

GIS – 865 Land Information System (3+0=3)

1. **Course Objectives:**
 - a. To enable the student to understand basic principles of cadastral information systems in the world and Pakistan.

2. **Course Outcomes:**
 - a. The student will be able to demonstrate an understanding of the development of the cadastral system of Pakistan in comparison with the other developed nations.

3. **Course Code:**
 - a. GIS – 865

4. **Credit Hours:**

a. Theory	=	03
b. Practical	=	00
c. Total	=	03

5. **Detailed Contents:**
 - a. The concept of Land and Land Administration
 - b. The Cadastral Concept, Cadastral Surveying, and Mapping, Cadastral Systems in Developing Countries
 - c. Digital Cadastral Databases
 - d. Land Titling
 - e. Land Registration, Adverse Possession, Linkages Between Cadastre, Land Valuation & Planning
 - f. Methods of data collection, data refinement, data storage, data analysis and manipulation, data presentation, programming.
 - g. Identifying issues in Land Information Systems, data issues, software, hardware, standards, institutional issues, coordinate systems, data validation, and quality issues
 - h. Spatial Hierarchy applied to National Spatial Data Infrastructure
 - i. Spatial Data Infrastructure for Pakistan
 - j. Economic Rationalism in managing spatial data infrastructure - the Pakistani experience
 - k. The Case Studies of LIS in various developed and underdeveloped countries

6. **Textbooks/Reference Books:**
 - a. Nancy Von Meyer, (2004), GIS and Land Records, ESRI Press, 150 pages, ISBN: 1589480775
 - b. Ralphs, M. P., & Wyatt, P. (2003). GIS in land and property management. Taylor & Francis. 416 pages, ISBN: 0415240654
 - c. Healey, P. (2006). Urban complexity and spatial strategies: Towards a relational planning for our times. Routledge.
 - d. Larsson, G., & Larsson, G. (1991). Land Registration and Cadastral Systems: Tools for land information and management. Longman Scientific & Technical.
 - e. National Research Council U.S. Panel on Multipurpose Cadastre, (1983), Procedures and Standards for a Multipurpose Cadastre, Nat. Academy P, US, 173 pages, ISBN: 0309033438.
 - f. Related Journal Papers (Class handouts)