

**COURSE DESCRIPTIONS**  
**Bachelor of Architecture (Thai Architecture)**  
**(Five-year professional degree program)**  
**(Revised Curriculum 2012)**

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|----------------|---|-----------------|
| <b>261 105</b> | <b>Architecture and Environment</b>   | <b>3(2-2-5)</b> |
|                | <p>Influence of the natural environment on architectural design and human comfort zone. Implications for the design of buildings that could effectively control the environment and conserve energy by natural means.</p>   |                 |
| <b>261 109</b> | <b>Interior Architecture</b>  | <b>3(2-2-5)</b> |
|                | <p>Design fundamentals for small scale architectural interiors; design of spaces, planes and forms; use of colors; lighting design; selecting materials and types of construction; suitable furniture arrangements to serve basic functional requirements; creating atmosphere and moods to convey certain meanings; using design as an instrument to create spaces that stimulate social interactions.</p> <p>Includes study visits.</p> |                 |
| <b>261 110</b> | <b>Model Making</b>   | <b>3(2-2-5)</b> |
|                | <p>Thinking process and practical means for making architectural models; using study models in the design development process.</p>  |                 |
| <b>261 201</b> | <b>Architectural Theories and Concepts</b>  | <b>3(3-0-6)</b> |
|                | <p>Theories, philosophical thoughts and concepts of various ideological groups; past and present examples of means, approaches and points of view that have influence on the diversity of architectural interpretations; developments in related fields and aspects associated with architectural creativity such as art, culture, technology, and society; searching for a standpoint; architectural trends and movements.</p>           |                 |



**261 204 Studies of Pre-design Services 3(3-0-6)**

Carrying out studies to assist developers in making decisions before engaging in design-stage commitments; selecting project site; related laws and standards. Techniques for collecting data and making analyses with regards to site planning and building design. Factors determining size and quality of the project such as economic feasibility, market potential and environmental constraints; developing terms of reference and conditions for writing up design contract.

**261 205 Architectural Training (non-credit)**

Students undergo training with an architectural firm or government agency, after having passed and accumulated a minimum of 125 credits, for a period of not less than 210 hours or the equivalent during the summer recess at the end of the 4th year. Assessments will be made on the basis of satisfactory/unsatisfactory performance.

**261 207 Architectural Practice 3(3-0-6)**

Principles and ethics concerning the architectural profession; related laws and legislations; establishing and managing an office; providing professional services; contract documentation; project management, construction management, and dealing with people of other related professions.

**261 212 Laws and Regulations in Architecture 3(3-0-6)**

Principles of architectural laws and regulations governing the design of buildings; analyses and applications for use in professional practice.

**261 213 Building Design Analysis 3(3-0-6)**

Analyzing the design of buildings based on design process and concepts of the designers together with their form-creating techniques; comparative look at different groups of architects in terms of creativity, ideology and socio-cultural environment; providing students with inspiration and deeper understanding of architecture.

Includes study visits.



- 261 215 Cross-cultural Workshop in Architectural Design 3(2-2-5)**  
 Concepts, principles, analyses and problem identification with regards to designing under different cultural contexts. Organized workshop to improve students' design skills and abilities.  
 Includes study visits.
- 261 216 Green Buildings 3(3-0-6)**  
 Architectural design associated with energy and environmental issues; building lifespan and factors affecting building design in overcoming environmental problems; related laws and standards; application of appropriate building materials and technology for architectural design, site planning, and landscape architecture.  
 Includes study visits.
- 262 101 Design Fundamental 3(1-6-2)**  
 Studio course in basic principles of design using various compositional elements; developing students' experience and understanding of aesthetics for two and three dimensional designs.
- 262 102 Basic Delineations 3(1-4-4)**  
 Use of technical drawing instruments and practical applications. Students learn to draw objects of various shapes and sizes as well as basic Thai architectural elements; fundamental principles and exercises in perspective drawing of spaces and forms, projection of shades and shadows, and rendering techniques for illustrating general atmosphere in presentation work.
- 262 103 Architectural Design Fundamental 3(1-6-2)**  
 Prerequisite: 262 101\* Design Fundamentals  
 Studio course in designing space, form and their interrelationships; issues to consider include design aesthetics, human scale, human behavior, and physical surroundings.  
 Includes study visits.



**262 104 Architectural Presentation I 3(1-4-4)**

Developing skills in the use of drawing pencils, ink, and different color mediums; drawing on location; application of rendering techniques for expressing ideas in architectural presentation.

Includes study visits.

**262 106 Computer in Thai Architecture 3(1-4-4)**

Basic principles in Thai architectural drawing; exercises in drawing Thai architectural components; basic application of computer programs to assist and develop skills in producing drawings of Thai architectural elements and producing presentation work.

**262 107 Thai Architectural Design I 4(2-6-4)**

Prerequisite: 262 103\* Architectural Design Fundamentals

Thoughts, beliefs and practices associated with constructing domestic and vernacular buildings in each region of Thailand. Emphasis on unique characteristics in terms of proportion, styles, materials and structure in design applications; exercises in designing and drafting.

Includes study visits.

**262 108 History of Thai Architecture I 3(3-0-6)**

Architecture in Thailand from Dvaravati period (6th - 10th century) to Early Rattanakosin period (19th century); influences of ancient civilizations on architecture in the Southeast Asian region.

Includes study visits.

**262 109 Thai Ornaments in Architecture 3(1-4-4)**

Origin and derivation of Thai ornamental patterns and structure of their designs. Exercises in drawing and creating patterns; developments in Thai style ornamental patterns and analyses of their applications in Thai architecture; developing skills in designing patterns and motifs for decorative purposes.

Includes study visits.



**262 110 Thai Architectural Design II 4(2-6-4)**

Prerequisite: 262 107\* Thai Architectural Design I

Ideologies, concepts and construction of traditional religious architecture in Thailand. Emphasis on forms, proportion, structure, architectural elements and materials. Application of knowledge to design work, drafting and model making.

Includes study visits.

**262 111 History of Thai Architecture II 3(3-0-6)**

History of architecture in Thailand from the period of King Mongkut, or Rama IV (1851-1868), to the present day; styles and cultural influences affecting Thai architecture.

Includes study visits.

**262 112 Contemporary Architectural Design and Construction I 4(2-6-4)**

Principles concerning design of domestic architecture and buildings of similar scale; organization of internal spaces and functions, arrangement of furniture, architectural design and site planning appropriate for the climate, environment and context of the site; construction methods and techniques for reinforced concrete buildings; exercises in producing architectural drawings, construction working drawings and model making.

Includes study visits.

**262 113 Thai Architectural Design III 4(2-6-4)**

Origins, ideologies, concepts and symbolisms in traditional Thai architecture of stupas and pagodas; analysis of plans, style, form, proportion, structure, architectural components and materials; contemporary application to design along with exercises in drafting and model making.

Includes study visits.



**262 114 Contemporary Architectural Design and Construction II 4(2-6-4)**

Prerequisite: 262 112\* Contemporary Architectural Design and Construction I  
Principles for designing small-scale public buildings with slightly complex functional requirements; making analyses, organizing internal spaces, designing buildings and site plan appropriate for the climate and environmental context. Construction methods and techniques for long-span steel structures; building services and mechanical systems; producing architectural drawings, construction working drawings and making models.  
Includes study visits.

**262 115 Architecture as a Culture Context in Asia 3(3-0-6)**

Cultural origins of architectural creativity reflecting the outlook of builders and users; social systems, rituals, beliefs and religions influencing architectural creations; understanding architecture, people, and cultures in the Asian region.  
Includes study visits.

**262 116 Thai Architectural Design IV 4(2-6-4)**

Prerequisite: 262 113\* Thai Architectural Design III  
Ideologies, concepts and symbolisms in traditional Thai religious and royal-style architecture; superstructure and roof styles; analysis of plans, styles, forms, proportions, structures, architectural components and materials; contemporary applications to design along with exercises in drafting.  
Includes study visits.

**262 117 Field Work Training for Supporting Thai Architectural Conservation 3(1-4-4)**

Instruments, equipment, and uses; surveying techniques; modern theories and principles of architectural conservation; documenting information on historical buildings and surrounding context for the purpose of preserving national art and culture; exercises in surveying and making measured drawings.  
Includes study visits.



**262 118 Principles of Thai Architecture 3(1-4-4)**

Factors influencing styles in Thai architecture of residential and religious nature; analyzing different types of buildings in terms of planning, architectural characteristics and details.

**262 119 Thai Traditional Arts and Crafts 3(2-2-5)**

Background of traditional arts and crafts in Thai architecture; decorative lime stucco molding, wood carving, mirrored glass mosaic, mother of pearl inlay, perforated paper, lacquered and gilded decorations; making appropriate choices for ornamental applications.  
Includes study visits.

**262 120 Vernacular Architecture and Cultural Ecology 3(3-0-6)**

Various aspects of vernacular architecture and cultural ecology; understanding the influences of natural and cultural environment on local characteristics of vernacular architecture and built environment.

**262 121 Delineations in Thai Architecture 3(1-4-4)**

Drawing course focusing on various types of Thai architecture; analyzing different structural forms and architectural details that are practical for construction.

**262 201 Contemporary Thai Architectural Design I 5(2-9-4)**

Prerequisites: 262 114\* Contemporary Architectural Design and  
Construction II

262 116\* Thai Architectural Design IV

Concepts and identity of Thai architecture; application to medium scale design projects for contemporary public use; technical aspects concerning building structures, construction methods, building services systems and environmental conditions; learning to solve problems through design and drafting exercises.

Includes study visits.



- 262 202 History of Architecture from Egypt to Baroque 3(3-0-6)**  
 Developments in Western architecture from Prehistory to the period of Baroque in the 18th century.
- 262 203 Contemporary Thai Architectural Design II 5(2-9-4)**  
 Prerequisite: 262 201\* Contemporary Thai Architectural Design I  
 Concepts and identity of Thai architecture; application to site planning and building design of large scale public projects serving large number of present day users; economic and social factors, technology, harmony with the environment, construction and structural systems; exercises in designing and drafting.  
 Includes study visits.
- 262 204 History of Architecture from Neoclassicism to Modernism 3(3-0-6)**  
 Development of Western architecture from the Neo-classic period in the 18th century to the period of the Modern movement in the first half of the 20th century and subsequent developments to the end of the century.
- 262 205 Contemporary Thai Architectural Design III 5(2-9-4)**  
 Prerequisite: 262 203\* Contemporary Thai Architectural Design II  
 Concepts and identity of Thai architecture; application to site planning and design of contemporary Thai architecture with multiple uses; keeping harmony with the community environment in physical, social, cultural and economic terms; technical aspects such as structure, construction methods, building services systems and environmental conditions.  
 Exercises in designing and drafting.  
 Includes study visits.





- 262 206 Seminar in Thai Architecture** **3(2-2-5)**  
 Discussions on various topics concerning Thai architecture; issues include design concepts, aims and intentions, problems and obstacles under each topic.
- 262 207 Thesis Preparation** **3(0-6-3)**  
 Prerequisites: 261 205\* Architectural Training  
 262 203\* Contemporary Thai Architectural Design II  
 Writing terms of reference through study and analysis of information for a proposed design project in Thai architecture or contemporary Thai architecture to be carried out in subsequent thesis course.
- 262 208 Thesis** **9(0-18-9)**  
 Prerequisites: 262 205\* Contemporary Thai Architectural Design III  
 262 207\* Thesis Preparation  
 Passed and accumulated a minimum of 140 credits  
 Students carry out design work for approved project proposed in Thesis Preparation course. Final design solutions are required to express Thai characteristics and be in harmony with local cultural context. The undertaking shall be carried out individually under the supervision of appointed advisors and committee.
- 262 209 Thai Architectural Design Analysis** **3(2-2-5)**  
 Making design analyses of Thai architecture; issues include design concepts and creativity, tradition, social and cultural integration, customary practices, and developments in the design of present-day Thai architecture.



- 262 210 Contemporary Asian Architecture** **3(3-0-6)**  
 Designs and developments of contemporary architecture in Asia with emphasis on those in ASEAN countries; design process and other relevant factors such as environment, technology, economics, and social and cultural contexts.
- 262 211 Architecture and Modern Thai Society** **3(3-0-6)**  
 Changes in Thai society since 1932 that have influence on formation of architectural concepts and styles over the different periods until present day; understanding architecture in the context of modern Thai society that is constantly changing, and related disciplines such as history, political science, art and literature.
- 262 212 Model Replica of Building** **3(2-3-4)**  
 Methods for collecting and documenting architectural information in accordance with architectural conservation process; practical exercises culminating in drafting and making model replica of selected building/s. Includes study visits.
- 262 213 Iconography in Thai Architecture** **3(3-0-6)**  
 Origins, concepts, and beliefs concerning the use of symbolisms and iconography in site planning, design and ornamentation of Thai Buddhist architecture and religious structures, such as pagodas, chapels and vihara, as well as royal palaces and other related types of buildings. Includes study visits.
- 262 214 Individual Study in Thai Architecture** **3(1-4-4)**  
 Students choose a topic of interest in the area of Thai architecture and conduct their own study under the approval and guidance of a supervisor.



**262 215 Building Re-use and Rehabilitation 3(2-2-5)**

Architectural conservation principles and practices concerning rehabilitation of registered buildings, historic buildings, and old buildings in various contexts to suit present-day requirements. Topics include renovation, re-use, additions and adaptations as well as designing new buildings in old contexts.

Includes study visits.

**262 216 Group Study in Thai Architecture 3(1-4-4)**

Students form teams and choose topic of interest in the area of Thai architecture and conduct group study under the approval and guidance of assigned supervisor/s.

**263 101 Materials and Construction I 3(2-3-4)**

Origins, properties and uses of timber, brick, stone, iron, aluminum, metallic and non-metallic building materials; methods of construction for small-scale timber buildings; exercises in drafting and construction working drawings.

Includes study visits.

**263 102 Mathematics 3(3-0-6)**

Fundamental course in mathematics dealing with calculus of functions, differentiation, integration, and constants; practical applications for problem solving in architectural design.

**263 103 Materials and Construction II 3(2-3-4)**

Prerequisite: 263 101\* Materials and Construction I

Origins, properties and uses of various building materials produced under industrialized process. Exercises in drafting according to construction working drawing conventions; methods of construction for small scale buildings and building components.

Includes study visits.



**263 104 Construction I 3(2-3-4)**

Prerequisite: 263 103\* Materials and Construction II

Methods of construction for small wooden buildings; various materials, building components and joint details. Basic building systems for small scale buildings; exercises in working drawings.

**263 105 Structural Systems in Architecture I 3(3-0-6)**

Prerequisite: 263 102\* Mathematics

Properties and behavior of structural materials and components under acting forces; theories and definitions of different units of forces; various structural systems and the way they work. Acting loads, load transfer, structural stability, causes of structural damage and failure; making structural estimations; designing suitable and viable structures.

Includes study visits.

**263 108 Structural Systems in Architecture II 3(3-0-6)**

Prerequisite: 263 105\* Structural Systems in Architecture I

Using basic principles of statics for making structural analysis; calculating loads and acting forces, reacting forces, bending moments, shear and other forces; drawing shear and bending moment diagrams; influence lines; deflection theory, and behavior of various structural components under external forces.

Includes study visits.

**263 110 Mechanical Equipment 3(3-0-6)**

Principles concerning mechanical equipment systems in buildings; allowing spaces for air conditioning system, plumbing and sanitary system, electrical system, lighting system, lightning protection system, fire protection system, communication and security systems. Fundamentals of good acoustic design for buildings. Related laws and regulations concerning inspection of building equipment and energy conservation.

Includes study visits.



- 263 111 Structural System in Architecture III** **3(3-0-6)**  
 Prerequisite : 263 108\* Structural Systems in Architecture II  
 Behavior and design of various building components for timber-frame structures, steel structures, and reinforced concrete structures.  
 Includes study visits.
- 263 112 Public Building Construction** **4(2-6-4)**  
 Prerequisite: 262 114\*\* Contemporary Architectural Design and Construction II  
 Different types of public buildings and related laws; design and construction of large buildings / high-rise buildings; structural systems, building services systems, and building envelope systems; conservation of energy and environment. Exercises in working drawing, documentation, specification writing, and model making.  
 Includes study visits.
- 263 113 Concrete Technology in Architecture** **3(2-3-4)**  
 Methods for selecting and storing materials and aggregates to be used in mixing concrete; determining mixing ratio; methods for setting up boxing, molding, pouring and curing concrete; designing special textural effects, and pre-casting.  
 Includes study visits.
- 263 114 Computer in Architecture** **3(2-3-4)**  
 Introduction to computer programming and packaged software for assisting in architectural design and presentation.
- 263 202 Industrialized Building** **3(2-3-4)**  
 Application of industrialized building systems to reduce time and cost in design and construction process as well as improve construction quality; different types of building products and construction joints.  
 Includes study visits.



- 263 205 Cost Estimation 3(2-2-5)**  
 Principles of cost estimation and valuation; estimation process, basis of estimate, labor costs, quantity survey, bill of materials and bill of quantities; direct costs, indirect costs, cost index and comparing costs of building components.
- 263 206 Construction Management 3(3-0-6)**  
 Principles of construction management; planning, management tools and decision making; construction problems involving architects, engineers and other related professions.
- 263 207 Computer Aided Architectural Design I 3(2-3-4)**  
 Use of computer technology for architectural drafting; work standards and systemizing drawings and documents.
- 263 208 Computer Aided Architectural Design II 3(2-3-4)**  
 Techniques for creating 3D modelling and 3D visualization; emphasis on using computer for studying architectural spaces and forms.
- 263 209 Individual Study in Computer Application in Architecture 3(1-4-4)**  
 Students choose a topic of interest concerning computer programs and programming techniques to assist in the different stages of architectural design process and carry out their own study under the guidance of a supervisor.
- 263 210 Building Innovation Technology 3(3-0-6)**  
 Concept and application of building technology innovation. Innovations concerning structural systems, construction systems, building envelope systems, building services systems, and facility management systems. Includes study visits.



- 263 211 Building Diagnosis** **3(3-0-6)**  
 Causes and effects of building deterioration; techniques for dealing with deterioration of building structure, building envelope, and building services. Includes study visits.
- 263 212 Architectural Design for Confronting Disasters** **3(3-0-6)**  
 Concepts for designing durable architecture that can withstand geohazards, landslides, earthquakes, floods, tsunamis, storms, fire and other natural disasters.
- 263 213 Architectural Acoustics** **3(3-0-6)**  
 Theory of sound; design principles for good acoustic quality in connection with building forms, materials, structures, and mechanical systems; reduction and prevention of noise interference; audio and acoustical equipment. Use of computer software for simulating room acoustics; case studies of auditoriums, concert halls, theaters, and cinemas. Includes study visits.
- 264 101 Site Planning** **3(2-3-4)**  
 Process and factors involved in site planning; exercises in design and site planning for architectural projects.
- 264 102 Landscape Architecture** **3(2-2-5)**  
 Prerequisite: 264 101\* Site Planning  
 Landscape design and its interrelationship with architecture and site planning; influence of the natural environment, ecology, and human behavior; studio exercises in site planning and grouping of buildings to create harmony between architecture and landscape. Includes study visits.



**264 201 Evolution of Human Settlements 3(3-0-6)**

Setting up of human settlements through the ages, from past to present; influencing factors affecting urban changes; impact of social and economic developments on urban growth and physical characteristics.

**264 202 Introduction to Urban Planning 3(3-0-6)**

Role, importance, and purpose of urban planning; planning process and methods; implementation of plans; study of land use, traffic, transportation, infrastructure, and environment in order to understand how the urban system works.

Includes study visits.

**264 203 Environment and Human Behavior 3(3-0-6)**

Structure of the relationship between people and their physical surroundings; perception and cognition of the environment; territoriality, interpersonal space, and defensible space behaviors.

**264 204 Individual Study in Landscape Architecture and Urban Design 3(1-4-4)**

Students choose a topic of interest concerning landscape architecture and urban design, and carry out their own study under the guidance of assigned supervisor.

**264 205 Design for Sustainable Environment 3(3-0-6)**

Concept of sustainable development and its application as the basis for designing sustainable environment; issues concerning unity and harmony between architecture, community and city.

**264 206 Sustainable Community Development 3(1-4-4)**

Various aspects of community and basic principles for developing sustainable community; analyses of relationship between internal and external factors affecting the community; fieldwork involving design and planning for selected community.

Includes study visits.





- 264 207 Urban Design** **3(1-4-4)**  
 Aspects of urban design associated with architecture; various components of the urban environment and context; exercises in urban design projects.
- 264 208 Field Study in Urban Design and Landscape Architecture** **3(1-4-4)**  
 Selected case studies of urban design and landscape architecture; understanding the relationship between architecture and other urban aspects of the built environment; gaining direct experience of places through field excursions both within the country and abroad.  
 Includes field trips.
- 265 201 English for Architecture I** **3(2-2-5)**  
 Exercises in reading articles on architecture and related disciplines; writing summaries and giving verbal presentations to express opinions in class.
- 265 202 English for Architecture II** **3(2-2-5)**  
 Exercises in reading articles on architecture and related disciplines; summarizing important points, writing articles, abstracts and reports; quoting, referencing and citations.

