

Course Description

Building Economics

Course Description

In most of commercial buildings (office, Hotel, department stores, etc.), economic efficiency in the planning process is a significant concern which may influence the success of the upcoming design and construction planning. The purpose of this course is also to incorporate economic feasibility study of the construction process by introducing economic issues on building projects.

Architectural Design I

Course Description

The purpose of this course is to experience creative design skills through a structured approach choosed from a wide variety of topics related to residential architecture as well as living culture.

Architectural Design II

Course Description

In the context of socio-cultural city within a city for residential and various building types, students will find a solution to the psychological and functional aspects, and a general direction for the overall building design.

Architectural Design III

Course Description

In this course students will select a class of topic on their own depending on their interests and design capability and propose a systematic approach for solving problems in the subject.

Planning Theory of Residential Architecture

Course Description

In this course students will be exposed transition changes of residential architecture and human life form. They also study about the main housing type such as single-family homes, apartment houses, etc. and relations between building types,, regional characteristics, type of property according to the usage of space within housing.

Planning of Social Welfare Facilities

Course Description

A method or model for calculating the size of facilities may appear to vary according to the purpose the space. Students will study overall the spatial planning of social welfare issues for achieving the long-term comprehensive plan for social policy, and research how to maintain the organization's administrative structure effectively.

Advanced Theories of Architectural Design I

Course Description

In this course students will study the meaning and principles of building components, theory and practice in the form of analysis, and lessons about the architectural form deployed in the form of psychological theory.

Advanced Theories of Architectural Design II

Course Description

In this course students will identify the first principles of classification and feature on the form and configuration of the historical buildings in terms of architectural form.

Studies in Architectural Design I

Course Description

Class topic will be selected based on main theme of the architect on their recent works, the theory or methodology, and students will study how a variety of architectural theory to associate with major architectural works in real life through seminar sessions.

Studies in Architectural Design II

Course Description

Class topic will be selected based on main theme of the architect on their recent works, the theory or methodology, and students will study how a variety of architectural theory to associate with major architectural works in real life through seminar sessions.

Advanced Theory of Architectural Modeling

Course Description

In this course students will study the components of the architectural formation required in the creation of design work and experience the methods of representing formation in three-dimensional space.

Topics in Architectural Planning I

Course Description

For large scale buildings with a public service, the right balancing point are to be set between convenience of the User and profit of clients while planning and construction. Yet these community facilities should be adjusted upward. This course seeks to develop construction plans in this respect.

Topics in Architectural Planning II

Course Description

In this course students will study architecture, film, painting, sculpture, arts, culture, music, and etc as a comparative theoretical model between the sectors that compared the spatial representation and analysis of works that share the ball in their respective fields, field representation a place of self-building activities that broaden vividly alive in contemporary arts.

Design Process in Architecture

Course Description

The goal of this course is the professional study of the overall architectural design. Architect's design needs to go beyond the theoretical limit by extensively analyzing the operations strategy, space and shape configurations by introducing the results and at the same time broadening the understanding of the construction work on the self-construction there search evidence base and to establish a unique architectural language.

Environmental Psychology

Course Description

In this course, students will study the relationship between the physical environment and human behavior in architecture and the city, and find ways of improving the environment based on the understanding of human behavior. Environmental awareness and assessment of environmental problems –behavior correlation theory, environment perception and cognitive theories, personal space and area gender, environment-behavior research methods, and research about the theory and practical application of technology and environmental design methodology.

Seminar in Housing

Course Description

Focusing on the work analysis for independent houses and apartment after modern pursues the essence of living. But the work is not just the space and form the premises, the architect thought, clients' needs and programs, such as analysis carried out for the future. This course provides the basis for modern residential living, and ultimately lead to a professional analysis for modern residential projects.

Seminar in Building Code

Course Description

In this course, students will understand the institutional effect that harmonizes public and private interests through the study of the basic structure and theory of architecture laws and further the quality of regulations and architectural design to ensure you can grasp the reality of building legislation alive through the analysis and criticism of the practical case, construction, and ever acquire the necessary basic knowledge in management.

Study of Modern Architecture`s Architect

Course Description

In this course, students will study the modern architects and analyse their works.

Study of Contemporary Architecture`s Architect

Course Description

In this course, students will study the contemporary architects and analyse their works.

Advanced Theory of Architectural Space

Course Description

In this course, students will study the various theories about the nature and characteristics of the building inside and outside space organization.

Urban Planning, Adv.

Course Description

In this course, students will understand the natural history and urban planning from study of the physical and social conditions of urban space, ranging from a comprehensive master plan from the complex plan through the analysis of various social conditions.

Site Planning, Adv.

Course Description

In this course, primarily intended for housing complex, students will study theory of living environment as well as the social, physical planning and research techniques for the investigation techniques in psychological aspects.

Dwelling Environment Evaluation, Adv.

Course Description

In this course, students will review the real problems of the living environment in the city, and research on living conditions in the residential environment assessment.

Urban Design, Adv.

Course Description

In this course, students will try to create a new urban space for various civic asset value as physical space made to study the design and evaluation methods for visual morphological integration pursued by the public of the time.

Theories of Urban Space Composition

Course Description

In this course, students will study principles of space in the building group from humans and space, in the grasp of the physical side of the city from space, as well as cognitive style, and studied the production of urban space from the image survey.

Studies in Urban Space Composition

Course Description

In this course, students will acquire various theories related to the interior design, and design studies for production of interior space to accommodate a variety of modern life.

Research Methodology for Architecture and Urban Planning

<p>Course Description</p> <p>In this course, students will address the points raised by the case study research method and purpose of the research topics investigated by analytical research methods.</p>
<p>Theory of Interior Design</p>
<p>Course Description</p> <p>In this course, students will address design techniques through a case study on the design of the of the elements and principles of interior space.</p>
<p>Computer Aided Architectural Design I</p>
<p>Course Description</p> <p>In this course, students will study the research methodology to pursue a new approach for using computers in architectural design.</p>
<p>Architectural Environments</p>
<p>Course Description</p> <p>This course aims to introduce the basic principles of architectural environmental planning and to explore how architects' decisions affect the built environment and sustainable design.</p>
<p>Advanced Thermal Environment</p>
<p>Course Description</p> <p>The course introduces thermal comfort, microclimatic analysis, passive thermal control, heating/cooling loads. Students learn the methods of a master plan for the composition of the indoor environment based on understanding of the physical nature of the environmental factors such as climatic design methods of building</p>
<p>Advanced Daylighting</p>
<p>Course Description</p> <p>This course focus on the lighting environment. Students will study the fundamentals and practical application of lighting standards, natural daylighting methods, and artificial lighting.</p>
<p>Advanced Acoustics</p>
<p>Course Description</p> <p>This course focus on the acoustic environment. Students will study the fundamentals and practical application of acoustic standards, noise, and sound insulation based on understanding of building space and structure.</p>
<p>Advanced Architectural Facility</p>
<p>Course Description</p> <p>Students understand building mechanical system basic plan and theory to active and specific measures for keeping building to health, safety, comfort and convenience and learn basic knowledge to possible established for the purpose of building or building equipment systems including intelligent building.</p>

Air-Conditioning Equipment

Course Description

This course will include an analysis and design of building air distribution systems; fundamental of heat transfer and thermal dynamic; air systems : diffuser, duct, and fan systems; water systems : pipe and pump systems; fundamental of HVAC system control.

Design of Low Level Energy House

Course Description

Students establish the academic foundation of Low Level Energy House and Sustainable Building Design by learning for sustainable building design and energy saving theory to realized that sustainable development in construction. This course theory can establish to comfortable, energy saving and Eco-friendly building by studying building thermal environmental factors and passive control methods for a human being.

Design of Solar Energy House

Course Description

Students study the Design of Solar Energy House for integrated environment system with design technique that considers the interaction of the natural environment and the building of various environmental factors.

Theory of Elasticity

Course Description

This course provides an introduction to the elasticity theory and its application to material structures at micro-scale. The basic theory includes the definition of stress, strain and elastic energy; equilibrium and compatibility conditions; and the formulation of boundary value problems.

Advanced Steel Structures

Course Description

This course examines advanced designs of structural steel building, including consideration of torsion, lateral-torsional buckling, plastic design, plate girders, framing systems for seismic design, and principles of stability including the direct analysis method.

Dynamics of Structures

Course Description

This course covers analysis methods for response of systems with a single degree of freedom and when subjected to harmonic, impact and general loading as well as partial differential equations for time-dependent, continuum mechanics systems and energy methods such as Rayleigh-Ritz method and the finite element method, for predicting the dynamic behavior of systems with multi degrees of freedom.

Structural Reliability and Risk Analysis

Course Description

The goal of this course is to provide the students with a thorough understanding of the key concepts behind structural reliability and risk analysis. After this course the students will have refreshed their knowledge of probability theory and statistics to model uncertainties in view of engineering applications.

Random Vibration of Structures

Course Description

This course is designed to introduce advanced graduate students to concepts of random vibrations for dynamic analysis of structural systems subjected to stochastic loading.

Wind Engineering I

Course Description

The main objective of the course is to give participants a knowledge of wind loading beyond just application of a design code or standard. The quasi-static fluctuating and the resonant dynamic effects of wind loads are studied, and the method of effective static load distributions introduced. The lecture is also be given on internal pressures and wind-tunnel methods.

Wind Engineering II

Course Description

Wind Engineering II course deals with wind and its effects on human activities, built infrastructure (buildings, structures, etc.) and natural environment. The particular characteristics of wind loading and response of a variety of structural types are covered: low-rise buildings, tall buildings, towers and masts, long-span bridges, free-standing walls and roofs, antennas etc

Spectral Analysis

Course Description

Spectral analysis is one of the most widely used methods for data analysis in geophysics, oceanography, atmospheric science, astronomy and engineering (all types). Therefore, this course covers an analysis in terms of a spectrum of frequencies or related quantities such as energies, eigenvalues, etc. In specific areas it may refer to: Spectral estimation, in statistics and signal processing, an algorithm that estimates the strength of different frequency components (the power spectrum) of a time-domain signal.

Disaster Preservation Engineering

Course Description

This course covers deals with preventing emergencies (i.e., Disaster) such as an earthquake, hurricane or tornado that completely destroys the structure. A disaster is the result of an emergency that is not properly controlled because the designer did not anticipate the emergency event or they did not have adequate design knowledge for the building to survive the event. The course in preservation engineering may provide the opportunity to train practicing or new engineers who want to focus on important buildings.

Advanced Wind Resistant Design

Course Description

This course offers state-of-the-art knowledge and information on various issues related to building wind engineering, including some sophisticated techniques and mathematical tools for solving complicated and difficult problems. It also discusses basic matters such as wind climates, flow around bluff bodies and so on, pointing out things left unnoticed from various different angles. The importance of careful observation of phenomena, deep consideration and creation of mathematical models.

Earthquake Resistant Design

Course Description

This course introduces delegates to seismicity and to the dynamics that are relevant to the design of buildings. It also teaches delegates how to design and detail structures to resist earthquake forces and how to perform ground response analyses in order to predict ground surface motions for development of design response spectra. Information about structural systems for high-rise buildings and structural modelling of high-rise buildings is also covered.

Advanced Seismic Resistant Design

Course Description

This course provides an overview of the breadth of earthquake engineering as a discipline, providing the most important knowledge and intellectual skills for students to be able to assess earthquake hazards and ground motions (shaking), and then to analyse and design structures for earthquake resistance. Various methodologies for design are covered, from simplified preliminary design methods to more advanced techniques, including special seismic protection systems.

Probabilistic Structural Dynamics

Course Description

The objective of this course is to develop methods for analysis of structures subjected to dynamic loads which are random in nature. Structures under the action of wind or earthquake loads are typical of such problems. The course introduces the application of probability, random variables and random processes to model uncertainties in dynamic loads. The response analysis considers question of propagation of uncertainties in the inputs to the response variables of interest and also considers questions on reliability of vibrating systems under dynamic loads.

Finite Element Method I

Course Description

This course introduces finite element methods for the analysis of solid, structural and heat transfer problems. Finite element methods and solution procedures for linear and nonlinear analyses are presented using largely physical arguments. Applications include finite element analyses, modeling of problems, and interpretation of numerical results.

Finite Element Method II

Course Description

This course will train you to analyse real world structural mechanics problems using the finite element method. You will be introduced to the mathematical basis of finite element analysis, on which nearly all structural analysis software is built. Students will learn how to apply commercially available finite element software to solve real-world engineering problems.

Repair and Strengthening of Reinforced Concrete Structures

Course Description

This course provides guidance on evaluating the condition of the concrete in a structure, relating the condition of the concrete to the underlying cause or causes of that condition, selecting an appropriate repair material and method for any deficiency found, using the selected materials and methods to repair or rehabilitate the structure, and preparing concrete investigation reports for repair and rehabilitation projects.

Advanced Vibration Control of Structures

Course Description

Active and passive vibration control of structures form an issue of very actual interest in architectural and civil engineering. The course intends to bring together engineers of different background, and it will try to fill gaps between structural mechanics, vibrations and modern control theory. It will also establish links between the different applications in structural control. This course will offer a unified view on active and passive control, and the mechanical modelling of structures.

Seminar in Building Structure I

Course Description

This course covers presentation and discussion on current relevant topics in structural technology for the built environment at the master and/or doctoral degree level.

Seminar in Building Structure II

Course Description

This course covers presentation and discussion on current relevant topics in structural technology for the built environment at the master and/or doctoral degree level.

Theory and Design in Composite Structure

Course Description

This course provides a basic means for design and analysis of steel and composite structures and to familiarize students with a range of typical processing techniques.

Advanced Wood Structure

Course Description

This course provides the student with background in wood and wood-based materials, codified design procedures, design and detailing of wood structures, statistical methods, and basic structural analysis.

Project Planning and Control in Construction

Course Description

This course covers the principles of project management techniques including planning and scheduling, communications, quality management, teamwork, resource management, risk management, handover and review.

Construction Project Management

Course Description

Students will learn how project management roles are changing as innovative contracts, alternate delivery systems, alternative dispute resolution, and creative project financing are increasingly changing how projects are administered. Students will also learn about cost and risk control as well as developing and applying policies and procedures.

Risk Management on Construction Project

Course Description

The overall goal of this course is to provide students with the background to understand the fundamentals of risk management in construction and to minimize risk and to develop strategic planning processes in a construction environment

Management Case Analysis in Construction Industry

Course Description

This course examines the management focus of the design and/or construction company and how corporate management is different from, yet relates to, and impacts project management. The company creates the framework within which projects may consistently achieve excellent performance or they may struggle to complete behind schedule, over budget, and not meet the customer's requirements.

Research of Architectural Design

Course Description

In this course, students will study the trend of the architectural design works, features and concepts by selecting the most recent and appropriate works on the subject, and propose analysis and development methods in various aspects.

Feasibility study of Architecture

Course Description

Large-scale projects becomes problematic before the plan becomes feasible. This course will attempt to reproduce the architectural planning to deal with the problems of feasibility of architectural projects in this respect.

Methodology of Sustainable Architectural Design

Course Description

Global warming, alternative energy, building sustainable environment becomes the biggest issue twenty-first century, and architecture takes a significant part of establishing foundation of sustainable society. In this course, students will study green building design methodology for sustainable and energy-saving society in order to meet the needs from the, environments and reduce environmental impact and propose environmentally friend building design methods which can ultimately improve the quality of life.

Studies in ecological architecture and urban

Course Description

In this course, students will address understanding of the natural environment and the energy from an ecological point of view and study the composition of healthy housing and urban environments using it effectively.

Advanced Theory of Modern Architecture I

Course Description

In this course, students will study the relationship between the Greek and Roman architecture for the construction of the Renaissance, and research of the characteristics of the Renaissance architecture and study the precedents of continuity and building construction in the history of architecture.

Advanced Theory of Modern Architecture II

Course Description

From the Baroque to the Industrial Revolution, students will investigate the characteristics of the historical buildings, and research of the precedent of architectural continuity and architecture in the history of architecture.

Advanced Theory of Contemporary Architecture I

Course Description

Since the formation and developmental processes of the industrial revolution of modern architecture to international styles in 1950s, students will investigate and analyze the architectural characteristics of the building in order to cultivate the skills necessary for creative architectural design work.

Advanced Theory of Contemporary Architecture II

Course Description

Targeted on buildings after international styles in 1950s, which was the growth and developmental processes of the modern architecture, students will investigate and analyze the architectural characteristics of the building in order to cultivate the skills necessary for creative architectural design work.

Advanced Theory of Architectural Form

Course Description

In this course, students will consider the concept of space and shape of the formation, principle, and constituting the space with the inner space, and study the environmental factors which are surrounding the space.

Building Information Modeling

Course Description

In this course, students will study through the life cycle of a building that can hold all the information at once and will manage with a change of a three-dimensional technology-based information system with real information of the building through the BIM to store all the information in a computer database, and generate the drawings and other information when they are needed.

Theories of Architectural Space composition I

Course Description

In this course, students will review and analyse functional elements, such as the psychological elements necessary for buildings internal and external spatial configuration in particular to assess the cognitive and physical space, and the reason of the difference between the experiential space deploy the spatial organization theory to achieve the Live Architecture.

Theories of Architectural Space Composition II

Course Description

In this course, students will investigate the changes and characteristics of architectural space configuration techniques, ranging from ancient to modern research and analysis of the architectural space is configured.

Studies of Korean Traditional Architecture I

Course Description

In this course, students will study ideas underlying the Korean traditional architecture, climate, culture, and social characteristics, and also investigate the patterns which are implemented in the form of the irrelevance in the architectural configuration.

Studies of Korean Traditional Architecture II

Course Description

In this course, students will study environment and building, building and people by investigating the case of traditional architecture in Korea, such as correlation perspective, research data revealed from the architectural composition techniques with the traditional architecture and its modern applications.

Advanced Theory of Architecture and Critic

Course Description

In this course, students will review history of architecture, architectural theory, architectural design within a series of courses that are linked to each other, and consider architectural theory in a critical point of view.

Advanced Theory of Architectural Exterior Space

Course Description

In this course, students will investigate the relationship between the characteristic and construction of the inner space and outerspace, and also study the type of construction and configuration of the outer space.

Methodology for Resuscitation and Addition of Building

Course Description

In this course, students will discuss about the new form of space, functional requirements of the building, and research for the case studies on renovation and addition of the buildings with the theory and methodology.

Methodology for Restoration and Conservation of Building

Course Description

In this course, students will discuss about the nature and context of the city and the building for the historical and cultural environment through case studies on the restoration and conservation and research center for the theory and methodology.

Matrix Structural Analysis Method

Course Description

This course mainly deals with matrix analysis of structures. The main objective is to enable the student to have a good grasp of all the fundamental issues in these advanced topics in structural analysis, besides enjoying the learning process, and developing analytical and intuitive skills. This course is also expected to enable a good understanding of how standard software packages (routinely used for frame analysis in design offices) operate.

Advanced Structural Design and Planning of High Rise Buildings

Course Description

This course provides advanced analysis of structures for high-rise, large and long-span buildings. The contents cover various advanced structural systems, analysis of forms in integrated-structure buildings, structural design in both horizontal and vertical directions and the behavior of building structures subjected to wind and earthquakes.

Advanced Structural Analysis and Design

Course Description

This is an advanced postgraduate course specializing in structural engineering covering advanced structural analysis and design, structural computing simulation and also offering units linked with steel, concrete, timber and other structural designs. It will also provide you with knowledge to design structures under dynamic and earthquake conditions.

Advanced Theory and Design of Reinforced Concrete Structures I

Course Description

This course covers advanced structural analysis and design for reinforced concrete members based on Ultimate Strength Design (USD) Method.

Advanced Theory and Design Reinforced Concrete Structures II

Course Description

This course covers advanced structural analysis and design for reinforced concrete members based on Ultimate Strength Design (USD) Method.

Advanced Theory of Architectural Materials and Method

Course Description

This course was created with the object of having students develop hands-on experimental research skills and an improved understanding of the characteristics of both structures and materials.

Advanced Wood Structure Theory and Design

Course Description

The Advanced Wood Structure Theory and Design course provides the student with knowledge in the analysis and design of wood structures.

Construction Management Research

Course Description

As technological integration and construction complexity increase, so do construction lead times. To stay competitive companies have sought to shorten the construction times of new infrastructure by managing construction development efforts effectively by using different project management tools. Therefore, this course deals with three important aspects of construction project management which are (1) theory, methods and quantitative tools used to effectively plan, organize, and control construction projects; (2) efficient management methods revealed through practice and research; (3) hands-on, practical project management knowledge from on-site situations and field trips.

Method Research in Building Construction

Course Description

This course provides an introductory overview of the various method research in building construction. Common construction methods are introduced and building details are explored.

Human Resource Management in Construction

Course Description

This course examines the primary role of human resources management (in construction) in the organization to help people and organizations effectively manage change. This highly interactive course focuses on strategies for assessing, designing, and implementing training and organizational development efforts that positively impact the performance of the individual and the work group in construction field.

Professional Project Information System in Construction

Course Description

The course aims the students to be able to analyze and evaluate the information requirements of any type of organization in construction industry and to learn basic terms, tools and processes in developing an information system to cooperate with IT professionals.

Modernized Methods from Korea Traditional Architecture in Construction

Course Description

This course introduces modern technology, way of construction, material development, and on-the-spot cases of high-rise construction based on the traditional construction methods in Korea.

Case Study of Value Engineering in Construction

Course Description

The principal objectives of the course are to expose students to total quality management and to provide an overview of value engineering concept in construction and its implementation with examples. Included is project analysis for constructability, value engineering, and productivity analysis/improvement techniques.

Case Studies

Course Description

This course deals with case studies in architectural research. These studies emerge from the methodologies developed in social sciences such as psychology, sociology and anthropology. Starting from philosophical and epistemological bases of research, the class will incorporate all relevant phases of scientific research methods and help students apply them to their immediate or upcoming research projects.