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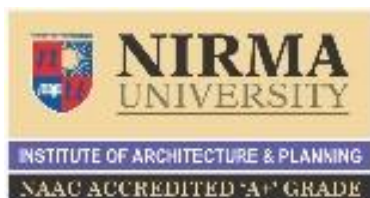
Urban Resilience and Adaptation for India and Mongolia

Curricula, capacity, ICT and stakeholder collaboration to support green &
blue infrastructure and nature-based solution

Report on:

Lecture Material

(Environmental Design and Introduction to GIS)



Partner number: P12

Nirma University, Gujarat, India

Disclaimer

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Course Name: Environmental Design and GIS Application

Number of credits: 2 ECTS

Period: Spring semester

Coordinator	Dr Aparna
Credits	2
Lecturers	Dr Aparna, Peeyush Purohit and Prof. Purvi Jadav
Level	Bachelors
Host institution	Nirma University
Course duration	15 Weeks

Summary

This is a 2 ECTS course which will be provided as an elective to Bachelors of Architecture students. This course will introduce various parameters of environmental design as well as applications of GIS (Geographic Information System) to BArch students.

Target student audiences

Bachelors students majoring in Architecture

Prerequisites

NA

Aims and objectives

The main course objective is to understand the guiding principles for the successful design of urban public spaces through contextual analysis of various parameters related to climate, topography, culture, and human behavior.

Image of a City Elements and relation with Green and Blue Infrastructure

Environmental Design and Introduction to GIS
B Arch V Sem

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Institute of Architecture and Planning Nirma University 1

- What are the adjectives you will use for a city?
- How about visual adjectives that you would like...
beautiful/ easy to move/ ordered
- How is it identified?
- Is a city identifiable? Is it readable? Can you 'read'
a city?
- What can make it 'read-able'?

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Legibility

- Mental image of a city held by its citizens
- Ease with which the parts of a city can be recognized into a
coherent pattern
- Related pattern of recognizable symbols, easily grouped into an
overall pattern
- Why is it important?

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Contd... Legibility

- Structure helps in way-finding, functional efficiency
- Collective memory
- Emotional Security – opposite effect of fear from disorientation







source: [Bendert, Heléne Roesner, Mueller et al, 2012](#) source: [pinterest](#) source: [pinterest](#)

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Imageability

- Structure and identity
- Physical qualities that relate to the above

Definition: "the quality in a physical object that gives it a high probability of evoking a strong image in any given observer"

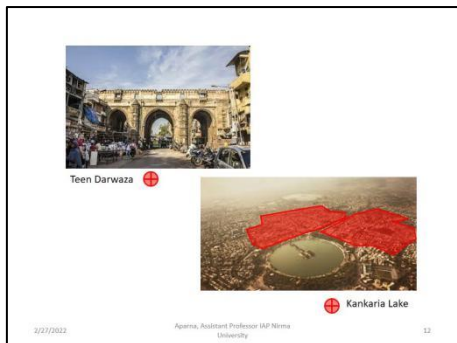
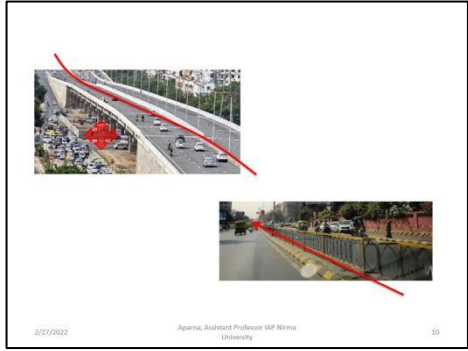
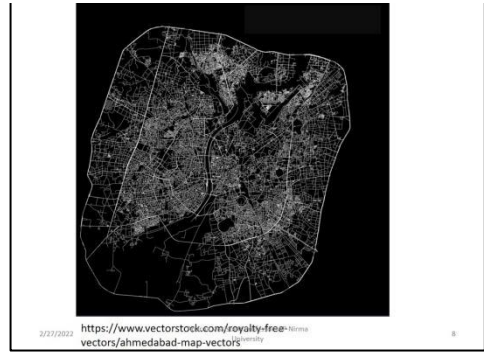
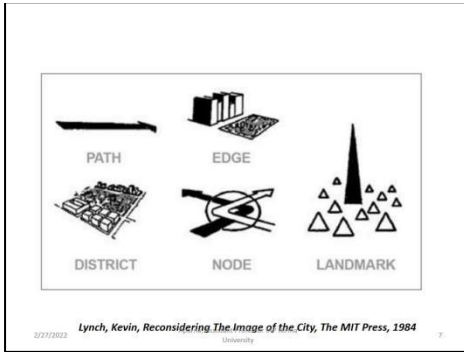
source: [Bijl Ghosh and K.C. Mago, 1974](#) source: [Ghats in Varanasi, Wikipedia](#)

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Can the visual image be expressed in the size of a postage stamp?




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Green and Blue Infrastructure

- Is an important way the image of the city gets captured in the minds of citizens and dwellers
- Some examples:
 - Green Gandhinagar!
 - Ahmedabad Riverfront!
 - Mumbai Marine drive!
 - Udaipur Lake City!

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Manhattan, Central Park



Kamogawa Riverfront - Wikipedia

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Gandhinagar Aerial | AC South Asia
 Gandhinagar Aerial | AC South Asia
 architecture.net



<https://www.gandhinagaronline.in/2012/01/guide-to-gandhinagar-in-one-day/>

Gandhinagar aerial views showing its 'green' districts, edges and node

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Sabarmati Riverfront, Ahmedabad,
<https://sabarmatiriverfront.com/>

Riverfront showing its 'blue and green' edge and pathway... It is also a contemporary landmark

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Mumbai Marine Drive,
<https://www.flickr.com/photos/naina/243996368>

Waterfront at Mumbai - Marine Drive is an important landmark showing its 'blue' edge and pathway... a continuous stretch of sittable spaces...

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Udaipur Lakes, Times of India, 2021

Lake system of Udaipur - itself a landmark with several dotted around the 'blue and green' districts...

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Acknowledgemnt: *All images are for the educational purpose and discussion during the class only; wherever available, the source of images have been cited.*

Key References for this session is

- Lynch, Kevin, *The Image of the City*, MIT Press, 1964.
- Lynch, Kevin, *Reconsidering The Image of the City*, in Matthew Carmona and Steve Tiedsdell (Ed.) *Urban Design Reader* MIT Press, 1984.
- Mell, Ian, *Global Green Infrastructure*, Routledge Taylor and Francis, 2016.