First Semester

GIH 401: CARTOGRAPHY

Skills, employability and entrepreneurship: This course provides students to learn about creating topographical maps / base maps. This is particularly useful to generate different kinds of thematic maps of land and water resources. Students qualify this course have opportunities to work as cartographers in the field of surveying in both government and private organizations.

Unit 1	**Introduction to Cartography and Ancient Cartography:** Evolution of Cartography, Modern Cartography and Applications, Definition of Maps. Outlines of Map Projections.	06 hrs
Unit 2	**Cartographic Themes and Types of Maps:** Introduction to Cartographic themes. Cadastral and Chorographical maps. Representation of Choroschematic maps, and Chorochromatic maps. Introduction to Population diffusion and the importance of Dot and Multi Dot maps. Map Scale and Types.	06 hrs
Unit 3	**Topographic Maps:** Introduction to Topographic maps. Identification of Symbols and Interpretation of Central Themes. Spatial Information and Marginal Information of Topographic maps. Recovery of Spatial Information from Topographic maps. Concept of 'Central Theme' and examples. Retrieval of Secondary Data.	06 hrs
Unit 4	**Hydrographic Charts**: Introduction to Hydrographic Charts. Marginal Information and Depth Information of Hydrographic Charts. Scales of Hydrographic Charts. Recovery of Spatial Information from Hydrographic Charts.	06 hrs
Unit 5	**Cartographic models**: Inductive and Deductive Models, Model Flow Charting, Model Implementation and Verification. Principles of Design and GIS Output, GIS Project design and Management.	06 hrs
Unit 6	**Remote Sensing Satellites used for Cartography.** **Digital Cartography:** Web Cartography, 3D Simulation and Visualization	06 hrs
Unit 7	**Thematic Mapping:** Geomorphology, Slope, Elevation, Stream Network, Drainage Patterns, Resources and Bathymetry. **Representation of Thematic Data:** Application of Histograms, Pie Charts, Wind Roses, Ray Diagrams**.** Contour Maps. Choroschematic mapping.	06 hrs
Unit 8	**Population Density:** Grid pattern distribution of population, Dot mapping, Multi Dot mapping and Settlement Mapping. **Multi-dated Thematic Mapping:** Shoreline Changes, Forest Cover Changes, Population Diffusion/Urban Growth mapping.	06 hrs

BIBLIOGRAPHY

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