

Geog 434. Principles of Remote Sensing
BS Geography 4 Years Programme, University of the Punjab, Lahore

- **Course Outline:**
 - Definition and History,
 - Physical Basis (EM Spectrum, Energy Interaction, Spectral Reflectance Curves, Image Characteristics)

BS Geography w.e.f. Academic Session 2018-2022 and onward

- Introduction to Aerial Photography,
 - Sensor Systems (Space and airborne, MSS, TM, ETM, HRV, LISS, IKONOS-2, Quick bird-2, AVHRR and others),
 - Platforms (Types and Orbital Characteristics),
 - Thermal Infrared (Characteristics, TIR Band Properties, TIR Image Interpretation, Intro to Microwave (Importance and applications),
 - Digital Image Processing (Over view of computer based image processing),
 - Applications (agriculture, urban, natural resources etc.)
- **Lab Outline:**
 - Introduction to labs,
 - Single band image interpretation,
 - False color predictions, False color composite Images Interpretation
 - Visual Interpretation of aerial photographs,
 - Various sensors data comparison,
 - Thermal Infrared Image interpretation,
 - Introduction to ERDAS Imagine, display, Geo-linking, Zooming,
 - Identification of targets,
 - FIELD TRIP

Book Recommended:

1. Campbell, James B. (2002). Introduction to Remote Sensing, 3rd Ed., (The Guilford Press) ISBN # 0-7484-0663-8 (pbk).
2. Gibson, P.J (2000). Introductory Remote Sensing: Principles and Concepts (Routledge), ISBN 0-415-19646-9
3. Jensen, J. (2000) Remote Sensing of the Environment: An Earth Resources Perspective, Amazon Publishers,
4. Lillesand, T. M. and Kiefer, R. W. (2004). Remote Sensing and Image Interpretation, 5th edition. (John Wiley and Sons), ISBN 0-471-15227-7
5. Mather, P M (2004). Computer Processing of Remotely Sensed Images, 3rd Ed. (John Wiley and Sons), ISBN 0-470-84919-3
6. Sabins, F.F (1996). Remote Sensing: Principles and Interpretation, 3rd ed, (W H Freeman & Co), ISBN # 0-7167-2442-1

1. Journals / Periodicals:

1. International Journal of Remote Sensing
2. Remote Sensing of Environment Journal

3. Photogrammetric Engineering & Remote Sensing Journal
4. Geo Carto International Journal
5. Asian Pacific Remote Sensing Journal
6. Canadian Journal of Remote Sensing