



---

# THIRTY EIGHT IIRS Outreach Programme On

**Global Navigation Satellite System and Geographical Information System Module**

| Sl No. | Module Name   | From       | To         |
|--------|---|------------|------------|
| 1      | Global Navigation Satellite System and Geographical Information System Module | 17-09-2018 | 26-10-2018 |

September, 2018

| Course Name: Global Navigation Satellite System and Geographical Information System Module/ Course Coordinator: Shri Ashutosh Bhardwaj & Shri Prasun Kumar Gupta |           |               |  |   |
|--|-----------|---------------|--|---|
| 17 Sep 18  | Monday    | 1600-1730 hrs | Introduction to GPS and GNSS   | Er. Ashutosh Bhardwaj                     |
| 18 Sep 18  | Tuesday   | 1600-1730 hrs | GPS receivers, processing methods, errors and accuracy   | Er. Ashutosh Bhardwaj                     |
| 19 Sep 18  | Wednesday | 1600-1730 hrs | Satellites based Augmentation systems & GPS Aided and GEO Augmented Navigation (GAGAN)   | Er. Ashutosh Bhardwaj                     |
| 20 Sep 18  | Thursday  | 1600-1730 hrs | Break  |   |
| 21 Sep 18  | Friday    |               | Muharram   |   |
| 22 Sep 18  | Saturday  |               |  |   |
| 23 Sep 18  | Sunday    |               |  |   |
| 24 Sep 18  | Monday    | 1600-1730 hrs | GPS signal characteristics, Data formats (broadcast, precise ephemeris)  | Shri S. Raghavendra                       |
| 25 Sep 18  | Tuesday   | 1600-1730 hrs | Indian Regional Navigation Satellite System (IRNSS)  | Er. Ashutosh Bhardwaj & Shri Kamal Pandey |
| 26 Sep 18  | Wednesday |               | Break  |   |
|  |           |               | DGPS demonstration (Pre-recorded followed by live query session)   | Offline                                   |
| 27 Sep 18  | Thursday  | 1600-1730 hrs | Advance GNSS processing  | Shri Suresh Kannaujiya                    |
| 28 Sep 18  | Friday    | 1600-1730 hrs | Mobile Mapping   | Dr. Harish Chandra Karnatak               |
|  |           |               | <b>Saturday</b>  |   |
|  |           |               | <b>Sunday</b>  |   |
| Geographical Information System Module/ Course Coordinator: Shri Prasun Kumar Gupta  |           |               |  |   |
| 01 Oct 18  | Monday    | 1600-1730 hrs | Introduction to GIS  | Dr. Sameer Saran                          |
| 02 Oct 18  | Tuesday   |               | <b>Gandhi Jayanthi</b>   |   |
| 03 Oct 18  | Wednesday | 1600-1730 hrs | Geographic Phenomena, Concepts and examples  | Shri Prasun Kumar Gupta                   |
| 04 Oct 18  | Thursday  | 1600-1730 hrs | Data Inputting and Editing in GIS  | Shri K. Shiva Reddy                       |
| 05 Oct 18  | Friday    | 1600-1730 hrs | GIS Data Models (Spatial and Non spatial)  | Shri Ashutosh Kumar Jha                   |
| 06 Oct 18  |           |               | Saturday   |   |
| 07 Oct 18  |           |               | Sunday   |   |
| 08 Oct 18  | Monday    | 1600-1730 hrs | Map Projection Concepts & Use in RS & GIS  | Dr. Ashutosh Srivastav                    |
| 09 Oct 18  | Tuesday   | 1600-1730 hrs | Spatial Analysis - Introductory Concepts and Overview  | Shri Prabhhar Alok Verma                  |
| 10 Oct 18  | Wednesday | 1600-1730 hrs | Spatial Analysis - Functionality and Tools   | Shri Kapil Oberai                         |
| 11 Oct 18  | Thursday  | 1600-1730 hrs | Demo of QGIS Software – Session 01:<br>Adding GIS Data, Attribute table & Identity tool<br>Change symbology, Create map composers<br>Manage plugins, CRS & EPSG<br>Geo-referencing & Tie-points, RMSE & Rectification                              | Recorded Lecture                          |
| 12 Oct 18  | Friday    | 1600-1730 hrs | Demo of QGIS Software – Session 02:<br>(Data Creation/Vector Generation)<br>Digitization, Setting digitizing environment<br>Adding attributes, Editing digitized layer<br>Attribute Queries, Spatial Queries<br>Linking spatial & non-spatial data | Recorded Lecture                          |
| 13 Oct 18  |           |               | <b>Saturday</b>  |   |
| 14 Oct 18  |           |               | <b>Sunday</b>  |   |
| 15 Oct 18  | Monday    | 1530-1555hrs  | Interactive Session of Demo of QGIS Software – Session 01 & Session 02   | Shri Prasun Kumar Gupta                   |
|  | Tuesday   | 1600-1730 hrs |  |   |
| 16 Oct 18  | Wednesday | 1600-1730 hrs | Data Quality & Policies OGC, NSDI & GSDI initiatives.<br>Discussion on Internet resources  | Dr. Harish Karnatak                       |
| 17 Oct 18  | Thursday  | 1600-1730 hrs | Advanced Geospatial Modeling   | Shri Ashutosh Kumar Jha                   |
| 18 Oct 18  | Friday    | 1600-1730 hrs | BREAK  |   |
| 19 Oct 18  | Monday    |               | <b>Dussehra</b>  |   |

|           |           |                  |  |                   |
|-----------|-----------|------------------|--|-------------------|
| 20 Oct 18 |           | <b>Saturday</b>  |  |                   |
| 21 Oct 18 |           | <b>Sunday</b>    |  |                   |
| 22 Oct 18 | Monday    | 1600-1730<br>hrs | Uncertainty in GIS and Error Propagation | Shri Hari Shankar |
| 23 Oct 18 | Tuesday   | 1600-1730<br>hrs | 3D GIS, City Models and Applications     | Dr. Sameer Saran  |
| 24 Oct 18 | Wednesday | 1600-1730<br>hrs | BREAK                                    |                   |
| 25 Oct 18 | Thursday  | 1600-1730<br>hrs | Recent Trends in Geoinformatics          | Dr. Sameer Saran  |
| 26 Oct 18 | Friday    | 1600-1730<br>hrs | Panel Discussion of Module 2             | All Faculty       |
|           |           |                  | Exam date to be announce                 |                   |