

EEM320 Theory of Architectural Planning II

1st and 2nd quarters, Junior

Instructor	To be advised
Style of Class	Lecture
Number of Credits	2
Day and Period	To be advised

Course Description

In this course students will learn planning methods for various types of buildings needed by local communities, gain knowledge about architectural planning from a global perspective, and acquire the skills to apply and implement such plans, by looking at examples and design methods of architecture throughout the world. The course will cover architectural planning with a focus on the relationship between human behavior and psychology and architectural space. Students will gain knowledge of basic architectural planning methods for structures such as facilities, high-rise hotels, hospitals, offices, and schools, while looking at specific examples of architecture in Fukui and around the world.

Furthermore, students will examine topics such as the relationship between architectural space and users' behavior and how buildings are used as it pertains to issues including considerations of elderly and the disabled in architectural plans, functions of space, movement patterns of people and objects, and human behavior and evacuation plans during a disaster, through looking at examples such as University of Fukui buildings, schools and hospitals in Fukui, and university and office buildings in other countries. Students will also study subjects such as the architectural design process used in architectural design practice, facility management, and architectural programming; learn techniques such as effective use of space, renovation and re-use of existing buildings, and methods to research user needs, through looking at examples such as repair work on University of Fukui buildings and public facilities in Fukui; and gain the skills to apply them in and execute actual architectural designs.

Course Objectives

Students will:

- (1) learn various types of architectural planning methods and examine the relationship between human behavior and psychology and architectural space, which form the basis of such methods
- (2) research how planning methods are used in nearby buildings by looking at examples such as repair work on University of Fukui buildings and designs of schools and hospitals in Fukui
- (3) acquire not only knowledge of specific examples and what is covered in the course, such as effective utilization of space in the design process and facility management, and research methodologies, but the skills to apply that knowledge in actual architectural designs

Prerequisites

Theory of Architectural Planning I

Class Materials

Textbooks:

This course will not use a textbook. Printouts will be passed out in class.

Reference materials:

- (1) Nishide Kazuhiko, *Kenchiku keikaku no kiso* (The Fundamentals of Architectural Planning), Suurikougakusha, June 2009.
- (2) Nagasawa Yasushi, *Kenchiku keikaku* (Architectural Planning), revised edition. Arizuka Reiko and Nishide Kazuhiko (eds.), Ichigaya Publishing, September 2011.

Course Method

The course will combine lecture and seminar formats. Lectures will consist of explaining the topics by using handouts and the blackboard, and introducing examples such as photos and drawings with a computer or LCD projector. Seminars will also be conducted at times to confirm students' understanding of the course content.

Evaluation/Assessment

Students will be graded based on regular exams and participation in the seminars.

Grading

50% seminar participation

50% regular exams

Course Schedule

Week 1:

Universal design (1)

This lecture will describe the elements of disabled- and age-friendly architectural planning methods. Students will learn about the concept of universal design and common measures for the disabled and elderly, looking at Fukui prefecture's Welfare City Development ordinance and other examples.

Week 2:

Universal design (2)

Students will be introduced to recent examples of universal design, and learn about new trends in measures for the disabled and elderly in special facilities such as welfare facilities, sports facilities, and facilities for those with severe physical disabilities. In addition, a seminar will be conducted in which students will create a planning proposal to modify simple buildings to accommodate those with physical disabilities.

Week 3:

Planning medical facilities (1)

This lecture will describe common planning methods for clinics and hospitals. Students will learn about topics such as the difference between hospitals and clinics, functions needed by hospitals, and spatial structure.

Week 4:

Planning medical facilities (2)

This lecture will introduce and explain drawings and photographs of new hospitals built in Fukui such as Fukui Prefectural Hospital, Tannan Regional Medical Center, and University of Fukui Hospital, to teach students about topics such as space and function in new hospitals.

Week 5:

Design methods

Students will learn about common problems in architectural design—namely, architectural functions and movement patterns of people and objects in buildings, and how to address them. In addition, a seminar will be conducted in which students will draw routes of how people move on an architectural floor plan.

Week 6:

Planning mid- and high-rise buildings

This lecture will explain about planning mid- and high-rise buildings such as office buildings and hospitals. Students will learn about various planning such as multi-story floor planning, elevator planning, and fire planning.

In addition, a seminar will be conducted in which students will plan the core of a simple office building including structures such as stairs, elevators, and restrooms.

Week 7:

Evacuation planning

This lecture will explain about human behavior and evacuation plans in disasters including past fire disasters, major earthquakes and tsunamis, and terrorism. Students will learn about human behavior patterns during a disaster, and behavior patterns in a panic situation, and the conditions in which it occurs. Students will also learn about measures to address these issues, such as fire compartments and evacuation plans.

Week 8:

Human behavior and spatial awareness

In this lesson, students will consider the relationship between urban, regional, and architectural space and human behavior. Students will learn about the process in which humans and animals cognize the environment surrounding them, create cognitive maps of the environment, and move based on the cognitive maps, based on recent cognitive psychology.

Week 9:

Color design

This lecture will use various examples to explain about designing the interior, color, and lighting of buildings and sign planning. In addition, a seminar will be conducted in which students will design the interior of the meeting room on the thirteenth floor of Education and Regional Studies Building No.1.

Week 10:

Planning education facilities (1)

This lecture will explain about planning methods for educational facilities such as elementary, junior high, and high schools. Students will be introduced to examples of recent school buildings that were designed to accommodate changes in educational methods, such as academic ability and active learning recently called for by the PISA, in addition to spaces in conventionally built schools, and learn about planning methods for educational facilities.

Week 11:

Planning education facilities (2)

Students will be introduced to examples of new school buildings recently built in Japan and schools in countries such as Finland, Sweden, and The Netherlands, and learn about spaces and functions needed in educational facilities, comparisons between schools in Japan and other countries, and recent changes.

Week 12:

Design process

Students will learn about the overall architectural process—from planning to design, to construction. A seminar will be conducted in which the instructor will set certain conditions needed in the design, such as building functions, size, and user needs, and students will think about the process that leads to design.

Week 13:

Facility management

This lecture will explain about the effective use of space and extending the life expectancy of buildings through renovation. Students will learn techniques of facility management such as use of open spaces, free-address system, and use of multi-purpose spaces. Students will also gain understanding of how this contributes to energy-efficient buildings and environmental conservation.

Week 14:

Architectural programming

Students will learn about the pre-design process, i.e. how to research various conditions such as user needs, how the facilities will be used, the site, climate, budget, and size, and the programming techniques to put together conditions needed in the subsequent design process.

Week 15:

Review

This class will consist of a review of what has been covered in the course, in which students will be able to ask questions about things they are still unclear about. Important points, and information and methods needed to apply what has been learned to actual building design will be reviewed as well.

Preparation and Follow-up

Preparation: Students are expected to show interest in their own living environments and read the appropriate section of the reference materials before each class meeting.

Follow-up: After each class, re-read the printouts and reference materials, review your notes, and prepare any questions you may have for the next class meeting.