

## Fourth EDUSAT Course Schedule and Time Table

**Basics course on  
"Remote Sensing, Geographical Information System and Global Positioning  
System"**

### Time Schedule

Module	Name of the Module	Duration	
		From	To
1	Remote Sensing and Digital Image Analysis	12-08-09	26-08-09
2	Global Positioning System	31-08-09	04-09-09
3	Geographical Information System	07-09-09	09-10-09
4	RS & GIS Applications	12-10-09	30-10-09

### Conducted by

Indian Institute of Remote Sensing  
National Remote Sensing Centre, ISRO  
Department of Space, Government of India  
4-Kalidas Road, Dehradun, India

### In collaboration with

Consortium for Educational Communication, UGC

### Sponsored by

National Natural Resources Management System

**August 2009**

**MODULE 1: REMOTE SENSING & DIGITAL IMAGE ANALYSIS**  
**MODULE COORDINATOR: Mrs. Minakshi Kumar (minakshi@iirs.gov.in)**  
**12<sup>th</sup> August 2009 – 26<sup>th</sup> August 2009**

<b>Date</b>	<b>Day</b>	<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
12 Aug 09	Wednesday	1115-1230hrs	Basic Principles of Remote Sensing	Dr. George Joseph, Director CSSTEAP
		1230-1300 hrs	Interactive Session (Query)	
13 Aug 09	Thursday	1115-1230hrs	Earth Observation Sensors and Platforms	Mrs. Shefali Agrawal
		1230-1300 hrs	Interactive Session (Query)	
14 Aug 09	<b>Sri Krishna Janmashtami</b>			
15 Aug 09	<b>Saturday</b>			
16 Aug 09	<b>Sunday</b>			
17 Aug 09	Monday	1115-1230hrs	Spectral Signatures of Different Landcover Features	Mrs. Shefali Agrawal
		1230-1300 hrs	Interactive Session (Query)	
18 Aug 09	Tuesday	1115- 1150 hrs	Thermal Remote Sensing	Dr. R.D.Garg
		1150-1205 hrs	Interactive Session (Query)	
		1205- 1240 hrs	Microwave Remote Sensing	
		1240- 1300 hrs	Interactive Session (Query)	
19 Aug 09	Wednesday	1115-1230hrs	Visual Image interpretation	Ms. Hina Pande
		1230-1300 hrs	Interactive Session (Query)	
20 Aug 09	Thursday	1115-1230hrs	Digital Image Processing: Basic Concepts Rectification and Registration	Mrs.Minakshi Kumar
		1230-1300 hrs	Interactive Session (Query)	
21 Aug 09	Friday	1115-1230hrs	Image Enhancement techniques	Mrs.Poonam Seth Tiwari
		1230-1300 hrs	Interactive Session (Query)	

22 Aug 09	<b>Saturday</b>			
23 Aug 09	<b>Sunday</b>			
24 Aug 09	Monday	1115-1230hrs	Demonstration: Image Processing Software	Mrs.Minakshi Kumar
		1230-1300 hrs	Interactive Session (Query)	
25 Aug 09	Tuesday	1115-1230hrs	Image Classification Techniques and Accuracy Assessment	Mrs.Poonam Seth Tiwari
		1230-1300 hrs	Interactive Session (Query)	
26 Aug 09	Wednesday	1115-1230hrs	Demonstration: Image Processing Software	Mrs.Minakshi Kumar
		1230-1300 hrs	Interactive Session (Query)	
27 Aug 09	<b>Thursday</b>			
28 Aug 09	<b>Friday</b>			
29 Aug 09	<b>Saturday</b>			
30 Aug 09	<b>Sunday</b>			

**MODULE 2: GLOBAL POSITIONING SYSTEM**  
**MODULE COORDINATOR: Shri Ashutosh Bhardwaj (ashutosh@iirs.gov.in)**  
**31<sup>st</sup> August 2009 – 04<sup>th</sup> September 2009**

<b>Date</b>	<b>Day</b>	<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
31 Aug 09	Monday	1610 -1710hrs	Introduction to GPS and Positioning techniques	Mr. Ashutosh Bhardwaj
		1710-1730 hrs	Interactive Session (Query)	
1 Sept 09	Tuesday	1610 -1710hrs	GPS Error and Demonstration on Different GPS Receiver	Mr. Ashutosh Bhardwaj
		1710-1730 hrs	Interactive Session (Query)	
<b>2 Sept 09</b>	<b>Wednesday</b>	<b>Module 1 Exam of RS &amp; DIP</b>		
3 Sept 09	Thursday	1610-1640 hrs	Principles of Differential GPS, Surveying Methods and integration with GIS themes	Mr. Ashutosh Bhardwaj
		1640- 1650 hrs	Interactive Session (Query)	
		1650-1720hrs	Comparison of different navigation systems	Shri P.L.N. Raju
		1720-1730 hrs	Interactive Session (Query)	
4 Sept 09	Friday	1610 -1710hrs	Demonstration on Data collection using Geodetic receiver and post processing	Shri P.L.N. Raju Mr. Ashutosh Bhardwaj & Dr. B.D. Bharath
		1710-1730 hrs	Interactive Session (Query) and Quiz on GPS	
5 Sept 09	<b>Saturday</b>			
6 Sept 09	<b>Sunday</b>			

**MODULE 3: GEOGRAPHICAL INFORMATION SYSTEM**  
**MODULE COORDINATOR: Shri P.L.N. Raju (raju@iirs.gov.in)**  
**07<sup>th</sup> September 2009 – 09<sup>th</sup> October 2009**

<b>Date</b>	<b>Day</b>	<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
7 Sept 09	Monday	1610 -1710hrs	Introduction to GIS	Shri P.L.N. Raju
		1710-1730 hrs	Feedback/Interaction	
8 Sept 09	Tuesday	1610 -1710hrs	Geographic Phenomena, Concepts and examples	Shri P.L.N. Raju
		1710-1730 hrs	Feedback/Interaction	
9 Sept 09	Wednesday	1610-1640 hrs	Spatial Data Models Data formats and structures	Dr. Sameer Saran
		1640- 1650 hrs	Feedback/Interaction	
		1650-1720hrs	Non-Spatial Data Models	Shri Ram Mohan Rao
		1720-1730 hrs	Feedback/Interaction	
<b>10 Sept 09</b>	<b>Thursday</b>	<b>Preparation leave For Exam</b>		
<b>11 Sept 09</b>	<b>Friday</b>	<b>Module 2 Exam of GPS</b>		
12 Sept 09	<b>Saturday</b>			
13 Sept 09	<b>Sunday</b>			
14 Sept 09	Monday	1610 -1710hrs	Inputting, editing and topology creation Hardware and Software requirements for GIS	Shri P.L.N. Raju
		1710-1730 hrs	Feedback/Interaction	
15 Sept 09	Tuesday	1610 -1710hrs	Demonstration on - Overview of GIS S/W · Domain Concept · Coordinate System Concept · Display details	Dr. Sameer Saran
		1710-1730 hrs	Feedback/Interaction	
16Sept 09	Wednesday	1610 -1710hrs	Demonstration of GIS S/W on: ➤ Coordinate System ➤ Ground Control Points ➤ Geo-referencing Digitization (i.e. Inputting & Editing)	Mr. P.K. Gupta
		1710-1730 hrs	Feedback/Interaction	
17 Sept 09	Thursday	1610 -1710hrs	Spatial Analysis – Vector	Dr. Sameer Saran
		1710-1730 hrs	Feedback/Interaction	

18 Sept 09	Friday	1610 -1710hrs	Demonstration of GIS S/W on: Table Manipulation & Joining	Mr. P.K. Gupta
		1710-1730 hrs	Feedback/Interaction	
19 Sept 09	<b>Saturday</b>			
20 Sept 09	<b>Sunday</b>			
<b>21 Sept 09 – 4 Oct 09 ( Dussehra Holiday )</b>				
5 Oct 09	Monday	1610 -1710hrs	Map Projection Concepts And use in RS & GIS	Maj. Gen. Dr. B. Nagarajan
		1710-1730 hrs	Feedback/Interaction	
6 Oct 09	Tuesday	1610 -1710hrs	Spatial Analysis – Raster	Shri P.L.N. Raju
		1710-1730 hrs	Feedback/Interaction	
7 Oct 09	Wednesday	1610 -1710hrs	Visualization and Generation	Dr. Yogesh Kant
		1710-1730 hrs	Feedback/Interaction	
8 Oct 09	Thursday	1610 -1710hrs	Demonstration of GIS S/W on: Spatial Analysis	Dr. Sameer Saran
		1710-1730 hrs	Feedback/Interaction	
9 Oct 09	Friday	1610 – 1655 hrs	Data Quality & Policies, OGC, NSDI & GS DI initiatives. Discussion on Internet resources	Shri P.L.N. Raju
		1655-1715 hrs	Feedback/Interaction	
		1715 – 1730 hrs	Final Discussion & Clarifications on GIS Module	Module 3 Faculty
10 Oct 09	<b>Saturday</b>			
11 Oct 09	<b>Sunday</b>			

**MODULE 4: RS AND GIS APPLICATIONS**  
**MODULE COORDINATOR: Shri P.L.N. Raju (raju@iirs.gov.in)**  
**12<sup>th</sup> October 2009 – 30<sup>th</sup> October 2009**

<b>Date</b>	<b>Day</b>	<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
12 Oct 09	Monday	1610 -1710hrs	Remote Sensing Applications trends in India and Global Scenario	
		1710-1730 hrs	Feedback/Interaction	
13 Oct 09	Tuesday	1610-1640 hrs	Remote Sensing an GIS Applications in Inventory & Crop Yield Forecasting	
		1640- 1650 hrs	Feedback/Interaction	
		1650-1720hrs	Remote Sensing an GIS Applications in Soil Resource Management	
		1720-1730 hrs	Feedback/Interaction	
14 Oct 09	Wednesday	1610 -1710hrs	<input type="checkbox"/> Forestry and Ecology <input type="checkbox"/> Biodiversity Characterization	
		1710-1730 hrs	Feedback/Interaction	
<b>15 Oct 09 – 21 Oct 09 (Diwali Holidays)</b>				
22 Oct 09	Thursday	1610 -1710hrs	<input type="checkbox"/> Coastal Zone Management <input type="checkbox"/> Oceanography	
		1710-1730 hrs	Feedback/Interaction	
<b>23 Oct 09</b>	<b>Friday</b>	<b>Module 3 Exam of GIS</b>		
23 Oct 09	Friday	1610 -1710hrs	<input type="checkbox"/> Water Resources Assessment and development <input type="checkbox"/> Watershed Characterization <input type="checkbox"/> Irrigation Water Management	
		1710-1730 hrs	Feedback/Interaction	
24 Oct 09	<b>Saturday</b>			
25 Oct 09	<b>Sunday</b>			
26 Oct 09	Monday	1610 -1710hrs	<input type="checkbox"/> Geology and Geomorphology <input type="checkbox"/> Hydrogeology/ Ground Water <input type="checkbox"/> Engineering Geology with emphasis on landslide studies.	

		1710-1730 hrs	Feedback/Interaction	
27 Oct 09	Tuesday	1610 -1710hrs	<input type="checkbox"/> Human Settlement Analysis <input type="checkbox"/> High resolution satellite data analysis	
		1710-1730 hrs	Feedback/Interaction	
28 Oct 09	Wednesday		<b>(Exam Preparation)</b>	
29 Oct 09	Thursday		<b>(Exam Preparation)</b>	
<b>30 Oct 09</b>	<b>Friday</b>	<b>Module 4 – Exam RS &amp; GIS Application</b>		