



School of Planning and Architecture: Vijayawada

(An institution of National Importance under the Ministry of Human Resource Development, Govt. of India)

Survey No.4/4, ITI Road, Vijayawada-520008, Andhra Pradesh, India

Department of Architecture

Course: MLAR

Subject Code; MLAR126
Name- Geoinformatics for Landscape Architecture

Class: 1st Yr
MLAR
II Sem A.Y. 2023-24

Instructors:

Subject Instructors- **Dr. Prashanti Rao**

Internal Assessment: 50

External Jury Exam: 50

Contact Periods/ week: 03 periods.(50 min each)

Total Marks: 100

Time Table:

Tuesday

Credits: 3

Attendance: Min
75%

Min. Passing Marks: 50% each in Internal & External Assessment, 50% in Aggregate

Objective: To develop an understanding of the land and its designed modifications, with an integration of Earth sciences, To develop understanding and capacity building to use information science in landscape architecture to address various problems of geography, cartography, geosciences and related branches of science and engineering in landscape design and planning .

LECTURE PLAN

S.NO	DATE	TOPIC OF CLASS LECTURE & DISCUSSION	REMARKS
1	Week-1 (9 th Jan)	Concept of Remote Sensing,	Discussion
2	Week-2 (16 th Jan)	Elements of Photographic System Types of Aerial Photographs: Vertical Photographs, Oblique Photographs, Satellite	Lecture and Discussion
3	Week-3 (23 rd Jan)	Introduction to Air Photo Interpretation, Photogrammetric for Map Making: Introduction /Definition, Geometric Elements of a Vertical Photograph	Lecture and Discussion
4	Week-4 (30 th Jan)	Relief Displacement, Ground Control for Aerial Photography	Lecture/Discussion
5	Week-5 (6 th Jan)	Movie Identification based on Remote sensing / Rocket science and discussion about the important inferences	Internal Assessment-1
6	Week 6	Study tour	

7	Week-7 (20 TH Feb)	Application of GIS and Remote sensing:- Agriculture Applications, Forestry Applications, Water resource Applications: Water Pollution Detection, Flood Damage Estimation, Urban & Regional Planning	Lecture/Discussion
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8	Week-8 (27 th Feb)	Applications, Wetland Mapping, Geographical Information Systems: Definition, Composition of Geographical Information System, Computer Hardware Module	(Lecture/ Practical)
9	Week-9	Midsem	Presentation on group assignments based upon Application of Remote sensing
10	Week-10 (28 th Feb)	Introduction to QGIS and GIS Software Module, Data Input, Data Storage, Data Output, Database Structures	(Lecture/ Discussion)/GIS -lab
11	Week-11 (5 th March)	Introduction to Geologic & Soil mapping, Land- use/land cover Mapping, Land use Classification -Practical in GIS Lab	Practical-GIS Lab
12	Week-12 (12 th March)	Application of GIS & Remote Sensing, Automated Mapping / Facility Management.	(Lecture/Discussion) Practical-GIS Lab
13	Week-13 (19 th March)	3-D GIS Digital Elevation Model & Digital Terrain Model,	(Lecture/lab) Practical-GIS Lab
14	Week-14 (26 th March)	Digital Image Processing and Editing; Error Detection and Correction,	Practical-GIS Lab
15	Week-15 (2nd April)	Digital Image Processing and Editing; Error Detection and Correction,	Practical-GIS Lab
16	Week-16 (9 th April)	Geo Spatial Analysis: Turning Data into Meaningful information. Comparison of Vector & Raster Methods	Practical-GIS Lab
17	Week-17 (16 th April)	Internal Assessment -3	Presentation of portfolio
S. No.	Stages of Evaluation		Weightage
1	First stage: Assessment -1		15
2	Second stage: Mid-semester Examination		20
3	Third stage: Assessment -3		15
	Total		50

Reference Books:

References:

1. Batty, D.M.a.M. (ed.) (2005) GIS, Spatial Analysis and Modelling, ESRI Press.
2. Brewer, C.A. (n.d) Designing Better Maps: A Guide for GIS Users, ESRI Press.
3. C, H.T. (n.d) Land Form Designs, P D A Publication.
4. C.Hanna, K. (1999) GIS for Landscape Architects, ESRI press.
5. G.S.Srivastava (2014) An Introduction to Geoinformatics, McGraw Hill Education.
6. Garcia, J. (2017) Introduction to Geographic Information System, Larsen and Keller Education.
7. H, P.P. (1995) Concrete Floors Finishes , Butterworth-Heinemann.
8. K.R, B. (1990) Integrating GIS into Urban Regional Planning, Alternative approaches for developing countries regional development Dialogue , Japan: UNCRD.
9. Michael, L. (1988) Tree Detailing , London: Butterworth Architecture.
10. Michael, L. (1993) Landscape Detailing Vol.1 Enclosure , 3rd edition, Architectural Press.
11. Mitchell, A. (2005) Geographic patterns and Relationships, ESRI Press.
12. Stevens, D. (2000) Ultimate Water Garden Book , 01st edition, Conran.

Course Instructors:

sd/-
(Dr. Prashanti Rao)

Head of Department:

sd/-
(Dr. Uma shankar Basina)