GIS – 817 Remote Sensing of the Environment (3+0=3)

1. **Course Objectives:**
   a. To provide advanced knowledge Remote Sensing in an Earth Resource Perspective
   b. To acquaint students with digital image processing techniques pertaining to various Earth resource applications

2. **Course Outcomes:**
   a. Understand the Nature of Remote Sensing and advances in remote sensing technologies
   b. Apply remote sensing data for various related application

3. **Course Code:**
   a. GIS – 817

4. **Credit Hours:**
   a. Theory = 03
   b. Practical = 00
   c. Total = 03

5. **Detailed Contents:**
   a. Remote Sensing of the Environment,
   b. Multispectral Remote Sensing
   c. Thermal Remote Sensing
   d. LiDAR Remote Sensing
   e. In situ spectral Reflectance Measurement
   f. Remote Sensing of Vegetation
   g. Remote Sensing of Water
   h. Remote Sensing of Urban Landscape
   i. Remote Sensing of Soils and Minerals
   j. Remote Sensing of Forestry
   k. Land-Use and Land-Cover Change Detection

6. **Textbooks/Reference Books:**
   a. Jensen, J R.(2007), Remote Sensing of the Environment: An Earth Resource Perspective, 2nd Ed., (Pearson Education) ISBN: 978-0131889507160918176 5.
   b. Campbell, James B. (2011) Introduction to Remote Sensing, 5th Ed., (he Guilford Press) ISBN: 978- 0131889507160918176 5
   c. Weng, Q. (2017), Advances in Environmental Remote Sensing Sensors, Algorithms, and Applications, (CRC Press), ISBN 9781138072916
   d. Related Journal Papers, (Class handouts)