS and ITC faculty.

Module		Duration	Module Topic	
1 2 3	Block 1: Core Modules	Geo-Information 3 weeks 3 weeks 3 weeks	(GI) Science and Earth Observation (EO): A Systems Based Approach GI Science and Modelling Earth Observation System Earth, Users and Data Integration	
Catch-up Week/ Re-Sit Examination				
4		3 weeks	Databases, Mathematics & Programming	
Winter Break				
5 6 7 8 9 10	Block 2: Domain Modules	3 weeks 3 weeks 3 weeks 3 weeks 3 weeks 3 weeks	Principles of Spatial Data Quality Spatial Data Modeling and Processing Base Data Acquisition Image Processing Web Technology for GIS and Mapping and Programming Visualization and Dissemination of Geodata	*Programming skills-2 (Part of Module-9):
Postgraduate Diploma Course				
11 to 14	Block 3: Project	10 weeks	Individual Project, Report Writing, Evaluation	
M.Sc. Course				
11 to 15	Block 3: Research Profile	15 weeks at ITC/UT, The Netherlands	- Research Skills - 2 Advanced Modules - 1 Advanced Group Project - Finalisation and Defence of MSc Research Proposal	
16	Block 4: Individual M.Sc. Research	3 weeks at ITC/UT, The Netherlands	Individual MSc Research	
17 to 23		25 weeks at IIRS	Individual MSc Research, Thesis Writing and Defence	

arijitpanda15@gmail.com

Arjit Panda

Qualification:
B.Sc. (Physics),
M.Sc. (Electronics),
M.Sc. (Geoinformatics and Earth Observation) ongoing

Area of Interest:
GIS, Digital Image Processing, Analog and Solid State Electronics, Physics

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, Python, R-software

Thesis:
Different measures of similarity and dissimilarity for fuzzy based noise classifier

er.daman.ece@gmail.com

Damandeep Singh

Qualification:
B.Tech (Electronics and Communication Engineering),
M.Sc. (Geoinformatics and Earth Observation) ongoing

Area of Interest:
GIS, Machine Learning, Data Mining, Geospatial Modeling, Digital Image Processing, Robotics

Software Skills:
ArcGIS, ERDAS IMAGINE, QGIS, IDRISI, NOVA, R-software, Python, C++

Thesis:
Spatial structure pattern prediction using deep learning techniques for land cover modelling

arijitpanda15@gmail.com

Reshma Jeswani

Qualification:
B.Tech (Computer Science and Engineering),
M.Sc. (Geoinformatics and Earth Observation) ongoing

Area of Interest:
GIS, Geo-web services, Service Oriented Architecture, Service chaining, DBMS

Software Skills:
ArcGIS, ERDAS IMAGINE, QGIS, Geoserver, PostgreSQL, R-software, Python

Thesis:
Event Detection using Real-time data and Web service orchestration for Flood management.

saion523@gmail.com

Soham Mukherjee

Qualification:
B.Tech (Computer Science and Engineering),
M.Sc. (Geoinformatics and Earth Observation) ongoing

Area of Interest:
GIS, Digital Image Processing, Sensor calibration, Spatial statistics, Computer Architecture, Digital Electronics, Analysis of Algorithms

Software Skills:
ArcGIS, QGIS, ERDAS IMAGINE, ENVI, IDRISI, R-software, Xilinx, Jenkins, Perforce, JAVA, J2EE, Python, PostgreSQL, Microsoft SQL Server, Oracle, Shell script, C

Thesis:
Quality analysis of inter-calibration of DMSP-OLS night time images.

tijarusrak@gmail.com

Surajit Kar

Qualification:
B.E. (Mining Engineering), M.Sc. (Geoinformatics and Earth Observation) ongoing

Area of Interest:
GIS, Digital Image Processing, Synthetic Aperture Radar (SAR), below ground and Opencast mining

Software Skills:
ArcGIS, ERDAS IMAGINE, QGIS, ENVI, eCognition, Geoserver, Webserver, SARPRO2, R-software, C, Python, HTML, JavaScript, PolSARpro

Thesis:
Monitoring and characterisation of opencast mining induced land deformation using PolSAR and DInSAR techniques.

vbhv14@live.com

Vaibhav Raj

Qualification:
B.Tech Environmental Engineering (Civil allied), M.Sc. (Geoinformatics and Earth Observation) ongoing

Area of Interest:
LiDAR, UAV Remote Sensing, Hyperspectral Imagery, Machine Learning, Parallel Processing, High Performance Computing, Data mining and analytics

Software Skills:
ArcGIS, QGIS, ERDAS Imagine, Open MP, MATLAB, Pix4D, AutoCAD, LAStools, PCL CloudCompare, Geoserver, R-software, CUDA, Python, C++, PostgreSQL

Thesis:
Object segmentation and surface creation from massive point cloud data using high performance computing.

himansibhatt@gmail.com

Himansi Bhatt

Qualifications:
B.Sc., M.Sc. (Geology), P.G.D. (Geoinformatics) Ongoing

Area of Interest:
Sedimentary Petrology, Plate Tectonics, Structural Geology, Remote Sensing, Igneous Petrology, Mineral Mining & Exploration

Software Skills:
ArcGIS, ERDAS IMAGINE, R, PostgresSQL, QGIS

jainronak75@yahoo.in

Ronak Jain

Qualifications:
B.Sc. (Botany, Chemistry, Geology), M.Sc. (Geology), M.Sc. Tech. (Applied Geology), P.G.D. (Geoinformatics) Ongoing

Area of Interest:
Plate Tectonics, Structural Geology, Petrology, Groundwater Geology, Petroleum Exploration, Mineral Exploration & Mining

Software Skills:
ArcGIS, ERDAS IMAGINE, AutoCAD, R, PostgresSQL, QGIS, Weka, IDRISI, Python, StarUML, Photoshop

PG Diploma (RS&GIS)

The PG Diploma programme aims to provide in-depth understanding of remote sensing, satellite image analysis, Geographic Information System (GIS) and Global Navigation Satellite System (GNSS) technologies and their applications in various fields viz., Agriculture and Soils, Forestry & Ecology, Geosciences, Water Resources, Marine and Atmospheric Sciences, Urban and Regional Studies, Large-scale Mapping, Disaster Management Studies, etc.

The PG Diploma course is modular in structure. First module covers basics of geospatial technologies, second module deals with thematic disciplines, and third module contains pilot project work. The PG Diploma programme is conducted in following disciplines-

- Agriculture and Soils
- Forest Resources & Ecosystem Analysis
- Geoinformatics
- Geosciences
- Marine & Atmospheric Sciences
- Natural Hazards & Disaster Risk Management (NHDRM)
- Photogrammetry & Remote Sensing
  (referred as Satellite Image Analysis & Photogrammetry for M.Tech.)
- Urban & Regional Studies
- Water Resources

P.G. Diploma

Module-I (4 Months)
- Basic of Remote Sesning
- Basic of Photogrammetry
- Digital Image Processing
- GIS and GNSS
- Statistics & Programming

Module-II (3 Months)

Specializations
(Participants have to choose one specialization from the following)
- Agriculture and Soils
- Forest Resources & Ecosystem Analysis
- Geosciences
- Marine & Atmospheric Sciences
- Natural Hazards & Disaster Risk Management
- Photogrammetry & Remote Sensing
- Urban & Regional Studies
- Water Resources

Module-III (3 Months)

Project Work

*Core paper under each specialization in module II of M.Tech/P.G. Diploma

Thematic Specialization	Subject
Agriculture & Soils	• Land Use & Soil Resource Assessment • Agri-informatics • Environmental Soil Science • Satellite Agro-meteorology
Forest Resources and Ecosystem Analysis	• Forest Mapping & Monitoring • Forest Inventory • Forest Informatics • Forest Eco-System Analysis
Geoinformatics#	• Spatial Data Quality • Programming Skills Development for Geo-Processing • Spatial Database Handling, Modelling & GIS Implementing Architectures • Geo-Statistics
Geosciences	• Remote Sensing for Earth & Planetary Science • Data Processing and Analysis for Geosciences • Applied and Tectonic Geomorphology • Engineering Geology and Groundwater
Marine & Atmospheric Sciences	• Satellite Oceanography • Satellite Meteorology • Coastal Processes and Marine Ecology • Atmosphere and Ocean Dynamics
Natural Hazards & Disaster Risk Management (NHDRM)	• Disaster Management Concepts and Overview • High Resolution Aerospace Data Analysis and Data Collection for Natural Hazards Assessment • Natural Hazards & Risk Modelling • Application of Geoinformatics to Natural Hazards
Photogrammetry & Remote Sensing	• Emerging Sensors and their Processing • Image Processing Algorithms • Digital Photogrammetry and Mapping • Mathematical Computing for Geospatial data analysis
Urban & Regional Studies	• Fundamentals of Urban and Regional Planning • Geospatial Technologies for Urban & Regional Area Analysis • Urban Resources, Services and Facilities Analysis • Geospatial Technologies for Urban Enviroment Studies
Water Resources	• Water Resources Assessment • Watershed Analysis and Planning • Water Resources Development • Water Resources Management

**Common with M.Tech. as per page no. 6*

#Offered under M.Tech. programme only

sg.abhirami@yahoo.in

Abhirami S G

Qualifications:
Integrated M.S. Geology,
P.G.D. (RS&GIS in Geosciences)
Ongoing

Area of Interest:
Mineral Exploration, Glacier studies, Structural Mapping, Petroleum Exploration

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, ILWIS

anandmbhushan@gmail.com

Anand Mohan

Qualifications:
B.Tech. (Electronics & Communication Engineering)
P.G.D. (RS&GIS in Photogrammetry and Remote Sensing) Ongoing

Area of Interest:
Remote Sensing & GIS Application in Electrical Utility & Telecom Design

Software Skills:
ArcGIS, ArcGIS Server, Arc FM, Open source GIS, ENVI, AutoCAD, AutoCAD Map2000i, Simulink, ERDAS IMAGINE, Python, Visio, OS-Window Family

arunima1991@gmail.com

Arunima Chanda

Qualifications:
B.Sc. (Geography),
M.Sc. (Geography) pursuing PhD (Multi Hazard Risk Management),
P.G.D. (RS&GIS in NHDRM)
Ongoing

Area of Interest:
Remote sensing and GIS application in Glacier studies, Landslide Hazard and Earthquake Hazard, Vulnerability Analysis, Natural Resource Management, Disaster Risk Management, Transport Planning, Pollution Control, Mapping

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, SURFER, MAPINFO, ILWIS, SWAN

athulyasatheesht@gmail.com

Athulya Satheesh T

Qualifications:
B. Planning,
P.G.D. (RS&GIS in Urban and Regional Studies) Ongoing

Area of Interest:
Innovations in Urban Planning, Virtual Rurality in urban town, Time Efficiency in cities, Sustainable and Green Development, Heritage Conservation

Software Skills:
ArcGIS, QGIS, AutoCAD, ERDAS IMAGINE, ENVI, ILWIS, IDRISI, SNAP, Terra Solid, eCognition, Photoshop

binodnath3@gmail.com

Binod Kumar Nath

Qualifications:
M.Sc. (Disaster Management)
P.G.D. (RS&GIS in NHDRM) Ongoing

Area of Interest:
Disaster Management, Flood Vulnerability Assessment, Geophysical Survey

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, SNAP, ILWIS, SURFER, SWAN

beradebarati@gmail.com

Debarati Bera

Qualifications:
B.Sc. (Geography),
M.Sc. (Geography),
P.G.D. (RS&GIS in Urban and Regional Studies) Ongoing

Area of Interest:
Regional Planning, Watershed Management, Flood area Management, Microclimatic Zone Delineation, Urban Green Spaces, Urban Solid Waste Management, Urban Sprawl, Site Suitability analysis, Wetlands Management, Urban 3-D modelling.

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, IDRISI, MAPINFO, ILWIS, ENVI.

gargi_one@yahoo.com

Gurveen Arora

Qualifications:
B.Sc. (Agriculture)
M.Sc. (Agro Forestry)
P.G.D. (RS&GIS in Forest Resources and Ecosystem Analysis) Ongoing

Area of Interest:
Ecological Modelling

Software Skills:
ENVI, ERDAS IMAGINE, ArcGIS, SNAP, QGIS, Forest Canopy Density Mapper, Forest Vegetation Simulator,
ILWIS

harsh.coolrtr@gmail.com

Harsh Sharma

Qualifications:
B.Tech. (Computer Science and Engineering),
P.G.D. (RS&GIS in Photogrammetry and Remote Sensing) Ongoing

Area of Interest:
Geographic Information System (GIS), Remote Sensing Application in Topographical Surveying.

Software Skills:
ERDAS IMAGINE, ArcGIS, ENVI,C,C++, Java, Python.

isha.94in@gmail.com

Isha Abhaykumar Shah

Qualifications:
B.Tech. (Civil Engineering)
P.G.D. (RS&GIS in Water Resources) Ongoing

Area of Interest:
Environmental and Climate Change Modeling, Glacier studies, Urban Hydrological Modeling

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, SNAP, AutoCAD, ILWIS, SWMM

saion523@gmail.com

Kajal Sharma

Qualifications:
B.Sc., M.Sc. (Geography),
P.G.D. (RS&GIS in Urban and Regional Studies) Ongoing

Area of Interest:
Urban planning, Urban sprawl, Urban environment, Urban hazards and disaster management, Wasteland development planning.

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, ILWIS

keerthijeya25@gmail.com

Keerthiga J

Qualifications:
B.Tech. (Civil Engineering)
P.G.D. (RS&GIS in Water Resources) Ongoing

Area of Interest :
Waterbody Mapping, Urban Hydrology, Watershed Characteristics & Management, Water Distribution modelling, Hydrologic Modelling

Software Skills:
AutoCAD, ARCHICAD, STAAD.Pro, ArcGIS, ERDAS IMAGINE, ENVI, ILWIS, SWMM, HEC-HMS

kumariniharika9@gmail.com

Niharika

Qualifications:
B.Sc. (Environmental Science),
M.Sc. (Environmental Science),
P.G.D. (RS&GIS in Agriculture and Soil) Ongoing

Area of Interest:
Meteorological studies, land use mapping, change detection in crop pattern, physiographic analysis using Remote Sensing and GIS and Crop water requirement, irrigation water requirement estimation and aquaponic farming system.

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, ILWIS.

nupurrautela3@gmail.com

Nupur Rautela

Qualifications:
B.Sc. (Horticulture),
M.Sc. (Environmental Science),
P.G.D. (RS&GIS in Forest Resources and Ecosystem Analysis) Ongoing

Area of Interest:
Wildlife habitat suitability modeling and mapping, Species richness and distribution modeling, Fire detection and scare modeling, Niche modeling, Forest degradation assessment and modeling, Geospatial modeling for natural resource assessment,Forest change dynamics

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, MAPINFO, ILWIS, R, Forest Vegetation Simulator, QGIS, FCD Mapper

pragyamehrishi@gmail.com

Pragya Mehrishi

Qualifications:
B.Sc. (Hons. Zoology),
M.A. (Geography),
P.G.D. (RS&GIS in NHDRM) Ongoing

Area of Interest:
Remote sensing and GIS applications in Flood Mapping, Monitoring and Damage Assessment, Disaster Risk Management and Vulnerability Analysis, Impact of Climate Change on Natural Hazards

Software Skills:
ArcGIS, QGIS, ERDAS IMAGINE, ENVI, SURFER, SWAN, ILWIS

rajashree.bini06@gmail.com

Rajashree Naik

Qualifications:
B.Sc. (Botany Hons.),
M.Sc. (Environmental Science),
P.G.D. (RS&GIS in Forest Resources and Ecosystem Analysis) Ongoing

Area of Interest:
Forest change dynamics, Carbon emission from forest degradation, Forest mapping and monitoring, Wetland and mangrove ecosystem

Software Skills:
ArcGIS, QGIS, ERDAS IMAGINE, ENVI, FCD MAPPER, Forest Vegetation Simulator, SNAP, LIMULATOR, ILWIS

ritikasrinet@gmail.com

Ritika Srinet

Qualifications:
B.Sc. (Physics, Chemistry, Mathematics),
M.Sc. (Environment Management),
P.G.D. (RS&GIS in Forest Resources and Ecosystem Analysis) Ongoing

Area of Interest:
Forest ecology, Terrestrial carbon pool assessment, LiDAR remote sensing.

Software Skills:
ArcGIS, QGIS, ERDAS IMAGINE, ENVI, FCD Mapper, Forest Vegetation Simulator, SNAP, LIMULATOR, ILWIS.

ruchigodiyal1@gmail.com

Ruchi Godiyal

Qualifications:
B.Sc. (Geology),
M.Sc. (Geology),
P.G.D. (RS&GIS in Water Resources) Ongoing

Area of Interest:
Ground water quality Analysis, Water Resource Management, watershed monitoring, Glacier studies, Soil Erosion.

Software Skills:
ArcGIS, ERDAS IMAGINE, SURFER, ILWIS, ROCKWORKS, ENVI

rupsa16@gmail.com

Rupsa Chakraborty

Qualifications:
B.Sc. (Geology),
M.Sc. (Geology),
P.G.D. (RS&GIS in Geosciences) Ongoing

Area of Interest:
Mineral Exploration, Petroleum Exploration, Groundwater Quality Analysis and Water table assessment and Glacier studies

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, SURFER, JAVA, Python

sshashwat93@gmail.com

Shashwat Shukla

Qualifications:
B.Tech. (Electrical and Electronics Engineering),
P.G.D. (RS&GIS in Photogrammetry and Remote Sensing) Ongoing

Area of Interest:
SAR, Fuzzy logic and neural networks, LiDAR and Photogrammetry applications, instrumentation and controls

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, SNAP, TRIVIM, C, Python, MATLAB

annasam13@gmail.com

Shruti Anna Samuel

Qualifications:
Integrated M.Sc. (Applied Geology),
P.G.D. (RS&GIS in Geosciences) Ongoing

Area of Interest:
Hyperspectral remote sensing for mineral exploration, Active tectonics, Glacier studies, Mineral Exploration, Microwave remote sensing for geosciences

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, ILWIS

hossainskariful@gmail.com

SK Ariful Hossain

Qualifications:
B.Sc. (Geography),
M.Sc. (Geography),
P.G.D. (RS&GIS in Marine and Atmospheric Science) Ongoing

Area of Interest:
Ocean and Coastal Environment, Hazard and Disaster Management, Urban Environment

Software Skills:
ERDAS IMAGINE, ENVI, ArcGIS, QGIS, ILWIS, SNAP, PARBAT, LIMUNATOR, BILKO

srutisudha80@gmail.com

Srutisudha Mohanty

Qualifications:
B.Sc. (Botany Hons.),
M.Sc. (Environmental Science),
P.G.D. (RS&GIS in Agriculture and Soils) Ongoing

Area of Interest:
Plant phenology, Carbon sequestration, Agro-meteorology, Crop monitoring

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, R, ILWIS, TIMESAT with MATLAB, SNAP, LIMULATOR

subodhanajyothi@gmail.com

Subhodhna Jyothi

Qualifications:
B.Tech. (Electrical and Electronics Engineering), M.Tech. (Electrical Power System),
P.G.D. (RS&GIS in Photogrammetry and Remote Sensing) Ongoing

Area of Interest:
Remote Sensing and GIS Applications in Electrical Utility. Solar Power.

Software Skills:
OS-Window family, ArcGIS, ERDAS IMAGINE, ENVI, SNAP, Basic in MATLAB.

supriya2.rajhans@gmail.com

Supriya Rajhans

Qualifications:
B.Tech. (Electronics and Communication),
P.G.D. (RS&GIS in Photogrammetry & Remote Sensing) Ongoing

Area of Interest:
Microwave Remote Sensing, SAR Polarimetry and Interferometry, LiDAR and TLS data processing, Hyperspectral data analysis, Integration of Python for processing these datasets

Software Skills:
ArcGIS, ERDAS IMAGINE, MATLAB, SNAP, ENVI, Python, Parbat, Trivim, Microstation, R, eCognition

suvrat.k007@gmail.com

Suvrat Kaushik

Qualifications:
B.Sc. (Geology), M.Sc. (Geology),
P.G.D. (RS&GIS in Water Resources)
Ongoing

Area of Interest:
Glacier Studies, Mineral Exploration, Petroleum Exploration, Soil Erosion measurement and Groundwater Quality Analysis.

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, SURFER, MAPINFO, ILWIS, SWMM, HEC-HMS, CROPWAT, MIKE

tapanedu@gmail.com

Tapan Adhikari

Qualification:
B.Sc. (Botany),
M.Sc. (Ecology and Environmental Science),
P.G.D. (RS&GIS in Forest Resources and Ecosystem Analysis) Ongoing

Interested Areas:
Wildlife and Habitat Conservation, Environmental Safety and Safeguard, Water Treatment and Technologies

Software Skills:
ArcGIS, ERDAS IMAGINE, SNAP, QGIS, ENVI, FVS, R

yudhishtherseth@gmail.com

Yudhishther Seth

Qualifications:
B.Sc., M.Sc. (Geography),
P.G.D. (RS&GIS in Agriculture and Soils)
Ongoing

Area of Interest:
Vulnerability analysis, Web portal, Impact of climate change on agriculture, Precision farming, mapping and protection of erosion prone areas

Software Skills:
ArcGIS, ERDAS IMAGINE, ENVI, Python (BASICS), MAPINFO, ILWIS

P.G.D. | Profile of the Batch 2015 - 2016

techno.archit@gmail.com

Archit Sharma

Qualification:
B.E. (Electronics & Telecommunication), P.G.D. (Photogrammetry and Remote Sensing)

Area of Interest:
Orthorectification, Stereo compilation, Radiometry, LiDAR, Utility mapping, Cadastral mapping, Remote sensing, GIS applications.

Software Skills:
ERDAS Imagine, LPS, ENVI, eCognition, Parbat, ArcGIS, QGIS, IDLE, μ-station, Sentinel-1, SNAP, NEST, ATCOR, FLAASH, 6S

Thesis:
Generation of high resolution thermal data with different algorithms - A comparative study

l.mahavir1990@gmail.com

Lakshit Mahavir

Qualification:
M. Plan (Urban Planning), P.G.D. (Urban and Regional Studies)

Area of Interest:
Urban Planning Application of Remote sensing and GIS in Urban Infrastructure, Application of Ground Penetrating Radar for Urban Infrastructure, GIS based Master Plans

Software Skills:
ERDAS Imagine, ArcGIS, ENVI, QGIS, eCOGNITION, AutoCAD, REVIT

Thesis:
Water Utility Map Updation using GPR and Supply-Demand Analysis

M. TECH. | Profile of the Batch 2014 - 2016

pratishtha.narain@gmail.com

Pratishtha Narain

Qualification:
M.Sc (Applied Geology), P.G.D. (RS&GIS in Geosciences)

Area of Interest:
Hyperspectral and Multispectral Remote Sensing, GIS, Geology

Software Skills:
ENVI, ERDAS Imagine, ArcGIS ILWIS, IGIS, ASD Spectrometer, GPR

Thesis:
Mineral Mapping Using Space Borne and Ground Based Spectrometric Techniques in and around Umra, Rajasthan

rc94316@gamil.com

Rahul Choudhary

Qualification:
B.Tech. (Agricultural Engg.) P.G.D. (RS&GIS in Water Resources)

Area of Interest:
Watershed hydrology, Watershed conservation, Planning and management, Water resources, Farm machinery and equipment, Irrigation management practices

Software Skills:
ArcGIS, ILWIS, ERDAS Imagine, JAVA.

Thesis:
Site suitability for water conservation structures in part of Rajasthan

rhtjuneja@gmail.com

Rohit Juneja

Qualification:
M. Plan (Site Planning),
P.G.D. (Urban and Regional Studies)

Area of Interest:
Urban Planning, Transportation, Environment Planning, Air Quality Assessment, Solid Waste Management, Smart Cities, Application of RS & GIS in Urban Planning

Software Skills:
ArcGIS, AutoCad, ERDAS Imagine, ENVI, eCognition, Google Sketchup

Thesis:
Assessment of Ambient Air Quality in Dehradun City

shravanee.singha@gmail.com

Shravanee Singha

Qualification:
M.Sc (Marine Geology),
P.G.D. (RS&GIS in Geosciences)

Area of Interest:
Ground water, Structural Geology, Optical Remote Sensing Microwave Remote Sensing, Hyperspectral Remote Sensing, DGPS- Survey

Software Skills:
ArcGIS, ERDAS Imagine, ENVI, ILWIS, QGIS, SNAP, LPS

Thesis:
Ground water Depletion induced predictive subsidence modelling in Delhi area using space borne DinSAR and subsidence instrument based observation measurement

soumiya940@gmail.com

Soumiya Bhattacharjee

Qualification:
M.Sc. (Geography)
P.G.D. (RS&GIS in NHDRM)

Area of Interest:
Landslide hazard mapping and monitoring, Morphometric Analysis of a Drainage Basin, Watershed Management, Environmental Study and Geology, Climate Change, Natural Hazards and Disaster Risk Management, Geomorphology, Land Use and Land Cover Analysis, Wasteland Analysis and Land Degradation Monitoring.

Software Skills:
ERDAS Imagine, ArcGIS, QGIS, R, ILWIS, SNAP, ENVI, HAZUZ, ALOHA, GRADS, SWAT, Python

Thesis:
Precipitation Intensity Duration based Threshold Modeling for initiation of land slides in Upper Alaknanda Valley.

tanya24.r@gmail.com

Tanya Rajwal

Qualification:
B. Plan (Site Planning), P.G.D. (RS&GIS in Urban and Regional Studies)

Area of Interest:
Urban Planning, Environment Planning, Application of Remote Sensing & GIS in Urban Planning, Urban Climate, Urban & Rural Housing

Software Skills:
ArcGIS, AutoCad, ERDAS Imagine, SagaGIS, ENVI, eCognition

Thesis:
Assessment of Impact of Urban forms on Urban Climate, Case study – Chandigarh Region

raniveenita@gmail.com

Veenita Rani

Qualification:
B.A. (History, Geography and English), M.A. (Geography), P.G.D. (Urban and Regional Studies)

Area of Interest:
Urban Planning, Growth Modelling, Network Analysis

Software Skills:
ArcGIS, ERDAS Imagine, ENVI, Map Info, IDRISI-Taiga, eCognition

Thesis:
Slum Environment Mapping Using Open Source Imagery

bhave2101@gamil.com

Vipul Bhave

Qualification:
M.Sc. (Forestry), P.G.D. (RS&GIS in Forest Resources and Ecosystem Analysis)

Area of Interest:
Remote Sensing & GIS in Agriculture and Forestry (Advanced Remote Sensing Techniques) Agri – business and Rural Development Agro – forestry Systems and Biodiversity, Environmental Impact Assessment and Sustainable Development, Economics and Business Operations

Software Skills:
ArcGIS, Q GIS, SNAP, ERDAS IMAGINE, ENVI, Fragstat, SPSS, XLSTAT, MS-EXCEL, R, Python, GPS/DGPS instruments

Thesis:
Canopy level estimation of Chlorophyll content for tropical mixed species plantation using satellite data (Sentinel-2A MSI)

rajr6112@gmail.com

Raj Kumar

Qualification:
B.Sc. (Forestry),
M.Tech. (RS&GIS)

Area of Interest:
Earth System modelling i.e. Process Based Model, Earth Observation and Geo-information Science, Application of RS and GIS in Forestry, Image Analysis, REDD and REDD+, Forest Plus, Forest Conservation and Management.

Software Skills:
Basics of JAVA, R, FORTRAN, HTML, MATLAB, ArcGIS, QGIS, ENVI, ERDAS Imagine, IDRSI Taiga, SNAP

Thesis:
Modelling of Plant Functional Types in Uttarakhand using Dynamic Global Vegetation Model: LPJ- GUESS

rohit_sambare_04@outlook.com

Rohit Sambare

Qualification:
B.Tech. (Civil Engg.),
M.Tech. (RS&GIS)

Area of Interest:
Water Resources, Hydrological & Hydraulic Modelling Integrated Watershed Resources Management River Valley Project Planning Hyperspectral Remote Sensing, Natural Resources Disaster Management Services, GIS Environmental impact Assessment

Software Skills:
ArcGIS, QGIS, ILWIS, ERDAS Imagine, ENVI HEC-HMS, HEC-RAS, Arc SWAT, Arc-Apex, MIKE-11, SWMM, VIC, Win- SRM, AutoCAD, MATLAB, Discipulus Geoservers

Thesis:
Time Delay Approach for Flood Forecasting using Data Driven Models and Satellite Data

shaininaha21@gmail.com

Shaini Naha

Qualification:
B.Tech. (Civil Engg.),
M.Tech. (RS&GIS)

Area of Interest:
Hydrological Modelling, Surface water processes, Snow melt run-off modelling, Remote Sensing and GIS, Data Assimilation

Software Skills:
ERDAS Imagine, ArcGIS, ENVI, QGIS, ILWIS, R, Google Earth

Thesis:
Hydrological Modelling of Beas river basin using Data Assimilation and Ensemble Techniques

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Evaluation Group, IIRS

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Acknowledgements:
Director, IIRS; Dean (A) & Group Director (ER&SSG),
Group Director, GTOP; Group Head, G&DMS;
Group Head, PPEG; Heads of Departments & Sections;
Course Directors and Coordinators,
M.Tech., M.Sc. and PGD Students

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