GIS – 815 Engineering Aspects of Remote Sensing   (3+0=3)

1. **Course Objectives:**
    a. To provide advanced knowledge on Emerging Remote Sensing science and Technologies.
    b. To acquaint students with engineering aspects of digital image processing techniques.

2. **Course Outcomes:**
    a. Understand the Nature of Remote Sensing and advances in remote sensin technologies.
    b. Understand the major process involved in remote sensing.

3. **Course Code:**
    a. GIS – 815

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

5. **Detailed Contents:**
    a. Introduction to the nature of Remote Sensing
    b. Optical Radiation Models
    c. Sensor Models
    d. Data Models
    e. Spectral Transforms
    f. Spatial Transforms
    g. Correction and Calibration
    h. Registration and Fusion
    i. Thematic classification

6. **Textbooks/Reference Books:**
    a. Schowengerdt, R A (2006). Computer Processing of Remotely Sensed Images, 3rd Ed. (Academic Press-Elsevier), ISBN: 978-0123694072
    b. Landgrebe, D. A. (2003) Signal theory methods in multispectral remote sensing, John Wiley and Sons ISBN: 0-471-42028-X
    c. Campbell, James B. (2011) Introduction to Remote Sensing, 5th Ed., (The Guilford Press) ISBN: 9781609181765.
    d. Related Journal Papers (Class handouts)