CE437 REMOTE SENSING & GIS (3L-0T-0P:3Cr, 3Hr)

Energy source & radiation principles, Remote Sensing System, Multi-spectral scanner, thematic mapper, Return beam vidicon camera, Thermal infra-red scanner, Side looking, Air borne RADAR, Spectral pattern recognition, visual & digital techniques, Data acquisition from ERS, land sat, SPOT, sea sat, IRS, interpretation of digital data products, application in water resources engg, land use etc.

GIS, introduction to GIS, creation of digital geographic data, characteristics of GIS, utilization of GIS for water resources, application of hydrological modeling.

COURSE OUTCOME

1. Apply the knowledge of scientific and engineering principles in understanding the energy interactions with earth surface features and the spectral properties and the principles of RS&GIS.
2. Identify and analyse the satellite images, their quality and storage characteristics obtained from various platforms.
3. Apply engineering and mathematical principles to analyse the map projections and coordinates systems.
4. Apply the concepts and tools of RS&GIS in various Civil Engineering related problems.

TEXT BOOKS

1. T.M. Lillesand and R.W. Kiefer, Remote Sensing and Image Interpretation, John Wiley & Sons, New York, 1994.
2. J.B. Campbell, Introduction to Remote Sensing, Taylor & Francis, London, 1996.
3. Lo, C.P. & Yeung A.K.W., Concepts and Techniques of Geographic Information Systems, Prentice Hall of India, New Delhi, 2002.
4. Anji Reddy, M., Remote Sensing and Geographical Information Systems, B.S.Publications, Hyderabad, 2001.