Course Type	Course Code	Name of Course	L	T	P	Credit
DP	**NGPC510**	**Remote Sensing: Principles and Data Acquisition System Practical**	0	0	3	1.5

Course Objective
• Understanding of Electromagnetic Radiation and their interaction with atmosphere and different surface features • Understanding spectral signature for delineation of different objects • Understanding satellite geometry and different sensor characteristics
Learning Outcomes
Upon successful completion of this course, students will be able to • Understanding fundamental of Remote Sensing Principles and Data Acquisition System

Unit No.	Details of Lectures	Lecturs Hrs.	Outcome
1.	Numerical problem related with Wien's displacement law and Stefan Boltzmann law for calculating various radiation parameters	**6**	Numerical calculatins
2.	Calculation of emissivity and thermal Inertia of rocks.	**3**	Numerical calculatins
3	Measurement of spectral reflectance curve over various land features in field within visible and near infrared region using spectro- radiometer and their significance in remote sensing	**6**	
4.	Interpretation of field as well as lab spectral reflectance curves taken within visible and near infrared region for vegetation, water, rock and soil and their importance in remote sensing.	**6**	Interpretatio n and data understandig
5.	Interpretation of field as well as lab spectral reflectance curves taken within visible and near infrared region for soil and their importance in remote sensing.	3	Interpretatio n and data understandig
6.	Interpretation of field as well as lab spectral reflectance curves taken within visible and near infrared region for water and their importance in remote sensing.	3	Interpretatio n and data understandig
7.	Interpretation of field as well as lab spectral reflectance curves taken within visible and near infrared region for different types of rocks and their importance in remote sensing.	**3**	Understand the data

8.	Study of given black-white satellite imagery and noting down of various image details as given there in. Study of various imagery acquired IRS, IKONOS, SPOT, Landsat, etc.	**3**	Interpretation and data understanding
9.	Study of standard False Colour composite (FCC) image.	**3**	Interpretation and data understanding
10.	Estimation of scale, drawing latitude, longitude and north direction, identification of geological, morphological, man-made features.	**6**	Data Understanding
	Total	**42**	

Text Books

1. George Joseph, Fundamentals of Remote Sensing, Universities Press
2. B. Bhatta., Remote Sensing and GIS. Oxford University press.

Reference Books

1. Lillesand TM and Kiefer R W, Remote Sensing and Image Interpretation, John Wiley Publication.
2. Seigel, B S and Gillespie, Alan, Remote Sensing in Geology, John Wiley Publication
3. Floyd F. Sabins, Remote sensing: principles and interpretation
4. Jensen, J.R. 2007. *Remote Sensing of the Environment - an Earth Resource Perspective*.
5. Rao, D.P. Remote Sensing for Earth Resources, AEG Publication