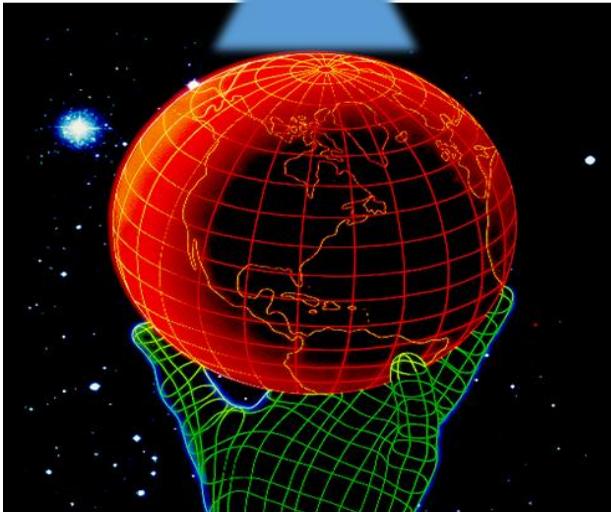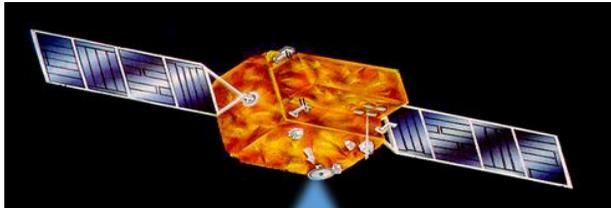# M. Tech. Course in
Remote Sensing and
Geographic Information System

July, 2020 - June, 2022

Indian Institute of Remote Sensing
Indian Space Research Organisation
Department of Space, Government of India
Dehradun - 248 001, Uttarakhand
www.iirs.gov.in

INTRODUCTION

Developments in Remote Sensing, Geographic Information System (GIS) and Satellite Navigation Systems have opened new horizons towards generating reliable and updated spatial information about the natural resources, natural and built environment and processes, natural hazards, etc. that are vital to informed decision making for more effective governance and societal development. Over the last three decades, remote sensing data have been used for generating spatial information on various themes. Today, India has a large constellation of satellites dedicated towards Earth Observation, communication and broadcasting, meteorology, navigation and space science missions. Trained and educated human resource is needed to generate reliable geospatial products, information and services from the existing and future space-based systems.

Indian Institute of Remote Sensing (IIRS), Indian Space Research Organisation (ISRO), Dehradun is conducting M.Tech. course in Remote Sensing & GIS (with specializations in different domains) since 2002. Around 330 students have registered in this course so far. The M.Tech. Degree is presently awarded by the Andhra University, Vishakhapatnam, India and is approved by the All India Council for Technical Education (AICTE). Indian and foreign nationals may apply for this course.

ABOUT THE COURSE

The M.Tech. course in Remote Sensing & GIS is offered in the following specializations:

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

AIM OF THE COURSE

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, coastal and marine resources, urban and regional planning, atmospheric studies and disaster management.

COURSE DURATION AND STRUCTURE

The course is of 2 years duration, comprising of four semesters. The first semester, common to all the participants, deals with fundamentals of Remote Sensing, Photogrammetry, GIS and GNSS. In the second semester, participants attend the core courses in their chosen specialisation, a few common courses and carry out a case study. The third and fourth semesters are for carrying out a dissertation in the chosen topic. M.Tech. degree is presently awarded by the Andhra University, Visakhapatnam (India) and is approved by the All India Council for Technical Education (AICTE).

TARGET PARTICIPANTS

This course is targeted for those who are interested to learn remote sensing and GIS technologies and their applications. Both the working professionals and fresh graduates (including candidates in the final semester/year of the qualifying degree) can apply for the course.

ELIGIBILITY

Please refer Course Calendar available in IIRS website (*https://www.iirs.gov.in/academiccalendar*) for the Essential Qualifications required to apply for each specialization, age limit and other details.

NUMBER OF SEATS

Total 40 seats are available (including all specializations).

COURSE FEE

- Govt.-Sponsored* candidates: University Registration fee only (currently, Rs. 20,000);
- Self-financed (Indian) candidates: Rs. 1,64,000 [Rs. 1,44,000 towards IIRS fee + University Registration fee (currently, Rs. 20,000)];
- Foreign candidates: USD 14,400 towards IIRS Fee + University Registration fee (currently, Rs. 20,000).

*Govt.-sponsored candidate means only the Permanent Employee nominated by a Govt. organization in India (Central or State Government Ministries/Departments or

Autonomous Institutions and State or Central Govt.-funded Universities). Such candidates must submit the Nomination Form from the Competent Authority of their parent organisation/institute at the time of submitting the online application. The template of the Nomination Form can be downloaded from IIRS website (https://admissions.iirs.gov.in).

HOW TO APPLY

Please fill up the **online application** form available in IIRS website (*https://admissions.iirs.gov.in*). Offline applications will not be considered. **The last date to apply for the course is April 20, 2020 (17:30 hrs)**. Candidate has to choose only one specialization at the time of applying online, which cannot be changed subsequently. If the candidate wishes to apply for M.Tech. as well as P.G. Diploma, he/she has to select the same specialisation for both the courses, give the order of preference for M.Tech. and P.G. Diploma, and pay the requisite application fee.

Application Fee: For only M.Tech. - Rs. 1,000/- (USD 100 for foreign nationals); For both M.Tech. and P.G. Diploma - Rs. 1,500/- (USD 150 for foreign nationals).

Govt.-sponsored candidates must submit the Nomination Form from the Competent Authority of their parent organisation/institute at the time of submitting the online application. The template of the Nomination Form can be downloaded from *https://admissions.iirs.gov.in/*.

ADMISSION PROCESS

Selection for admission to M.Tech. course is based on Entrance Test (computer-based exam or Interview). Govt.-sponsored candidates are exempted from entrance test. Foreign candidates are also exempted from entrance test but they have to appear for interview through online platforms. Other candidates need to appear for Entrance Test. Entrance test is likely to be held at Ahmedabad, Bangalore, Dehradun, Delhi, Hyderabad, Kolkata, Nagpur, Lucknow, Shillong, and Thiruvananthapuram on **May 9, 2020**.

ACCOMMODATION

The lodging and boarding facilities are provided to all students at IIRS in its hostels at nominal charges. Local candidates will be considered for hostel accommodation, only if available. **No accommodation will be provided to the accompanying person/ children.** Indian cuisine is served in the hostel mess. The

expenditure towards boarding and lodging (currently, Rs. 4,500 p.m. approx.) will have to be borne by the participants as per IIRS hostel's policy.

ABOUT IIRS

Indian Institute of Remote Sensing (IIRS) is a premier institute with a primary aim to build capacity in Remote Sensing and Geoinformatics technologies and their applications through training & education, research and outreach programmes. IIRS is a Unit of Indian Space Research Organisation (ISRO), Department of Space, Government of India. While nurturing its primary endeavour to build capacity among the user community by training mid-career professionals since its inception in 1966, the Institute has enhanced its programmes to meet the requirements of various stake-holders, ranging from fresh graduates to policy makers including academia, industry, different government departments and NGOs.

IIRS also hosts the headquarters of the Centre for Space Science & Technology Education in the Asia and Pacific (CSSTEAP), affiliated to the United Nations, and conducts its training and education courses in Remote Sensing & GIS.

LOCATION & ACCESSIBILITY

Indian Institute of Remote Sensing (IIRS) is located in Dehradun, the capital city of the State of Uttarakhand. Dehradun is about 260 km from Delhi and is well-connected by air, rail and road. The city is famous for its picturesque landscape, pleasant climate, high quality school education and is the gateway to several places of religious and tourist importance.

Important Dates#

Last date to Apply	20.04.2020 [17:30 hrs]
Admit Card for Entrance	27.04.2020
Entrance Exam	09.05.2020
Announcement of Results	Last week of May, 2020
Course Start Date	15.07.2020

The dates and Centre for Entrance Test mentioned above may change, and the decision of the Institute shall be final.

For more information and further clarification, please write to: Course Coordinator/ Course Director, M. Tech. or Group Head, PPEG as per the details given below.

Dr. Arpit Chouksey Course Coordinator, M.Tech. & Scientist/Engineer "SE"	Water Resources Department, Indian Institute of Remote Sensing, Department of Space, Govt. of India, 4, Kalidas Road, Dehradun - 248001, Uttarakhand Tel: 0135-2524167 Email: arpit@iirs.gov.in
Dr. Anil Kumar Course Director, M.Tech. & Scientist/ Engineer "SG"	Photogrammetry and Remote Sensing Department, Indian Institute of Remote Sensing, Department of Space, Govt. of India, 4, Kalidas Road, Dehradun - 248001, Uttarakhand Tel: 0135-2524114 Email: anil@iirs.gov.in
Dr. Hari Shanker Srivastava Group Head, PPEG & Scientist/Engineer "SG"	Indian Institute of Remote Sensing Department of Space, Govt. of India, 4, Kalidas Road, Dehradun - 248001 Uttarakhand Tel: 0135-252-4351/4109/4106 Fax: 0135-2741987 Email: mtechadmissions@iirs.gov.in