

# Land Use Planning and Practices (0010504)

## Fall 2025

### Instructor

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### Course Description

#### Outline/Purpose:

This course is designed to equip students with practical skills in land use, transportation, and building layout planning, as well as the design of three-dimensional urban landscapes. The course is structured into two weekly sessions: the first (lecture) session introduces foundational theories and principles of land use and site planning; the second (lab) session offers hands-on experience with analytical and design tools such as QGIS, AutoCAD, and SketchUp. The goal of the course is to give students the opportunity to apply these tools and concepts by planning and designing a site in the old downtown area of Incheon.

#### Course Learning Outcomes:

By the end of this course, students will be able to:

- Understand the foundational principles of land use planning, site layout, and urban form
- Analyze spatial data related to land use, transportation networks, and built environments using GIS tools
- Develop technical proficiency in digital design software, including AutoCAD and SketchUp, for creating detailed two-dimensional plans and three-dimensional urban models
- Evaluate site conditions and apply planning standards to propose functional and context-sensitive designs.
- Design integrated site plans that include roads, buildings, open spaces, and urban landscape features
- Communicate planning proposals effectively through visual presentations, maps, and design documentation
- Collaboratively plan and design a redevelopment scenario for a selected site in the old downtown area of Incheon, incorporating analytical insights and design strategies

#### Class Delivery Method: Lecture slides + Lab documents

- In the lecture, students will learn fundamental concepts, principles, and examples of land use planning.
- In the lab section, students will gain hands-on experience on land use planning and practices by learning analysis and design tools, including QGIS, AutoCAD, and SketchUp.

**Time:** Tue (16:30-18:00), Thu (16:30-18:00)

**Classroom:** Building 28, Room 405

**Grade/Credit:** 3/3

**Grade evaluation:** Absolute evaluation

**Language:** English

**Software:** QGIS, AutoCAD, SketchUp (students should be equipped with their own laptop)

#### Grading:

- This class follows absolute evaluation.

- A+: 95 and above, A0: 90 – 94, B+: 85 – 89, B0: 80 – 84, C+: 75 – 79, C0: 70 – 74, D+: 65 – 69, D0: 60 – 64, F: Below 60

Percentage of grade evaluation	Exam	Attendance	Assignment
	40%	20%	40%

- **Exam (40%):** Three or four students will be grouped to work on a term project. For the mid-term exam, students will present their project proposal. In the final exam, students will present final team projects that are going to be prepared throughout the semester. There is no written tests in this class. Please stay tuned, assignment guidelines will be uploaded to the LMS
- **Attendance (20%):** Out of a maximum of 20 points (학칙시행세칙 제 56 조 제 2 항) → For general subjects (3 credits), 1/3 point will be deducted for every 1 hour of absence → 1 point will be deducted for 3 hours of absence. Students who miss more than one-third of the actual class hours or engage in academic dishonesty will not be granted course credits, regardless of their exam scores or other grades (학생시행세칙 제 56 조 제 3 항).
- **Assignment (40%):**  
**Weekly Lab Assignments (30%):** Students will complete and submit lab exercises each week via the LMS (submission deadlines will be announced, typically before the Thursday class). Labs are designed to provide hands-on experience with land use planning and related practices. Lab instructions and documents will be distributed at the start of each session, and students will work on the exercises in class with instructor support. Extra credit may be awarded for completing additional lab work.  
**Presentations on Development Examples (10%):** Each week, students will present real-world development examples that illustrate land use and development practices, helping to connect theory with practice. (e.g., <https://parkcity.gov/departments/planning/general-plan> )

#### Course schedule:

Week	Topics	Lab Practices / Tools
01	<b>Course Introduction</b> - Land use codes and zoning basics - QGIS installation & interface	Lab 01. Getting started with QGIS Software / QGIS
02	<b>Land Use Analysis 1</b> - Basics of land use planning - Land use classification	Lab 02. Land use classification / QGIS
03	<b>Land Use Analysis 2</b> - Land use planning process - Land use planning key components	Lab 03. Land use and facility mapping / QGIS
04	<b>Site Analysis 1</b> - Land use survey methods - Data collection, processing for site analysis	Lab 04. Site Analysis 1: Secondary Data & Survey Planning / QGIS

05	<b>Site Analysis 2</b> <ul style="list-style-type: none"> <li>- Process of site analysis</li> <li>- Site analysis checklist (site location &amp; context, landscape, movement/infrastructure, built form)</li> </ul>	Lab 05. Site Analysis 2 / QGIS
06	<b>Field Survey</b> <ul style="list-style-type: none"> <li>- Field data collection (Incheon downtown)</li> <li>- Checklist and notes</li> </ul>	Field survey + Group discussion/ October 11 (SAT), 2025 @10AM
07	<b>Land Use and Development Concept</b> <ul style="list-style-type: none"> <li>- Setting goal and strategic vision of land use and development</li> <li>- Key principles and components of residential, commercial, open space uses, and transportation</li> </ul>	Lab 07. Conceptual Land Use & Development Sketching / Hand drawing
08	<b>Midterm Exam &amp; Presentations</b>	
09	<b>Land Use Planning Practice</b> <ul style="list-style-type: none"> <li>- Fundamentals of land use demand forecasting</li> <li>- Allocation methods for residential, commercial, and office land uses</li> </ul>	Lab 08. Base map creation / AutoCAD
10	<b>Street Network / Circulation Planning</b> <ul style="list-style-type: none"> <li>- Pedestrian and vehicular flow planning</li> <li>- Street network planning</li> </ul>	Lab 09. Street Network Design & Circulation Mapping / AutoCAD
11	<b>Green Infrastructure Planning</b> <ul style="list-style-type: none"> <li>- Types of green and open spaces</li> <li>- Key principles of urban park design</li> </ul>	Lab 10. Green Space & Urban Park Layout Design / AutoCAD -
12	<b>Site Planning Practice</b> <ul style="list-style-type: none"> <li>- Grading, contour lines, and modeling basics</li> </ul>	Lab 11. Site Grading and Contour Modeling / AutoCAD + SketchUp
13	<b>Landscape and Skyline Planning Practice</b> <ul style="list-style-type: none"> <li>- 3D Modeling of site plan</li> </ul>	Lab 12. 3D Landscape & Skyline Visualization / SketchUp
14	<b>Comprehensive Land Use Planning</b> <ul style="list-style-type: none"> <li>- Finalize team project</li> </ul>	Lab 13. Integrated Land Use Project Development / QGIS + AutoCAD + SketchUp
15	<b>Final Presentation &amp; Exam</b> <ul style="list-style-type: none"> <li>- Group presentations</li> <li>- Feedback &amp; evaluation</li> </ul>	