Advanced Urban Design (Urban Design Case Study)
457.555 / 001

Course credits: Engineering and Construction Engineering / Graduate School / 3 credits
Class time: Thursday 16:00 - 18:50
lecture room :
Professor: Kwon Young-sang (35-413, yskwon@snu.ac.kr) / Assistant teaching assistant:

Lesson overview

1) What city would we live in?

- Urban design is ultimately a concrete task of creating a human settlement environment. Therefore, urban design is an exploration of the answers to the fundamental questions about the future of a human being in a city.
- Sometimes we plan and design large cities like Seoul, establish regional plans that cross national boundaries, and even create small complexes such as university campuses. We also design central business district(CBD) to revitalize the economy, preserve historic spaces, and sometimes design streets, plazas, parks and even street lights in our neighborhoods.
- In order to make a good city, basically some skills are needed. The first is the process of raising the frame of recognition by the **historical approach** how the city has been designed so far. In this process, we can understand what our seniors are aware of and why the city was so created.
- The second is the process of understanding how to design cities with a **functional approach**. It is an understanding of the environmental, economic, cultural, social, engineering, and aesthetic demands that cities must have. Through this, it is possible to understand how to implement the principles of Urban Studies as real space.
- The third is a **practical approach** to learning how to solve some of the challenges facing the present city. The theme that the city faces in terms of time and space evolves and changes. Based on these two approaches, you can learn how to solve urban challenges facing the future. **Smart City will be covered in 2018.**

- This lesson is to understand the meaning and role of urban design, social needs and future value and to start the first step toward urban designers.
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2) How do you research based on urban design cases?

- Analyzing urban design cases is an essential process for conducting research related to urban design, as well as practical aspects of actual urban design.
- Many of the studies related to real urban areas start with analyzing urban design cases. Therefore, how urban space is read and interpreted is an essential skill as urban design (practice, theory).
- This class aims to acquire the method of conducting research and project based on urban design case.

Lecture Goal

Attendees can analyze urban design cases and apply them to their own design.

- Analyze the case by urban design type and aim at utilizing it for the design of their own design. Understand the urban design process and the urban design aspects of students who are not majoring in urban design at the undergraduate level, or who are not systematically studying urban design.

Attendees can conduct my own research through urban design case analysis.

- Understand the design, flow, and methodology of research through urban design case analysis and apply it to my research.

Attendees can understand and understand the latest issues of urban design (Smart City).

- Understand trends of the fourth industrial revolution, big data, and smart city, which are the recent issues, and understand urban design cases.

Lecture method

Lecture method

- The lectures will be on theoretical lectures (10 weeks) and research projects (3 weeks).
- Theoretical lecture will be held for 10 weeks on the theme of urban design and will

be presented with lectures and presentations of students' previous research. (Once per one student)

- **The research project (3 weeks) will be the presentation of the students' research project on a specific topic among urban design cases. The theme of 2018 will be "Smart City".**
- **This class is a graduate school and undergraduates are not allowed to take courses.**

Assessment method

- Attendance, attitude of class (20%), F disposal of more than 1/3 of the class (policy of Seoul National University), 2 times of late would be 1 time of absence
- Research reading, mid-term summary presentation (20%)
- Final exam (30%)
- Final project announcement (30%)

Lecture Plan

1 Week: Lecture Introduction (9/6 (International Competition Screening)) -> 9/4 19:00

- Professor Introduction
- Class introduction
- Urban Design Theory Outline

2 Week: How has the city evolved? How Today's City Evolved? (9/13)

- City Form and Design in the Pre-industrialization Period / Wall, Grid, Axis, City square
- Industrial Urban Design Change / Urban, Population Growth, Technology Innovation, Gustave Dore, Manhattan, Chicago
- 1950s urban design / CBD emergence, Chicago Expo, tertiary industrial revolution and cities, cars and cities
- Today, Regional City / Edge City, Megalo-City

3 Week: Unique form and design of Korean cities. - Unification of Korean Urban Planning and Design (9/20)

- The tradition of urban planning and design before Japan

- Change of Urban Form in the Process of Modernization
- 1950s-70s
- 1980 ~ 90s spreader
- Transitions since 2000

4 Week: Ideas that shape the city Ideas that shape cities (9/27)

- Architectural Approach Architectural approach / style
- Modernist City Design / Le Corbusier, Chicago, Pruitt Igoe, Eero Sarrinen, OMA, Arup
- Traditional City Deign / London (Christopher Wren), 1906 San Francisco, Washington, New Urbanism
- Green City Design, Landscape Urbanism / Climate Change, Garden City, Canal, High-Line Park, Cheonggyechon
- Design by system / Structural system, Crystal Palace, Buckminster Fuller, Pompidou Center, Plug in City, Archigram, Metabolism, Michael Batty, GIS, SIM City
- Urban form, spatial structure
- Community, Community, Village / Sejong City First Village, Hanok Village
- Urban image, urban landscape, urban aesthetics

5 Week: Tools for designing cities Tools for Designing Cities (10/11)

- Investment in Infrastructure Investment in Infrastructure, Rainwater, Energy
- Codes and Design Guidelines / Zoning, Land Use, New York, Battery Park City
- Incentives for Better Design
- public facilities, public spaces, park green spaces
- roads, pedestrian roads, bicycle roads
- Land use, infrastructure, environmental facilities

6 Week: How to Make Sustainable Cities Making Cities Sustainable (10/18)

- Design with Nature, Ian McHarg
- Ecological Urbanism
- Landscape Urbanism
- High-Line, James Corner
- Shrinking City
- Terra Fluxus

- Managing Water in the City, Managing Water: Flooding & Scarcity
- Green Infrastructure & Renewable Energy Green Infrastructure & Renewable Energy

#1 Assignment : Research Proposal – Smart Cities (10/25)

7 Week: Cities in the Information Age (11/1)

- Managing Energy Consumption
- New cities and new urban structures for them
- Smart City, Intelligent Cities / Sensor, Big Data, Predictive Model, Displays, Barcelona, BIG-BMW Design competition, Songdo New Town, Kenya Techno City, Bogota
- Spatial pattern / third space in the city where information and communication developed, new rule
- Mixed use, Mixing Home, Work, Culture, and Recreation / Sony Center

Special Seminar on New town Project on 3rd Nations of Vietnam (11/8)

8 Week: Preserving Older Cities (11/15)

- Historical cultural assets in the city
- Conservation and Preservation
- What does hanok mean to us?
- Urban assets during the Japanese colonial era, integrated housing?
- Regeneration of old buildings
- Conservation and utilization of modern industrial heritage

9 Week: Designing New Cities, Districts, and Neighborhoods (11/15)

- New City, New City Concepts / Utopia, Chicago, E.Howard, Milton Keynes, New Towns in Paris, New Towns in America New Towns in California, New Towns in Japan, New Towns in Beijing and Shanghai
- New city development in Korea
- Third World New City Development Market
- Public role and growth of private developer developer
- Walkable Neighborhood

10 Week: Urban Decline and Regeneration, Gentrification. The Challenges of Informal Cities and Disadvantaged Neighborhoods (11/22)

- decline of the city
- urban regeneration and urban design
- Gentrification
- Regeneration of infrastructure, roads, railways, harbors
- The narrower the road, the better. Rediscovery of walking space

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11 Week: New Vision of Urban Design, Future City, Smart City Visionary Cities (11/29)

- Ideal cities / Constructivism, Flying City, Archigram, Waling City, Instant City, Tectonic City
- Industrial Revolution and Cities
- Fourth industrial revolution and future city
- Metabolist, Genzo Tange, City in the Sky, Isozaki
- OMA, MVRDV, Lebbeuss Woods
- Sejong City
- Ecological Visions, Floating City

- Self Organizing City
- Smart City

#2 Assignment : Final Presentation – Smart Cities (12/6)

- Space structure and land use, complex land use, decentralization
- Changes in transportation systems, unmanned vehicles, shared car services (Uber, cacao), drones
- Urban structure of energy production and utilization, renewable energy, low energy use
- Control of environment, disposal of waste, response of fine dust
- Responding to disaster, resilience of city
- Virtual space, AR / VR, Digital Twin, CPS (Cyber Physical System)
- Welfare, life, administrative service (senior citizen / support of one license, CPTED, BF, telemedicine, walking space)
- Shared space (Aribnb service)
- Resolving existing urban problems, urban regeneration

12 Week: Lecture Epilogue (12/13)

- Lecture summary & Who Designed the City?
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#3 Final exam / Final Report Submission (Document type, .DOC, .HWP, 20page)

Reference

Main Reference : ETL

Sub Reference

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