

## รายวิชาและข้อกำหนดของหลักสูตร

# Bachelor and Master of Urban Design and Development (International Program)

TU 101 Thailand ASEAN and the World 3 (3 – 0 – 6)

Study of significant phenomena around the world, in the ASEAN region and in Thailand in terms of their political, economic and sociocultural dimensions. This is done through approaches, theories and principles of social science research via discussion and raising examples of situations or people of interest. The purpose of this is to create a complexity of global interrelationships, to build a global mindset and to be able to challenge broader worldview.

TU 100 Civic Education 3 (3 – 0 – 6)

Instillation of social conscience and awareness of one's role and duties as a good global citizen. This is done through a variety of methods such as lectures, discussion of various case studies and field study outings. Students are required to organize a campaign to raise awareness or bring about change in an area of their interest.

TU 102 Social Life Skills 3 (3 – 0 – 6)

Important skills for success in leading a happy life in society. Students learn to develop their ability to manage stress, build emotional security, understand themselves and adapt to psychological, emotional and social problems. Students also learn to understand the meaning of aesthetics, experiencing and appreciating the relationship between art and humanity in different field, namely visual arts, music, performing arts and architecture.

TU 103 Integrated Sciences of sustainability 3 (3 – 0 – 6)

Integrated study of science, mathematics and other scientific disciplines related to nature, the built environment, economy and society, leading towards sustainable development. The course also looks at lifestyle adaptation to enable prevention, mitigation and adaptation, as well as suitably building sustainability in global dynamics, both physically and socially.

#### TU 104 Critical Thinking, Reading and Writing 3 (3 – 0 – 6)

Development of critical thinking through questioning, analytical, synthetic and evaluation skills. Students learn how to read without necessarily accepting all the information presented in the text, but rather consider account the objectives, perspectives, assumptions, bias and supporting evidence, as well as logic or strategies leading to the author's conclusion. The purpose is to apply these methods in student's own persuasive writing based on information researched from various sources, using effective presentation techniques.

#### TU 105 Communication Skills in English 3 (3 – 0 – 6)

Development of English listening, speaking, reading and writing skills, focusing on the ability to hold a conversation in exchanging opinions, as well as reading comprehension of academic texts from various disciplines related to student's field of study.

#### TU 106 Creativity and Communication 3 (3 – 0 – 6)

Creativity thought processes, with critical thinking as an important part, as well as communication of these thoughts that lead to suitable results in social, cultural and environmental contexts, at personal, organizational and social levels.

#### AP 163 History of Art 3 (3 – 0 – 6)

Evolution of art in both the western and eastern world is emphasized in the prominent periods when significant changes of style and characteristics of art occurred. Cultural, social and economic factors underlying the style of contemporary art of Europe and various Asian regions will also be explored.

#### AP 164 Economics of Built Environment 3 (3 – 0 – 6)

Basic economic concepts, fundamental economic problems, the application of microeconomic theories to the built environment design process, project feasibility analysis, knowledge of macroeconomic theories and current general national economic situations, which have potential impacts on the investment of construction projects.

### AP 162 Applied Physics for Built Environment 3 (2 – 2 – 5)

Relevant theories and experiments on built environment application including a definition of particles and rigid bodies, Newton's mass laws, balance of forces, work, potential and kinetic energy and spring to help explain the static and dynamics of rigid bodies and design building structures; thermodynamics as backgrounds of air flow and heat transfer in the built environment; the ideal gas law and air-vapor mixture as basics of psychrometric; the properties of sound wave for the design of sound protection and amplification; and the properties of electromagnetic waves including light and heat to be the basic considerations of fenestration designs.

### Urban Design and Development Courses

#### Theory of Urban Design and Development Courses

#### UD 211 Urban Design Fundamental 3 (3 – 0 – 6)

Definition and examples of urban design, heritage of urban design thought and practice; the role of urban design and development in the fields of architecture, landscape architecture, and urban planning will be introduced.

#### UD 212 Theory and Concept in Urban Design 3 (3 – 0 – 6)

Thematic and chronological fundamentals of urban design theory, major trends in urban design theory and practice from various eras from neo-classic to contemporary urbanism. The rise of new urbanism as a result of rapidly proliferating technological and industrial advances is explored as a backdrop to various Urban Design strategies that have been subsequently deployed.

#### UD 213 Big Cities and Big Plans: International Perspective 3 (3 – 0 – 6)

Social, technological, political, economic, and cultural implications of the "Big Plan" concept in the urban context. The relationship between policy and urban design development are examined through readings, case studies, and presentations as well as an analysis of the ways in which top-down policies shape cities and how the governments implement urban design and development policies. Students gain a critical understanding of both the complex system of governance within which urban design and development occurs and the effective tools available for creative intervention.

## Urban Design and Development Studio Courses

### UD 221 Reading and Representing Place 3 (1 – 4 – 4)

Introduction to methods of analyzing, evaluating, and recording the urban environment. Drawing and visual communication skills which include perspective freehand sketch and graphic presentation are used in recording and representing how to perceive the urban environment used in the urban design process. Topics include city and self-identity, varying perception of places, neighbourhood, district and city and their social context. The course is designed to prepare students for the studio sequence.

### UD 222 Urban Design and Development Studio: Design Thinking 3 (2 – 2 – 5)

Human-centered design thinking processes, that include problem definition, research, ideation, prototype, objective, implement, learn, visualization and storytelling approaches within a team dynamic environment are emphasized in this course.

### UD 223 Urban Design and Development Studio: Urban Intervention 6 (2 – 8 – 8)

The module discusses urban design principles and methods through urban intervention techniques. Introduces students to fundamental urban design issues related to the urban fabric. The course provides an insight in how to read the urban fabric including environmental, social, cultural and their manifestation in urban space. The exercise stresses the use of graphics and communication techniques.

### UD 224 Urban Design and Development Studio: Infill Development 6 (2 – 8 – 8)

The first Urban Design and Development Studio focuses on introducing a design process applied to an existing urban environment and to understand the first role of an urban designer which is to serve the public as a client. The studio provides a framework for students to expand their design thinking using a small neighborhood of Bangkok as a laboratory. Designing an urban Infill project requires knowledge and skills in research, mapping, probing and visualizing the city.

UD 225 Trail of Urbanism 0 (0 – 0 – 0)

Overall analysis of selected cities and regions with emphasis on major tangible and intangible characteristics. Some preliminary reading on the cities and the region prior to the field trip will be required.

UD 326 Urban Design and Development Studio: Urban Regeneration 6 (2 – 8 – 8)

Identify and investigate a “dead” or “lost” urban area and create a design program to regenerate and transform the urban environment. The development program must address the multiple needs of a variety of stakeholders and the design should be relevant to a particular neighborhood while considering the impact of the regeneration on the larger city.

UD 327 Urban Design and Development Studio: Greenfield Development 6 (2 – 8 – 8)

An urban design studio for complex large areas. Emphasis will be on applying all aspects of inventory and analysis with a focus on ecological processes. Students will investigate a study area at three scales: (1) macro-scale; (2) meso-scale; and (3) micro-scale, and develop their own vision for an innovative urban design response.

UD 328 Supervised Internship 0 (0 – 0 – 0)

A professional practice of Urban Design and Development in related public or private organizations which must be approved and supervised by the Faculty of Architecture and Planning, during the summer semester for not less than 360 hours.

UD 429 Collaborative Urban Design and Development Project 6 (2 – 8 – 8)

Develop new combinations of place, built space, and service to satisfy the needs and expectations of the public. Provide opportunities to design under 4 common development situations: a site looking for a use, a use looking for a site, capital looking for an investment opportunity, and an existing development. The initial to middle stages of urban project development will include project initiation, idea inception, development, refinement, project feasibility and contract negotiation and project management.

## Technology Courses

### UD 231 Computer-aided in Urban Design 3 (1 – 4 – 4)

Digital techniques for Urban Design and Development will be introduced including data mapping, computer modelling, and interface design. The course emphasizes the critical use of these technologies for Urban Design practice. Fundamental skills are developed for learning Geographic Information Systems (GIS) and digital visualization. The course will stress how to understand relationship and integration of information that will encourage non-traditional methods of spatial representation.

### UD 332 Ecological Framework in Urban Design 3 (3 – 0 – 6)

Introduction on an ecological framework approach defined as the use of natural environment and socioeconomics and cultural information. There is an emphasis placed on applying all aspects of urban inventory and analysis with a highlight on natural processes and ecological transformation, which are appropriate to urban design. A case study of a complex ecology environment in urban areas.

### UD 333 Environment and Technology in Urban Design and Development 3 (2 – 2 – 5)

The relationship between environmental protection and technology within the larger design process. Dimensions such as energy, materials, socio-economic factors, water quality, air quality, solid waste and, hazardous materials handling will be assessed. Environmental quality planning and management and Environmental Impact Assessment techniques and approaches will be considered.

### UD 434 Data and Decisions in Urban Design and Development 3 (1 – 4 – 4)

Methods of statistical and mathematical analysis in design and planning will be emphasized with the use of computer packages for analyzing urban data using regression, matrix methods, cohort-survival population models on microcomputers.

## Urban Design and Development Supporting Courses

### UD 241 Comparative City Narration 3 (1 – 4 – 4)

Develop students' skills in researching, writing and presenting their ideas on two different cities - a Thai City and an international city such as Singapore or Hong Kong. Students choose their own topic of interest.

### UD 342 Urban Tourism 3 (3 – 0 – 6)

Develop an understanding of urban tourism and leisure enterprises that are based on creative product development and delivery through a series of seminars, and case studies with guest lecturers. Students will review and discuss different creative industry models that link the tourism and leisure industries with the larger urban development process. They will also have the opportunity to work from initial ideas to bringing tourism and leisure products and services to market.

### UD 343 Real Estate and Housing Development 3 (3 – 0 – 6)

The strong relationship between real estate and housing development and management will be explored. Students will be exposed to basic real estate development economics and its application to various types of developments including theme parks, accommodation, integrated resorts, affordable housing etc. Cases are drawn from various places around the world.

### UD 444 Social Innovation and Social Entrepreneurship 3 (1 – 4 – 4)

Case studies on perspectives and endeavors of thought leaders and entrepreneurs who address social needs in Thailand and internationally using entrepreneurship as a means of innovation for social and urban development through private for-profit and nonprofit organizations, nongovernmental organizations, or public institutions.

### UD 445 Professional Practice and Ethic in Urban Design and Development 3 (1 – 4 – 4)

A series of seminars related to current urban design thinking and ideologies, problems in urban management and design, dilemmas in Thai urbanism, environmentally focused problems in professional practice and ethics.

UD 446 Organization Development and Management 3 (1 – 4 – 4)

A study of Management Science covering a review of basic management theories, introducing organization development concepts and processes. Special emphasis will be given to the organizational effectiveness as an organization's essential goals through case studies.

#### Elective Courses

UD 351 Creative City 3 (1 – 4 – 4)

This class addresses the design of facilities to create the creative city that will respond to and foster a creative economy, one of the driving forces to balance and sustain the structure of productivity. It aims at adding economic value to services and manufacturing products while social value should also be integrated with economic value creation.

UD 352 Mega Cities in the Global South 3 (1 – 4 – 4)

This class explores transitional context and debate in the Global South and attempts to understand its current pressing problems and opportunities for development. Migration issues, the informal economy, and urban sprawl in mega-cities are discussed.

UD 353 Urban Design for Health 3 (1 – 4 – 4)

The course is concerned with understanding design related strategies that will improve the health and behavior of the citizen. The class introduces literature, theories, models, and case studies related to the built environment, health and behavioral change.

UD 354 Cities at Risks 3 (1 – 4 – 4)

Understanding climate and climate-related risks on cities and the coping capacities of urban community. Topics include characterizing vulnerabilities of the city, vulnerability and risk assessment, and adaptive capacity strategy.

## Master Level

### UD 611 Advanced Urban Design and Development Research 3 (1 – 4 – 3)

A study of research methodology in design will introduce a series of frameworks associated with qualitative and visual research methods. Through a series of readings, exercises, and a research project which will relate to students' individual research interests, students will learn how to analyze and synthesize data, conduct flexible, design-centered research planning.

### UD 621 Seminar in Advanced Urban Design and Development 1 3 (1 – 4 – 3)

This seminar course will expose students to different types of urban design and development issues that affect the community, and the environment. Theory, research, and application are expressed in relation to urban design and development through various topics. Collaborative thinking, debates, discussions, and lectures will be used to examine various issues and theories.

### UD 631 Urban Design in Development Studio 6 (2 – 8– 14)

A studio-based module will test theory through practices, combining cultural, social, economic, political and spatial analysis in the effort to present a holistic response to the growing complexities within the design and production of urban form.

### UD 700 Individual Studies 3 (0 – 6 – 3)

Students conduct an independent study which will be subject to the approval of the Urban Design and Development department. The process of presenting the research should follow appropriate research protocols dealing with topics relevant to urban design and development.

### UD 721 Seminar in Advanced Urban Design and Development 2 3 (1 – 4 – 3)

Seminars leading to theory and concept discussions to help students develop their own research interest related to urban design and development. Students will investigate the subject matter of research such as theory, methodologies, and techniques for research. The Seminar emphasizes principles and skills for investigating ideas, framing research problems, and conducting independent research.

#### UD 731 Development for Sustainable Communities 6 (2 – 8– 14)

Students will produce a development proposal related to an urban built environment that considers social, economic and environmental dimensions, innovation, partnership, research and communication for sustainable community development would be the focus of the design intervention.

#### Urban Design Studio

##### UD 641 Urban Design for Tourism 6 (2 – 8 – 14)

This studio will focus on the urban design process and provide a framework for students to critically consider sites and programs relating specifically to the tourism industry. Students are introduced to various tourism models, exploration methods and tools for researching, investigating, and understanding the complex layers of a developing tourism related city. This studio encourages students to develop innovative approaches for new infrastructure, spaces, or services that address the needs of different stakeholders at various scales. The initial product will allow students to consider various ideas and approaches in the design of an urban district that offers distinctive tourism experiences.

##### UD 642 Urban Design with Public-Private Partnership 6 (2 – 8 – 14)

This studio supports urban design process and provides framework for students to critically consider sites and issues relating specifically to Public-Private Partnership and factors contributing to successful Public-Private Partnership project. Students are introduced to various design models and exploration methods and tools for researching, investigating, and understanding the complex layers of developing city. This studio encourages students to develop hypothesis for urban design intervention that address the needs of different stakeholders at various scales.

##### UD 643 Urban Design for Real Estate and Housing Innovation 6 (2 – 8 – 14)

This studio supports urban design process and provides framework for students to critically consider sites and issues relating specifically to real estate and housing development and factors contributing to successful real estate and housing development project. Students are introduced to various design models and exploration methods and tools for researching, investigating, and understanding the complex layers of developing city. This studio

encourages students to develop hypothesis for innovative housing scheme that address the needs of different stakeholders at various scales.

#### Urban Development Studio

##### UD 741 Urban Development for Tourism 6 (2 – 8 – 14)

The studio will introduce the role of creative tourism and leisure sectors in the society and evaluate the impact on local communities. Topics include understanding the operations, management strategies, finance, and policies related to tourism. The implementation of design to support tourism and its impact on the local environment and communities, the role of national policy and local government on tourism development.

##### UD 742 Urban Development with Public-Private Partnership 6 (2 – 8 – 14)

The role of Public-Private Partnerships in society will be introduced and how to evaluate their impact on local communities. Topics will include understanding the operations, management strategies, finance, policies related to Public-Private Partnership. The implementation of design to promote Public-Private Partnerships, the role of national policy and local government on Public-Private Partnership development will be examined.

##### UD 743 Urban Development for Real Estate and Housing Innovation 6 (2 – 8 – 14)

Develop and promote real estate and housing innovation. Topics will include project feasibility, operations, management strategies, finance, local and government supported programs. The roles of national policies, local government, community, and private developers, effecting the development of real estate and housing innovation will be examined. Students will propose policies or design guidelines for sustainable housing.

#### Thesis

##### UD 800 Thesis 12 (0 – 24 – 24)

This module will provide students an opportunity to conduct independent research in urban design, develop their topic and demonstrate analytical and critical abilities to investigate their topic of interest.