

**DEPARTMENT OF ENVIRONMENTAL SCIENCE & ENGINEERING**  
**INDIAN SCHOOL OF MINES UNIVERSITY**  
**DHANBAD**

Semester : Winter (2008-2009)

Group : B. Tech. (Environmental Science & Engineering) & M.Tech. (ESE)

Subject : Remote Sensing & GIS      ESC 141 04 (B.Tech.) and ESE 521 08 (M.Tech.)

	Topics	No. of Lectures
1	Introduction to Remote Sensing	1
2	Types of Remote Sensing	1
3	Advantages of Remote Sensing	1
4	Applications of Remote Sensing	1
5	History of Remote Sensing	1
6	Physical basis of Remote sensing	2
7	Electromagnetic Spectrum	1
8	Spectral reflectance curves	1
9	Spectral signatures	1
10	Resolution	1
11	Remote Sensing platforms	1
12	Important Remote Sensing Satellites	1
13	Remote Sensing Sensors	1
14	Major Remote Sensing Sensors	2
15	Aerial photography/ Aerial Photo-Interpretation	4
16	Digital Image Processing	2
17	Pixels & Digital Number	2
18	Image Processing-Image Restoration, Image Enhancement, Image Transformation, Image Classification & Analysis	5
19	Image interpretation	3
20	GIS-Introduction	2
21	Preparation of Thematic Map from Remote Sensing data	2
22	Co-ordinate Systems	2
23	GIS components- Hardware, software and infrastructure	3
24	GIS Data types- Data input and Data processing	2
25	DEM/ DTM generation	2
26	Integration of Remote Sensing & GIS	2
27	Case studies	3
	<b>Total</b>	<b>50</b>

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