



**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

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### Department of Architecture

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**Course:** ARC213 - Geomatics and Site Planning

**Class:** 2<sup>nd</sup> Yr B. Arch  
III Sem A.Y. 2024-25

**Instructors:** Dr Banu Chitra and Dr. Prashanti Rao

**Internal Assessment:**  
100

**Contact Periods/ week:** 04 periods.(50 min each)

**End Exam:** 100

**Time Table:** Tuesday and Thursday (Period 4)

**Total Marks:** 100

**Credits:** 4

**Attendance:** Min 75%

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

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#### Objective:

- To teach the importance of site and its content in architectural creations
- To orient the students towards several influencing factors which govern the siting of a building or group of buildings in a given site.
- To teach various techniques of site analysis through exercises and case studies.
- To teach the students the methodology of preparing a site analysis diagram.
- This will serve as a prelude to any architectural creation through exercises.
- To introduce various techniques associated with site surveying

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#### Lecture Plan

S.No	Week	Topic Of Class Lecture & Discussion	Assignments / Remarks
1	Week 1	Introduction Definition of plot, site, land and region, units of measurements. What is Site Planning and Importance of site planning? Detailed discussion on Site location, on site and off-site features	Lecture
2	Week 2	Mark off site and on-site features of the design project Post office-to learn by doing. Definition-Uses of surveying overview of plane surveying (chain, compass and plane table), Objectives, Principles	Lecture and Presentation Special Lecture –Dr Arpan Paul ( <b>Structure Lab Visit</b> )

		and classifications Errors in survey measurements.	
3	Week 3	Analysis of natural, cultural and aesthetic factors – topography, hydrology, soils, vegetation, climate, surface drainage, accessibility, size and shape	Lecture and Presentation <b>(Landscape Lab Visit)</b> <b>Assessment -1</b>
4	Week 4		
5	Week 5	Infrastructures available - sources of water supply and means of disposal system, visual aspects; Preparation of site analysis diagram. Study of microclimate: - vegetation, landforms and water as modifiers of microclimate.	Lecture and Presentation
6	Week 6 and 7	<b>Study Tour</b> (27 <sup>th</sup> August to 8 <sup>th</sup> September)	
7	Week 8	Study of land form; - contours, slope analysis, grading process, grading criteria, functional and aesthetic considerations – Case studies and exercises on the above.	Lecture
8	Week 9	<b>Midterm Assessment</b>	
9	Week 10	Context of the site. Introduction to existing master plans land use for cities, development control Rules. Preparation of maps of matrix analysis & composite analysis.	Lecture
10	Week 11	Site selection criteria for housing development, commercial and institutional projects - Case studies.	<b>Case Study Visit</b>
11	Week 12	Organization of vehicular and pedestrian circulation, types of roads, hierarchy of roads, networks, road widths and parking, regulations. Turning radii & street intersections	
12	Week 13	Concept and Terminology, Levelling Instruments and their Temporary and permanent adjustments method of levelling.	lecture
13	Week 14		Expert Lecture

14	Week 15	Characteristics and uses of contours- methods of conducting, Contour surveys and their plotting. Types of curves. Introduction to geodetic surveying, Total Station and Global positioning system	
15	Week 16	Case study exploration and Presentation	<b>Internal Assessment-III</b>

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

References

- B.C.Punmia, Ashok K. Jain, Ashok Kr. Jain, Arun Kr. Jain, “Surveying”, Vol.I, Firewall Media, 2005
- P.B.Shahani, “Text of surveying”, Vol. I, Oxford and IBH Publishing Co, 1980
- Joseph De.Chiarra and Lee Copleman, “Urban Planning Design Criteria”, Van Nostrand Reinhold Co., 1982
- Storm Steven, “Site engineering for landscape Architects”, John wiley & Sons Inc, 2004
- White, Edward T. Site analysis: Diagramming information for architectural design. Architectural Media, 1983.
- Lynch, Kevin, Kevin R. Lynch, and Gary Hack. Site planning. MIT press, 1984.
- LaGro Jr, James A. Site analysis: Informing context-sensitive and sustainable site planning and design. John Wiley & Sons, 2013.

**Course Instructors:**

Dr.Prashanti Rao and Dr Banu chitra

**Head**

**Department/Coordinator:**  
Dr Srinivas Daketi