MANGALORE UNIVERSITY

DEPARTMENT OF MARINE GEOLOGY

MGP 506: REMOTE SENSING & GIS (Lab, Soft Core)

Course Outcome:

CO1: Students will be able to generate various kinds of thematic maps.

CO2: They will learn various software packages, which will be used for the analysis of remotely sensed data.

Remote Sensing (Lab)

1. Numerical problems on aerial photographs.
2. Mosaic compilation, annotation, scaling and preparation of photo Index
3. Interpretation of Aerial photographs
4. Satellite Image Interpretation: Visual interpretation of Black & White and FCC images.
5 Plotting of spectral reflectance curves for vegetation, soil and water
6. Generation of Thematic maps like geology, geomorphology, Land use / land cover. Hydro-geomorphology etc.
7. Photo-base determination
8. Digital Image processing – Importing and exporting, Image enhancement and Image classification of satellite images using ERDAS Imagine software

GIS (Lab)

1. Georeferencing – image rectification based on co-ordinate system.
2. Onscreen digitization
3. GIS and Remote Sensing data integration. Integration of vector and raster data (linking of spatial and non - spatial data)
4. Extraction of Thematic maps: Road, Settlement, Drainage
5. Overlay analysis and proximity analysis.
6. Edge matching/ spatial adjustment
7. Calculation of slope in degrees and percentages.
8. Calculation of area, perimeter and distance using ArcGIS
9. Map composition and presentation of results
10. Creation of 3D maps: TIN, Hillshade, Aspect with ArcGIS