



Govt. of India  
 Department Space  
 Indian Space Research Organization  
 Indian Institute of Remote Sensing



**Eighty Fifth IIRS Outreach Programme**  
 On  
 Basic of RS, GIS & GNSS

**Course Schedule**

| S. No. | Course Name                                  | Module Name           | From       | To         |
|--------|--|-----------------------|------------|------------|
| 1.     | Basic of RS, GIS & GNSS                      | Complete Basic Course | 16-08-2021 | 26-11-2021 |
| 2.     | Remote Sensing & Digital Image Analysis      | Module-1              | 16-08-2021 | 10-09-2021 |
| 3.     | Global Navigation Satellite System           | Module-2              | 13-09-2021 | 24-09-2021 |
| 4.     | Geographical Information System Module       | Module-3              | 27-09-2021 | 22-10-2021 |
| 5.     | Basics of Geocomputation and Geoweb Services | Module- 4             | 25-10-2021 | 02-11-2021 |
| 6.     | RS & GIS Applications                        | Module-5              | 08-11-2021 | 26-11-2021 |

**Course Name: Remote Sensing & Digital Image Analysis**  
**Course Coordinator: Mrs. Minakshi Kumar**

**Duration of the Course: 16 August-10 September 2021**

| Date              | Day             | Time   | Topic  | Speaker              |
|-------------------|-----------------|--|--|----------------------|
| 16/08/2021        | Monday          | 1530-1730 hrs  | Course Inauguration and Introductory Lecture   | Dr. Prakash Chauhan  |
| 17/08/2021        | Tuesday         | 1600-1730 hrs  | Basic Principles of Remote Sensing   | Ms. Manu Mehta       |
| 18/08/2021        | Wednesday       | 1600-1730 hrs  | Earth Observation Sensors and Platforms  | Mr. Vinay Kumar      |
| <b>19/08/2021</b> | <b>Thursday</b> | <b>Holiday - Muharram</b>                                |  |                      |
| 20/08/2021        | Friday          | 1600-1730 hrs  | Spectral Signatures of Different Land cover Features and Visual Image interpretation | Dr. Hina Pande       |
| 23/08/2021        | Monday          | 1600-1730 hrs  | Digital Image Processing: Basic Concepts Rectification and Registration              | Ms. Minakshi Kumar   |
| 24/08/2021        | Tuesday         | Offline  | RS and Image Interpretation Practical  |                      |
| 24/08/2021        | Tuesday         | 1600-1730 hrs  | Image Enhancement techniques   | Dr. Poonam S. Tiwari |
| 25/08/2021        | Wednesday       | 1600-1730 hrs  | Image Classification Techniques  | Dr. Anil Kumar       |
| 26/08/2021        | Thursday        | 1600-1730 hrs  | Advanced Classifiers and Accuracy Assessment   | Dr. Anil Kumar       |
| 27/08/2021        | Friday          | 1600-1730 hrs  | Thermal Remote Sensing   | Dr. Yogesh Kant      |
| <b>30/08/2021</b> | <b>Monday</b>   | <b>Holiday - Janmashtami</b>                             |  |                      |
| 31/08/2021        | Tuesday         | 1600-1730 hrs  | Hyperspectral Remote Sensing   | Mr. Vinay Kumar      |
| 01/09/2021        | Wednesday       | 1600-1730 hrs  | Image Processing Hands-on Demo using QGIS  | Mr. Prasun Gupta     |
| 02/09/2021        | Thursday        | 1600-1730 hrs  | Google Earth Engine API: Introduction and case studies                               | Ms. Supriya Sharma   |
| 03/09/2021        | Friday          | 1600-1730 hrs  | Open Source Data and International Geoportals for Satellite data download            | Dr. Harish Karnatak  |
| 06/09/2021        | Monday          | 1600-1730 hrs  | Basics of Microwave Remote Sensing   | Dr. Shashi Kumar     |
| 07/09/2021        | Tuesday         | 1600-1730 hrs  | Basics of SAR Data Processing  | Mr. Ashish Joshi     |
| 08/09/2021        | Wednesday       | 1600-1730 hrs  | Basics of UAV Remote Sensing   | Mrs. Shefali Agrawal |
| 09/09/2021        | Thursday        | 1600-1730 hrs  | Basics of LIDAR Remote Sensing   | Dr. Hina Pande       |
| 10/09/2021        | Friday          | <b>1430- 1730 Query Session / Feedback / Valedictory</b> |  |                      |

**Module- 2: Global Navigation Satellite System**  
**Module/ Course Coordinator: Dr. Ashutosh Bhardwaj**

**Course Duration: 13 September-24 September 2021**

| Date              | Day             | Time          | Topic  | Speaker                                   |
|-------------------|-----------------|---------------|--|---|
| 13/09/2021        | Monday          | 1600-1700 hrs | Introduction to GPS and GNSS   | Dr. Ashutosh Bhardwaj                     |
|                   |                 | 1700-1730 hrs | Interactive Session  |   |
| 14/09/2021        | Tuesday         | 1600-1700 hrs | GPS receivers, processing methods, errors and accuracy                                 | Dr. Ashutosh Bhardwaj                     |
|                   |                 | 1700-1730 hrs | Interactive Session  |   |
| 15/09/2021        | Wednesday       | No Lecture    |  |   |
| 16/09/2021        | Thursday        | 1600-1700 hrs | Satellites based Augmentation systems & GPS Aided and GEO Augmented Navigation (GAGAN) | Dr. Ashutosh Bhardwaj                     |
|                   |                 | 1700-1730 hrs | Interactive Session  |   |
| 17/09/2021        | Friday          | 1600-1700 hrs | GPS signal characteristics, Data formats (broadcast, precise ephemeris)                | Dr. Ashutosh Bhardwaj & Shri Ashish Joshi |
|                   |                 | 1700-1730 hrs | Interactive Session  |   |
| <b>18/09/2021</b> | <b>SATURDAY</b> |               |  |   |
| <b>19/09/2021</b> | <b>SUNDAY</b>   |               |  |   |
| 20/09/2021        | Monday          | 1600-1700 hrs | Indian Regional Navigation Satellite System (IRNSS)                                    | Dr. Ashutosh Bhardwaj & Shri Kamal Pandey |
|                   |                 | 1700-1730 hrs | Interactive Session  |   |
| 21/09/2021        | Tuesday         | 1600-1700 hrs | DGPS demonstration (Pre-recorded followed by live query session)                       | Offline                                   |
|                   |                 | 1700-1730 hrs | Interactive Session  | Dr. Ashutosh Bhardwaj                     |
| 22/09/2021        | Wednesday       |               |  |   |
| 23/09/2021        | Thursday        | 1600-1700 hrs | Advance GNSS processing  | Shri Suresh Kannaujiya                    |
|                   |                 | 1700-1730 hrs | Interactive Session  |   |
| 24/09/2021        | Friday          |               | <b>Panel Discussion</b>  |   |

**Module- 3: Geographical Information System**

**Module/ Course Module/Course Coordinator:** Shri. Prabakar Alok Verma

Course Duration: 27 September-22 October 2021

**Note:** Detailed schedule of the Course will be updated soon.

**Module Name-4 Basics of Geocomputation and Geoweb Services**

**Module/ Course Module/Course Coordinator:** Shri. Kamal Pandey

Course Duration: 25 October -02 November 2021

**Note:** Detailed schedule of the Course will be updated soon.

**Module/Course Name-5 : RS & GIS Applications**

**Module/ Course Coordinator:** Shri C.M. Bhatt

Course Duration: 08 November- 26 November 2021

**Note:** Detailed schedule of the Course will be updated soon.

**Note:** Details about the course, examination and latest schedule will be updated on below link;

<https://www.iirs.gov.in/> or <https://www.iirs.gov.in/EDUSAT-News>