

Program of Bachelor of Architecture (Architecture Major)

| BACHELOR OF ARCHITECTURE (Architecture) | | | | |
|--|--------------------------|------|---|------------|
| 2023 Curriculum-Revised Version 2023.2 as of 23 Aug 24 | | | | |
| First year | Preceding First Semester | | | Credits |
| | ADX | 1300 | Preparation for Architectural and Design Studies (60 hrs) | Non |
| | | | Total | 0 |
| | First Semester | | | |
| | XXX | XXXX | XXXXXXXX (General Education) | 3 |
| | XXX | XXXX | XXXXXXXX (General Education) | 3 |
| | ELE | 1001 | Communicative English I | 3 |
| | ADX | 1301 | Visual Design | 3 |
| | ADX | 1309 | Delineation | 3 |
| | ADX | 1308 | Technical Drawing | 3 |
| | | | Total | 18 |
| | Second Semester | | | |
| | XXX | XXXX | XXXXXXXX (General Education) | 3 |
| | ELE | 1002 | Communicative English II | 3 |
| | GE | 2202 | Ethics | 3 |
| | ADX | 1103 | Understanding Architecture | 2 |
| | ADX | 1307 | Design Illustration and Presentation | 3 |
| | ADX | 1304 | Design Fundamentals | 3 |
| | ADX | 1306 | History of Art and Design | 3 |
| | | | Total | 20 |
| Second year | First Semester | | | |
| | ELE | 2000 | Academic English | 3 |
| | AAI | 1300 | Building Technology & Construction I | 3 |
| | AAI | 1301 | Introduction to Computer – Aided Design | 3 |
| | AAI | 2100 | History of Modern Architecture and Later | 3 |
| | AAI | 2200 | Architectural Design I | 6 |
| | | | Total | 18 |
| | Second Semester | | | |
| | ELE | 2001 | Advanced Academic English | 3 |
| | AAI | 2103 | Architectural Design Principle | 3 |
| | AAI | 2201 | Architectural Design II | 6 |
| | AAI | 2301 | Building Technology and Construction II | 3 |
| | AAI | 3302 | Structural Design Principles | 2 |
| | | | Total | 17 |
| Third year | First Semester | | | |
| | XXX | XXXX | XXXXXXXX (General Education) | 3 |
| | AAI | 2303 | Fundamental of Building Information Modeling Mngmnt | 2 |
| | AAI | 3200 | Architectural Design III | 6 |
| | AAI | 3300 | Building Technology and Construction III | 3 |
| | AAI | 4302 | Architectural Programming | 2 |
| | | | Total | 16 |
| | Second Semester | | | |
| | AAI | 3100 | Theory and Concept in Architecture | 3 |
| | AAI | 3201 | Architectural Design IV | 6 |
| | AAI | 3301 | Building Technology and Construction IV | 3 |
| | AAI | 3303 | Fundamental of Site and Landscape Planning | 3 |
| | AAI | 2302 | Building Equipment and Systems | 3 |
| | | | Total | 18 |
| Fourth year | First Semester | | | |
| | AAI | 3102 | Seminar in Architecture | 2 |
| | AAI | 4101 | Architecture in Southeast Asia | 3 |
| | AAI | 4200 | Integrated Architectural Design I | 6 |
| | AAI | 4300 | Building Technology and Construction V | 3 |
| | AAI | 4301 | Fundamentals of Urban Planning and Design | 3 |
| | XXX | XXXX | Major Elective I | 3 |
| | | | Total | 20 |
| | Second Semester | | | |
| | XXX | XXXX | XXXXXXXX (General Education) | 3 |
| | AAI | 4201 | Integrated Architectural Design II | 6 |
| | AAI | 4102 | Architectural Design Research Paradigm | 2 |
| | AAI | XXXX | Free Elective I | 3 |
| | AAI | XXXX | Major Elective II | 3 |
| | | | Total | 17 |
| | Summer | | | |
| | AAI | 4204 | Practicum in Architecture 320 hours | non |
| | | | Total | 0 |
| Fifth year | First Semester | | | |
| | AAI | 5201 | Pre-Thesis in Architecture | 3 |
| | AAI | 5206 | Integrated Architectural Design III | 6 |
| | XXX | XXXX | Free Elective II | 3 |
| | | | Total | 12 |
| | Second Semester | | | |
| | AAI | 5202 | Thesis in Architecture | 9 |
| | AAI | 5200 | Professional Ethics and Practices in Architecture | 2 |
| | | | Total | 11 |
| | | | GRAND TOTAL | 167 |

Course Description

General Education Courses 30 Credits

ELE 1001 Communicative English I 3 (2 - 3 - 6)

English skills in listening, speaking, reading, and writing for efficient communication in various contexts.

ELE 1002 Communicative English II 3 (2 - 3 - 6)

Prerequisite: ELE 1001 Communicative English I

Communicative English using various language learning strategies, reinforcing listening, speaking, reading, and writing skills through interactive activities in various contexts.

ELE 2000 Academic English 3 (2 - 3 - 6)

Prerequisite: ELE 1002 Communicative English II

Academic English with a multidisciplinary approach, emphasizing high-level reading, writing, listening, and speaking skills essential for effective learning at the university level

ELE 2001 Advanced Academic English 3 (2 - 3 - 6)

Prerequisite: ELE 2000 Academic English

Advanced English for academic purposes with a multidisciplinary approach, emphasizing critical and analytical thinking in reading, writing, listening, and speaking essential for effective learning at the university level.

GE 1410 Thai for Profession Communication 2 (2 - 0 - 4)

(Required course for Thai students)

Communication skills in Thai language in listening, speaking, reading, and writing, active listening, comprehensive reading, analyze main idea and supporting details, write an article, project and meeting minute, public speaking, special-occasion speeches

GE 1411 Thai Language for Multicultural Communication 2 (2 - 0 - 4)

(Required course for non-Thai students)

Thai language for basic communication in multicultural social setting, integrative culture perspective in listening and speaking on talk at work. Thai cultural and traditional patterns in each professional setting, Thai ways of life, Thai ceremony, and festivals.

GE 1412 Introductory Thai Usage 2 (2 - 0 - 4)

(Required course for Thai students from International Program)

Enhance listening and speaking skills in daily life, write and read Thai consonants, vowels, tones, and grammar and create accurate basic sentences.

GE 2202 Ethics 3 (3 - 0 - 6)

Teachings of major world religions, the role of conscience, self-development in the moral arena, building self-esteem, self-knowledge, and good habits, distinguishing the right from the wrong, doing the right and refraining from the wrong, attaining a more fulfilling life. Civil right and duties

BBA 1004 Essential Marketing for Entrepreneurs 2 (2 - 0 - 4)

Fundamental concepts of marketing, including ethical issues, challenges, trends, channels, tools, platforms, and strategy formulation to implement and enhance marketing performance of goods and services.

BBA 1005 Essential Finance for Entrepreneurs 2 (2 - 0 - 4)

Fundamental financial issues and tools in conducting business and essential financial issues including types and sources of capital raising, interest rate, loans, time value of money, financial statements analysis, financial planning, and project decisions.

BBA 1006 Essential Economics for Entrepreneurs 2 (2 - 0 - 4)

Application of economic theories in business. Topics included cost-benefit analysis, opportunity cost, demand and supply, competition and market structures, macroeconomic indicators and policies.

GE 2110 Human Civilizations and Global Citizens 2 (2 - 0 - 4)

The development of human society, achievements, and heritages of Western and Eastern civilizations since ancient times in order to understand their roots; globalization impacts on modern societies; cross-cultural society. It will help human beings to be aware of researching and searching for information that connects the past and the present.

GE 1303 Science for Sustainable Future 2 (2 - 0 - 4)

The interrelationship of human beings, science, technology, and nature, natural resources utilization on future environmental challenges, the importance of natural capital and ecosystem services on sustainability, the importance of sustainable natural resources for future

BBA 1007 Data Analytics for Entrepreneurs 3 (2 - 2 - 5)

Application of data analytics concept in business. The topics include data collection, data

preparation /cleansing, application of basic statistical methods to data analysis, result presentation, and visualization.

Core Courses 43 Credits

ADX 1103 Understanding Architecture 2 (2 - 0 - 4)

Visual, sociocultural, historical and philosophical aspects of the man-made environment using examples from the field of architecture and the allied arts; A rudimentary understanding of the profession and the discipline of architecture; The ideation context and the formal attributes of the built environments of various eras; The factors and issues that underlie the translation of human needs and purposes into significant architectural form.

ADX 1301 Visual Design 3 (2 - 2 - 5)

Visual language, basic design elements, and design composition used in conveying desired messages of 2 and 3 dimensional designs with emphasis on actual application through a series of corresponding projects.

ADX 1304 Design Fundamentals 3 (2 - 2 - 5)

Introduction to the design principles that focus on basic understanding of the interrelationship between form and function which leads to create attractive composition and practical design. This class emphasizes on skills development, concept and practice, exploring through hand sketching, drawing, and model making.

ADX 1306 History of Art and Design 3 (3 - 0 - 6)

A survey of Western art, architecture, and other creative design charting the history of visual expression spanning from the Ancient world to Baroque period, with overarching themes covering notable works and movements, and addressing the key topics, methods, and historical circumstances that have affected the trajectory of Western art and design.

ADX 1307 Design Illustration and Presentation 3 (2 - 2 - 5)

Advanced architectural presentation techniques covering both hardcopy by hand-drawn and drafting and digital product formats, various 2-D and 3-D modeling, digital presentation, digital production and advance image enhancement software through basic A.I.

ADX 1308 Technical Drawing 3 (2 - 2 - 5)

Drawing through mechanical technique by hand for architecture, i.e. orthographic projection, isometric, axonometric, projective perspective, shade and shadow, and symbolic convention.

ADX 1309 Delineation 3 (2 - 2 - 5)

Developing in the student a good, simple sketch technique to facilitate easy and quick communication or to serve to record design ideas during conceptualization or presentation; Exercises including drawing of trees, automobiles and human figures; representation of building materials; construction of shades and shadows and scientific method of drawing of one- and two-point perspectives; Media including graphite and colored pencil, felt tip pen and magic marker and introduction of simple watercolor on various types of paper and board.

AAI 1300 Building Technology and Construction I 3 (2 - 2 - 5)

Introduction to small size building construction, standard timber construction methods, short span beams, column and floor joist, properties of basic construction materials such as timber, concrete and masonry including studio work.

AAI 1301 Introduction to Computer-Aided Design 3 (2 - 2 - 5)

Basic understanding of commanding computers as a design tool with industry-standard design applications for two-dimensional architectural drawings, three-dimensional modeling, animation and high-quality presentation.

AAI 2103 Architectural Design Principle 3 (3 - 0 - 6)

Principles of architectural design including approaches, ideation and design thinking, tactics, and archetypes, contexts and analyses, typologies, overview of approaches through various theories in the design manifestation, planning, analogy and metaphor, regionalism, tectonic, meaning translation, phenomenology and genius loci, studies through cases of noteworthy architectures.

AAI 2301 Building Technology and Construction II 3 (2 - 2 - 5)

Prerequisite: AAI 1300 Building Technology and Construction I

Understanding of standard medium size building construction method using reinforced concrete, light frame steel for the roof system, principles of structural system, properties of building materials such as steel, glass and other standard building products including studio work.

AAI 2302 Building Equipment and Systems 3 (2 - 2 - 5)

Fundamental design principles of building equipment and systems, water supply and sanitary system, air conditioning system, electricity and lighting systems, fire protection systems, vertical

and horizontal transportation system, communication system, security system, smart building systems and studio work.

AAI 3300 Building Technology and Construction III 3 (2 - 2 - 5)

Prerequisite: AAI 2301 Building Technology and Construction II

Composite building materials and construction methods, large span pre-stressed and post-tensioned systems for floor and beam, fundamental principles of prefabricated-construction system and curtain wall including studio work.

AAI 4101 Architecture in Southeast Asia 3 (3 - 0 - 6)

Survey of architecture in Southeast Asia historically and contextually; contemporaneity and especially emphasis on placed on Thai-ness and its meanings in various contexts, Thai architecture studied from multi-typologies and genres.

AAI 4102 Architectural Design Research Paradigm 2 (2 - 0 - 4)

Paradigms and approaches to design as a research, methodology encompassing problem definition, proposal development, literature review, case study analysis and synthesis, research strategy, data collection and analysis, theoretical and conceptual framework development, and

Major Required Courses 57 Credits

AAI 2200 Architectural Design I 6 (2 - 8 - 8)

Prerequisite: ADX 1304 Design Fundamental

Continuation and integration of architectural and interior architectural design approach focuses on the intimate-large scale residential and commercial spaces by considering basic related factors such as space, measure, structure, site, tectonics, program, and habitation, poetic meaning, human needs, and the interaction of persons with the natural and built environment as well as integration of artistic sensibility, creativity, and the understanding of human factors through basic living spaces. The practice processes with problem solving, an individual concept, analysis of human relations to space, and a practical problem-solving solution. Schematic design tools including hand-drawing, drafting, model-making, and presentation are skills to apply.

AAI 2201 Architectural Design II 6 (2 - 8 - 8)

Prerequisite: AAI 2200 Architectural Design I

Continuation of practice from AAI 2200 Architectural Design I, an exploration of creativity through interior and architectural design practices with space organization and human perception as well as broadening architectural understanding with multi-user private and medium-scale public design problems. Study how architecture fits contextually into existing circumstances, and how poetic meanings relate to built forms, analysis of existing places and synthesis incorporating the more complex multi-dimensions of architectural environments. Using tools and techniques to transfer hand-drawn sketches into graphical presentation, from conceptual diagrams to fully loaded architectural presentation.

AAI 3100 Theory and Concept in Architecture 3 (3 - 0 - 6)

Contemporary architectural and design theories and concepts, from the 15th Century to late Modern period as well as the present time, through the study of significant texts and buildings of the sentimental architects and theorists, investigating the formal, technological, social, political, and economical debates at issue within the discipline, with emphasis given to evaluate and articulate the interactions between theory and practice, thereby enabling students to formulate and assess strategies for the making of interior architectural space and design of architecture.

AAI 3200 Architectural Design III 6 (2 - 8 - 8)

Prerequisite: AAI 2201 Architectural Design II

Continuation of practice from AAI 2201 Integrated Design II with moderate complex level, developing the design process skills through conceptualization, analysis, synthesis, visualization of architectural design at all levels of correlation of context, conceptualization in value, identity and aesthetic quality in architectural design and exploration of a medium scale public building.

AAI 3201 Architectural Design IV 6 (2 - 8 - 8)

Prerequisite: AAI 3200 Architectural Design III

Continuation of practice from AAI 3200 Architectural Design III with more complexity, experiment and application of a wide span structure, development of space and building form through the expression of structure, building envelope, materials, site planning, and space arrangement of building for tropical climate concerning aesthetics and utility system of building, and exploration of a medium scale public building, integration with marketing and business issues.

AAI 4200 Integrated Architectural Design I 6 (2 - 8 - 8)

Prerequisite: AAI 3201 Architectural Design IV

Continuation of practice from AAI 3201 Architectural Design IV, investigation and analysis of spatial, programmatic and contextual factors as determinants in cluster buildings planning, importance of built environments responsive to urban context and communities, multi-level of correlation of buildings in an urban fabric, parallel with current urban situation, forming the conceptual background of large-scale public architecture relative to macro planning issues, collaboration with AAI 4300 Building Technology & Construction V and major electives courses.

AAI 4201 Integrated Architectural Design II 6 (2 - 8 - 8)

Prerequisite: AAI 4200 Integrated Architectural Design I

Continuation of practice from AR 4200 Integrated Architectural Design I, developing design process focusing on multidisciplinary research pertaining to individual interests, analysis and studying of issues of interest, collaboration with major elective courses.

AAI 5201 Pre-Thesis in Architecture 3 (0 - 6 - 3)

Prerequisite: AAI 4201 Architectural Design IV
 ELE 2000 Academic English

Preparation of thesis information, context, theory and facilities of thesis research. The direction will be individually supervised by assigned advisor.

AAI 5202 Thesis in Architecture 9 (0 - 18- 9)

Prerequisite: AAI 5201 Pre-Thesis in Architecture
 AAI 4201 Architectural Design IV
 AAI 3100 Theory and Concept in Design

Continuation of a self-initiated architectural design proposal from AAI 5201 Pre-Thesis in Architecture under the supervision of thesis advisor and committee, developing architectural design concept and design development based on information from research and analysis, architectural presentation through various media and thesis writing.

AAI 5206 Integrated Architectural Design III 6 (2 - 8 - 8)

Prerequisite: AAI 4201 Integrated Architectural Design II

Expanded development of individualized approaches to the design process refines the student's ability to work independently; issues relative to site, program and technology prepares the student to define specific topics of investigation; research and design of an architectural proposal

carried to the most advanced pre-professional level of conceptual, programmatic and technical inquiry and resolution at various scales of project development.

Minor Required Courses 25 Credits

AAI 5400 Thai Architecture 3 (2 - 2 - 5)

Different components of Thai architecture as in building bodies, roofs and structures, analysis of different forms and spaces of Thai buildings from past to present time, conducting research on Thai design, architectural characteristics, site planning and appropriate functions.

AAI 5401 Building Cost Estimation and Control 3 (3 - 0 - 6)

Principles of building estimate and control by way of rough and exact estimation, the cost of materials, equipment and cost of labor, quality survey: materials, labor cost and equipment for final decision.

AAI 5403 Fundamentals of Architectural and Urban Conservation 3 (3 - 0 - 6)

Principles of architectural and urban conservation for evaluation and development, physical environment, economic and social work by government policy to reinforce fundamentals of architectural and urban conservation.

AAI 5404 Construction Management 3 (1 - 4 - 4)

Construction methods in relation to the engineer, contractor, architect, and security control for safety purposes, including municipal laws of construction.

AAI 5405 Individual Study in Architecture 3 (3 - 0 - 6)

Individual study on interesting architectural topics of interest of the students, under the supervision of the lecturers.

AAI 5407 Real Estate Development 3 (3 - 0 - 6)

Fundamental principles in real estate development process, categories of real estate projects, law and regulations, feasibility and marketing analysis, financial investment, property management

AAI 5409 Architectural Psychology 3 (3 - 0 - 6)

Basic concepts of psychology development, fundamentals of psychology, human behavior, mankind and environment.

AAI 5413 Project Management 3 (3 - 0 - 6)

Feasible programmed instruction of projects, site, economical techniques, professional management, budget analysis and leasing.

AAI 5414 Energy Saving 3 (3 - 0 - 6)

Unconventional energy saving resources, alternative and renewable energy such as solar energy, wind power, water power, geothermal power and biomass.

AAI 5415 Interactive Features Design 3 (2 - 2 - 5)

Introduction to the creation of work within a design and technological context, i.e., new media installation, interactive architecture, and intelligent space, developing individual investigations and interests by exploration, experimentation, and implementation.

AAI 5416 Façade Design in Architecture 3 (2 - 2 - 5)

Theoretical basis for a design understanding for overall performance of façades, examination of the complex interrelationships through a consideration of existing constructions, design criteria in successful design of façades, knowledge of materials, methods of manufacturing and installation.

AAI 5417 Interior Design by Architects 3 (2 - 2 - 5)

Introduction to interior spatial design and decoration necessary for professional architects incorporating lectures and studio, issues surrounding the interior profession and the architects, survey of contemporary works, principles of shaping and planning interior spatiality, design factors, programs, elements, colors, lighting, tectonic, presentation skills, and decorative materials for both new and renovation projects.

AAI 5418 Introduction to Exhibition Design 3 (2 - 2 - 5)

Introduction to exhibition design, strategies in designing for exhibitions and trade show booths, various issues ranging from programs space design, conceptual development of a thematic approach, and creation of a presentation system for products, artifacts, or artwork activities as business practices specific to the trade show and exhibit design industry, and the effective use of computer renderings and presentation skills.

AAI 5419 Special Topics in History, Theory and Technology in Architecture 3 (3 - 0 - 6)

Specialized topics of interest in history, theory and technology of architecture and urbanism.

AAI 5420 Light, Perception and Culture 3 (3 - 0 - 6)

Lighting design principles, theories, introduction to psychology of lighting design, and the impact of energy ethics on lighting decisions, and design studio.

AAI 5421 Landscape Architectural Design 3 (2 - 2 - 5)

Prerequisite: AR 3310 Fundamentals of Site and Landscape Planning

Basic Landscape design, survey landscape design history and theory, landscape planning, styles and modes of landscape design, hardscape and plant materials, presentation techniques, and landscape architectural design project.

AAI 5422 Contemporary Theory and Concept in Architecture 3 (3 - 0 - 6)

Contemporary architectural theories and concepts, postmodern theories, emphasis on leading architects, analysis and synthesis of architectural thoughts of current world.

AAI 5423 Sustainable Building Design 3 (2 - 2 - 5)

Principle of the passive and active building design, high performance building, resources and energy management, renewable energy solutions, and various sustainable design applications.

AAI 5424 Introduction to Design-Build 3 (2 - 2 - 5)

Design research and design thinking methodology on prototype, materials and tectonics, technology and innovative design and construction, construction detail design by hands-on.

AAI 5425 Project Feasibility Study 3 (3 - 0 - 6)

Fundamentals of analysis of marketing, construction cost estimation, finance and investment, influential factors and data analysis; planning in economic perspective, allocation of products that help to increase profits and programming calculation of returns and investment.

AAI 5600 Interior Design for Commercial Space 3 (1 - 4 - 5)

Commercial interior design integrating architectural knowledge with interior design principles, space planning, materials, furniture, lighting, and sustainability, crafting a comprehensive interior design proposal for a commercial space.

AAI 5601 Interior and Semi-outdoor Space Design 3 (1 - 4 - 5)

Explore the seamless integration of interior and exterior spaces—architecture-interior-landscape—in cohesion, developing design strategies for balconies, terraces, patios, and atriums, the use of materials, plants, and lighting for outdoor environments, the relationship between indoor and outdoor landscape, basic materials for semi-outdoor space considering waterproofing

and thermal comfort of an open-air environment, designing inviting and functional transitional spaces.

AAI 5602 Interior Design for Special Facility 3 (1 - 4 - 5)

Focusing on interior design challenges in specialized facilities, integrating architectural expertise with interior design principles for unique spaces, research of user needs, functionality, and aesthetics, as well as specialized technology such as A.I. and automation, integrated with multidisciplinary design approach in crafting a comprehensive design proposal for a special and innovative facility.

AAI 5603 Interior Detail 3 (2 - 2 - 5)

Interior detailing, advanced material selection, finishes, and construction techniques through the various materials and colors in order to attain a specified mood and emotion, integration of architectural and interior elements seamlessly, crafting of interior spaces through meticulous detailing.

AAI 5604 Sculpture amidst Architecture 3 (1 - 4 - 5)

3D design principles, sculptural fabrication process, such as form, spatiality, structure, volume, visual balance, surface treatment, composition, movement and scale, contemporary methods and techniques, the development of conceptual intent, aesthetics and technical skills, the intersection between the artistic value and application of architecture and sculpture, studio making sculptures.

AAI 5605 AI Art 3 (1 - 4 - 5)

The intersection of artificial intelligence and creative expression, generative AI systems, experimenting with design and fine art through AI tools, design ideation, conceptualization, and innovative applications of AI within the design industry, studio practicing design and fine art with AI.