

MGP 506: Remote Sensing and GIS (Lab, Soft Core)

Skills, employability and entrepreneurship: These subjects are practical experiences of the advanced subjects and details are provided in the **MGS 505: GIS AND GPS** Students have employability in different organizations related to human resource development as well as private firms and MNCs. Students can start their entrepreneurship.

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 and 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.
- 9) Interactive sessions of teaching to enhance students-teacher interactions through hands-on demonstrations and exercises of the Gt. Aide (Academy Software), Google Earth and Topo maps for structural geological and geomorphic applications in the recent advancement of the subject related to the curriculum.

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
- 11) Interactive sessions of teaching to enhance students-teacher interactions through hands-on demonstrations and exercises in the recent advancement of the subject related to the curriculum.