Interior Architecture Program

5 Years Structure

Interior Architecture Program

School of Architecture and Design, KMUTT

Name of Program

Bachelor of Architecture Program in Interior Architecture

Degree

Full name: Bachelor of Architecture, (Interior Architecture), International Program

Abbreviate name: B. Arch. (Interior Architecture), International Program

The Objectives of the Program

- To produce graduates who are outstanding in creativity. Academic knowledge professional skills and have the qualifications to be a change agent in the field of interior architecture. and related fields.
- To produce graduates who have methods and processes for developing ideas, and creative design skills developed through a good Design Thinking process that is accepted in the professional field with 3 important components:
  - Searching for information and Ideas Exploration.
  - Learning from hands-on experimentation
  - Acting for professional execution to produce graduates who are outstanding in creativity, academic knowledge, professional skills and have the ability to work together cross-disciplinary or Multi-Disciplinary Collaboration)

Program Duration

Completion of required credits for full-time program are to be made within a period of 10 semesters or 5 academic years, but not to exceed 20 semesters or 10 academic years.

Curriculum

Total Program Credits 162 credits

Curriculum Components

General Education Courses 24 credits

- Integrative Courses 15 credits
- Language Courses 9 credits

***Major* Courses 132 credits**

- Fundamentals Courses 29 credits
- Core Courses 50 credits
- Technology Courses 26 credits
- Supporting Courses 18 credits
- Architectural Elective Courses not less than 9 credits

***Free Elective* Courses not less than 6 credits**

Interior Architecture Program

Year 1

First Semester

Code	*Course*	*Credit**
ARC 111	Design Sketch and Drawing	3(1-4-6)
ARC 117	Design Fundamentals I	4(1-6-8)
ARC 123	History of Art and Design	3(3-0-6)
LNG 221	Academic English in International Contexts	3(3-0-6)
GEN 121	Learning and Problem Solving Skills	3(3-0-6)
GEN 231	Miracle of Thinking	3(3-0-6IN)
	Total	**19(14-10-38)**

Second Semester

ARC 112	Digital Design	3(1-4-6)
ARC 161	Building Materials and Construction Technology I	4(2-4-8)
INA 125	History of Architecture and Interior Architecture	3(3-0-6)
INA 141	Interior Architectural Design I	4(1-6-8)
LNG 222	Academic Listening and Speaking in International Contexts	3(3-0-6)
GEN 111	Man and Ethics of living	3(3-0-6)
	Total	**20(13-14-40)**

Year 2

First Semester

ARC 231	Theory of Architectural and Interior Architecture	3(3-0-6)
ARC 262	Building Materials and Construction Technology II	4(2-4-8)
ARC 271	Structural Design I	3(3-0-6)
ARC 281	Environmental Technology I: Comfort Factors and Thermal Design)	3(3-0-6)
INA 233	Interior Architectural Project Programming and Space Planning I	3(2-2-6)
INA 242	Interior Architectural Design II	4(1-6-8)
	Total	**20(14-12-40)**

Second Semester

ARC 272	Structural Design II	3(3-0-6)
INA 21101	Introduction of Color Theory and Usability	1(1-2-4)
INA 21102	Introduction of Material Theory and Usability	1(1-2-4)
INA 21103	Color and Material Application in Interior Architecture	2(1-2-4)
INA 212	Spatial Perception and Psychology	3(3-0-6)
INA 234	Interior Architectural Project Programming and Space Planning II	3(2-2-6)
INA 242	Interior Architectural Design II	6(1-10-12)
	Total	**19(11-20-42)**

Year 3

First Semester

INA 311	Ergonomics/Safety and Human Disabilities	3(2-2-6)
INA 344	Interior Arch. Design IV	6(1-10-12)
INA 352	Lighting & Acoustic Design for Interior Architecture	3(3-0-6)
INA 373	Interior Arch. Construction and Detailing	3(1-4-6)
INA xxx	Interior Architectural Elective I	3(x-x-x)
XXX xxx	Free Elective I	3(x-x-x)
	Total	**21(7+x-16+x-30+x)**

Second Semester

INA 345	Interior Arch. Design V	6(1-10-12)
INA 357	Furniture Design and Workshop	3(1-4-6)
INA 364	Interior Shop Drawing and Detail	3(1-4-6)
INA 394	Interior Specifications, Cost Estimation and Construction Management	3(2-2-6)
GEN 241	Beauty of Life	3(3-0-6)
INA xxx	Interior Architectural Elective II	3(x-x-x)
	Total	**21(8+x-20+x-36+x)**

Year 4

First Semester

Code	*Course*	*Credit**
INA 435	Research Methods for Interior Architecture	3(2-2-6)
INA 446	Interior Arch. Design VI	6(1-10-12)
INA 496	Professional Practice and Code of Conduct for Interior Architecture	3(3-0-6)
GEN 351	Modern Management and Leadership	3(3-0-6)
INA xxx	Interior Architectural Elective III	3(x-x-x)
XXX xxx	Free Elective II	3(x-x-x)
	Total	**21(9+x-12+x-30+x)**

Second Semester

Plan 1: Cooperative Learning

INA 491	Cooperative Learning	6(0-35-18)
	Total	**6(0-35-18)**

Plan 2: Architectural Internship

INA 492	Architectural Internship	3(S/U)
INA xxx	Interior Architectural Elective	3(x-x-x)
	Total	6**(x-x-x)**

Year 5

First Semester

INA 501	Thesis Preparation	3(1-4-6)
LNG 321	Academic Reading and Writing In International Contexts	3(3-0-6)
	Total	**6(4-4-12)**

Second Semester

INA 502	Thesis	9(0-18-36)
	Total	**9(0-18-36)**

**Credit = Credit Hour (Lecture-Practice-Self Study)*

Course Description

General Education Courses 24 Credits

Integrative Courses 15 Credits

GEN 111 Man and Ethics of Living 3(3-0-6)
Prerequisite: none

This course studies the concept of living and working based on KMUTT's Mission to develop its students to be the best academically, to have morality and work ethics, and to demonstrate the KMUTT vision and mission through the use of knowledge and integrative learning approaches. Students will be able to gain KMUTT's desirable vision of the University such as, social responsibility, KMUTT Citizenship, professional skills, and to apply knowledge toward life in KMUTT and beyond for the benefit of themselves and others.

GEN 121 Learning and Problem Solving Skills 3(3-0-6)
Prerequisite: None
This course aims to equip students with the skills necessary for life-long learning. Students will learn how to generate positive thinking, manage knowledge and be familiar with learning processes through projects based on their interest. These include setting up learning targets; defining the problems; searching for information; distinguishing between data and fact; generating ideas, thinking creatively and laterally; modeling; evaluating; and presenting the project.

GEN 231 Miracle of Thinking 3(3-0-6)
Prerequisite: none
This course aims to define the description, principle, value, concept and nature of thinking to enable developing students to acquire the skills of systematic thinking, systems thinking, critical thinking and analytical thinking. The Six Thinking Hats concept is included. Moreover, idea connection/story line and writing are explored. Examples or case studies are used for problem solving through systematic thinking using the knowledge of science and technology, social science, management, and environment, etc.

GEN 241 Beauty of Life 3(3-0-6)
Prerequisite : None
This course aims to promote the understanding of the relationship between humans and aesthetics amidst the diversity of global culture. It is concerned with the perception, appreciation and expression of humans on aesthetics and value. Students are able to experience learning that stimulates an understanding of the beauty of life, artwork, music and literature, as well as the cultural and natural environments.

GEN 351 Modern Management and Leadership 3(3-0-6)
Prerequisite: none
This course examines the modern management concept including basic functions of management—planning, organizing, controlling, decision-making, communication, motivation, leadership, human resource management, management of information systems, social responsibility—and its application to particular circumstances.

Language Courses 9 Credits

LNG 221 Academic English in International Contexts 3(3-0-6)
Prerequisite: none
The course aims at developing the confidence and academic English skills necessary for learners in an international program . The learning and teaching involves the integration of the four language skills, thinking skills and autonomous learning . In terms of reading, the course focuses on reading for main ideas, summarizing skills, critical reading and interpretation skills through the use of real-world content . In terms of writing, the emphasis is on process writing and academic writing to enable learners to effectively use the information gained from reading to support their statements . In terms of speaking, the focus is on sharing opinion and exchanging information on issues related to the learners' content areas or their field of interest . In terms of listening, the focus is on listening to English talks and taking notes from authentic input.

LNG 222 Academic Listening and Speaking in International Contexts 3(3-0-6)
Prerequisite: none
This course aims at developing confidence and academic listening and speaking skills necessary for learners in an international program . The teaching and learning styles involve an integration of English into learners' content areas to enable them to think critically and communicate effectively . Learners will be able to listen to extended speech and lectures in their fields, share ideas and express opinions, conduct an interview for professional, collect data and present a survey project.

LNG 321 Academic Reading and Writing in International Contexts 3(3-0-6)
Prerequisite: LNG 222
The course aims at developing confidence and academic reading and writing skills necessary for learners in an international program . The teaching and learning styles involve an integration of English into learners' content areas to enable them to read academic articles in their chosen fields . Learners will be able to extract main points from the text, purposefully select required information to support their writing, write different forms of reports in their fields, use information obtained from reading and their own experience in writing an essay, and effectively use references and citations throughout the writing process.

Major Courses 132 Credits

Fundamentals Courses 29 Credits

ARC 111 Design Drawing and Sketch 3 (1-4-6)
Prerequisite: none
This course provides students with the fundamental skills and techniques to effectively communicate architectural ideas through drawings and sketches. Students will explore various drawing mediums and tools while developing their understanding of scale, proportion, and spatial relationships.
The course covers technical drafting techniques, including orthographic projection, metric drawings, perspective, shading, and composition. Additionally, they will be introduced to freehand sketching and rendering, enabling them to express architectural designs with appropriate textures and materials.
Learning Outcomes
1. Demonstrate proficiency in using various drawing mediums and tools for architectural representation by applying scale, proportion and rendering effectively.
2. Utilize technical drafting techniques, including orthographic projection, metric drawings, perspective, shading, and composition.
3. Interpret architectural drawings and sketches appropriately, developing observational skills to capture architectural forms and details

ARC 112 Digital Design 3 (1-4-6)
Prerequisite: none
This course aims to equip students with knowledge and proficiencies on digital tools requires to explore design and architectural concepts and develop techniques to present their work professionally and efficiently. Students will learn practical basics of 2D and 3D tools for making drawing and modelling work with introduction to parametric design and methodology of contemporary computational design approaches and develop skills in producing prototypes.
Learning Outcomes
1. Summarize basic knowledge of computational thinking logic as basis to develop coding skills.
2. Demonstrate skills to use computer software and digital fabrication tools to develop and express design concepts through effective computer drawings and efficient model making which reduces production time and material wastage.

ARC 117 Design Fundamentals I 4 (1-6-8)
Prerequisite: none
This course introduces the practical relevance of a set of nine design principles including Proportion, Asymmetry, Figure & Ground, Transformation, Chance, Dot/ Line/ Plane, Module, and Idea/Concept/ Reflexivity through structured day-length exercises in combinations of drawing, two-dimensions and three-dimensions. This class emphasizes on skills development, conceptual understanding and good working practice. The assessment is done via brief presentations and teacher advice.
Learning Outcomes
1. Demonstrate skill on generating design concept, idea development and design execution through design principles.
2. Demonstrate skill on brief presentations in combinations of drawing, two-dimensions and three dimensions.

ARC 123 History of Art and Design 3 (3-0-6)
Prerequisite: none
The ARC 123 course (The History of Art and Design) will take a global and thematic approach to learn art terms, uses, and applications through art histories by evaluating objects, architecture, and images. Students will contextualize historical work to other media, periods, and perspectives to help broaden a more global perspective and cultivate visual literacy. To strengthen critical inquiry skills, students will practice description, comparison, and analysis of historical works. This course aims to create a common visual vocabulary to discuss both content and ideas.
Learning Outcomes
1. Demonstrate and become familiar with a broad understanding of materials, mediums, and historical artworks
2. Conduct formal, stylistic, and historical analyses of images, objects, and architecture
3. Develop skills to translate visual material into written and verbal forms of communication using the English language and art and design-specific vocabulary.
4. Engage in critical thinking and connection-making through art and history.

ARC 231 Theory of Architecture and Interior Architecture 3 (3-0-6)
Prerequisite: none
A study of ways in which architects and their design processes are inspired and influenced by numerous factors. The course includes the analysis of architectural design concepts and philosophy from works of leading architects; impacts of economics and technology on construction materials; application of modern construction materials and techniques in the designs of contemporary architecture. The works of leading architects and designers; contemporary architectural design concepts; and interpretation of theories in architectural practice are introduced and discussed in the course.
Learning Outcomes
1. Identify the inspiration, context and criteria underlying the key architectural projects in different periods.
2. Discuss how theory informs architectural practices.

INA 125 History of Architecture and Interior Architecture 3 (3-0-6)
Prerequisite: ARC 123
Overall, historical development of architecture and interior architecture in Western Europe and Asia. Architecture in Western Europe includes development of designed space, furniture and decoration, form, structure and site planning. This course introduces the Prehistoric period & ancient worlds. Classical foundation: Greek and Roman Architecture. Medieval era: Byzantine, Romanesque and Gothic. Renaissance: Return to Antiquity. Baroque: Mid-17th-18th century Europe. Neoclassicism Romanticism & Picturesque. Transition to Industrial Age. Pioneering architecture of the early 20th Century. Towards

Demise of Modernism: architecture in Post-war period. Contemporary architecture: The end of the 20th century. Architecture in Asian includes relationship between architecture and interior architecture, and ideology in South, East, and Southeast Asia, ranging from prehistoric to pre-colonisation. It also aims to study two most influential cultures: India and China, Korea and Japan, Mon and Pagan, Srivijaya Kingdom, Ancient Khmer, and Laos and Siam. It will also investigate the evolution of Buddhist stupas in Southeast Asia that cohere with variation of Thai traditional religious architecture.

Learning Outcomes

1. Demonstrate understanding of historical development of architecture and interior architecture in Western Europe and Asia through historical timeline.
2. Analyze chronological changes of architectural components and compositions of architectural development in Western Europe and Asia.
3. Compare Western European and Asian architectural forms and compositions according to given themes.
4. Generate architectural arguments/questions based on historical evidence and communicate the idea logically.

INA 212 Spatial Perception & Psychology 3 (3-0-6)

Prerequisite: none

Studies include the review of fundamental concepts of psychology; psychological factors and their impact on human behavior and space; processes of human behavior, perception, cognition and affects and conceptual systems; spatial behavior; psychological principles in color and form design.

Course Outcomes

1. Summarizing concepts of psychology and perception that have impact on human behavior and how humans occupy space.
2. Identifying and evaluating outcome spatial experience in architectural and spatial design projects.
3. Communicating in both written and oral presentation for case studies on architecture and spatial design.

INA 21101 Introduction of Color Theory and Usability 1 (1-2-4)

Prerequisite: none

Providing fundamental knowledge on five major topics: 1) light and color perception, 2) color system, 3) color shape and features, 4) contrast and color balance, and 5) color psychology.

Learning Outcome

Use basic knowledge from various color theories. Can be used to solve problems for the preliminary design as specified by the problem.

INA 21102 Introduction of Material Theory and Usability in Interior Architecture 1 (1-2-4)

Prerequisite: none

Providing fundamental knowledge on five major topics which include 1) Different materials used in interior architecture 2) The characteristics and benefits of several types of hard finishing materials 3) The characteristics and benefits of several types of soft finishing materials 4) The characteristics and benefits of several types of Sustainable materials and 5) The material applications in interior architecture.

Learning Outcome

Use basic knowledge from the properties of various materials. Can be used to solve problems for the preliminary design as specified by the problem.

INA 21103 Color and Material Application in Interior Architecture 2 (1-2-4)

Prerequisite: INA 21101

This course emphasizes the development and practice of knowledge application skills for color scheme, mood board, and material board selection and design. This kind of knowledge is strongly related to material selection, which provides an aesthetic sense while also demonstrating professional practice. The course provides an intention on material and color design and selection that has an impact on the environment, social, culture, and people who live in the design context.

Learning Outcome

Apply knowledge about color theory and various materials. To create interior architecture design concepts that are reasonable as the problem sets out.

INA 311 Ergonomics: Safety and Human Disabilities 3 (2-2-6)

Prerequisite: none

The course includes the effects environment, interiors and furnishings having on the human body; concerns regarding the safety of designs; safety of building systems; maintenance as they effect normal performance; and current information regarding safety and disability laws (basic considerations in design of physically impaired). Ergonomic safety for human with disabilities is a very important problem. In this study, an ergonomics perspective is applied in the analysis of some basic daily activities. It is known as comfort design, functional design, and system is the practice of design products, systems, or processes to take proper account of the people interaction. Universal Design is the formation of a classroom experience that is accessible to the higher education. Course design following standard guidelines are accomplished through thoughtful planning, implementing, and evaluating instruction.

Course Outcomes

1. Describe and Understanding: Universal Design is an approach that aims to create products, environments, and services that are accessible and usable by the widest range of people, regardless of their age, ability, or background. By implementing Universal Design principles, we can achieve participation and empowerment for all individuals.

2. Describe and Understanding: Securing government responsibility and the development of Universal Design policies and strategies requires a combination of advocacy, collaboration, and evidence-based arguments. 2. Definition: Valuing human diversity in society is essential for fostering inclusivity, equality, and understanding among individuals.

3. Apply: Law and regulation play a crucial role in promoting and enforcing Universal Design principles. They provide a framework for ensuring accessibility, inclusivity, and equal opportunities for all individuals.

4. Apply: The 2030 Agenda for Sustainable Development, adopted by the United Nations in 2015, explicitly recognizes the inclusion and rights of persons with disabilities. The agenda consists of 17 Sustainable Development Goals (SDGs) and encompasses a broad range of social, economic, and environmental issues. Several of these goals specifically address the needs and rights of persons with disabilities.

5. Apply: Architecture and Interior architectural design skill through various tools following interior architectural professional standard.

6. Presentation: Design C communication and personal verbal the design outcome using mediums and tools effectively.

Core Courses 50 Credits

INA 141 Interior Architectural Design I 4 (1-6-8)
Prerequisite: ARC 118

This course provides foundations of Interior Architectural design from exploration and investigation on the relationship between human activities and requirement with interior space and architectural elements. Developing their understanding of spatial design, architectural studies, intervention between body, culture and technology Conclude the program in the interior space reflects the architecture of the building by focusing on domestic architecture and spatial relations between personal space and shared space.

Learning Outcomes

1. Demonstrate understanding foundations of Interior architecture includes spatial design, interior architectural design process, intervention between human scale, programming and spatial utilization.

2. Utilize their creative and critical thinking to design, communicate and produce their works individually and group work.

3. Developing subjective idea to construction of real structure will encourage students to practice from the beginning to the end process of design; ideation, hand drawing and sketching, model making, presentation, technical drawing detailing, material selection.

INA 233 Interior Architecture Project 3 (2-2-6)
Programming and Space Planning I
Prerequisite: none

Studies include the methodology of gathering, analyzing, projecting and synthesizing information as gained through interview, questionnaires, and observation for the purpose of establishing interior architecture project's objective, functional requirements, and basic furniture layout plan for small buildings.

Course Outcomes

1. Summarize information taught in theory series and being able to relate it through furniture layout plan, section, elevation, model, and three-dimensional spatial visualization effectively.

2. Understand and be able to identify and solve problems about human activities and interior design space for small buildings.

3. Perform professionally on the human dimension, local building code, human needs and basic engineering system involved in the formation of professional program proposal and space requirement summary in interior architecture design and practice.

INA 234 Interior Architecture Project 3 (2-2-6)
Programming and Space Planning II
Prerequisite: none

Studies include the methodology of gathering, analyzing, projecting and synthesizing information as gained through interview, questionnaires, and observation for the purpose of establishing an interior architecture project's objective, functional requirements, and basic furniture layout plan for large buildings, commercial buildings and public buildings.

Course Outcomes

1. Summarize information taught in theory series and being able to relate it through furniture layout plan, section, elevation, model, and three-dimensional spatial visualization effectively.

2. Understand and be able to identify and solve problems about human activities and interior design space for large buildings, commercial buildings and public buildings.

3. Perform professionally on the human activities, circulation flow, local building code, commercial space and human psychology, engineering system for large scale building, building type issues involved in the formation of professional program proposal and space requirement summary in interior architecture design and practice

INA 242 Architectural Design II 4 (1-6-8)
Prerequisite: INA 141

Foundations includes spatial design and architectural studies. Intervention between body, culture and technology. Exploration and investigation on the relationship between interior space and architectural elements: how the program in the interior space reflects the architecture of the building. Sketches. Physical models. Technical Drawings. Focusing on transitional space between the home and the workplace.

Course Outcomes

1. Acquire basic knowledge of spatial design and architectural design taught in class and being able to apply to the given interior architectural design brief.

2. Formulating effective representation of data associated with architectural context and design.

3. Producing interior architectural design appropriate to the given task with aesthetic sense and creativity.

4. Communicate design solutions to peers and wider audiences.

INA 243 Interior Architectural Design III 6 (1-10-12)
Prerequisite: INA 242
This course focuses on the interior architectural design of small and medium scale commercial spaces. The project description must take into account the logic of branding study and design. A study of the user's behavior and their needs related to the brand is to be necessary in order to create a usable space. Students begin by assessing data in the applicable design context. Students should use the searching process while considering varied information to identify design concepts, improve the logical design development, and emphasize the relevance of the usage of materials, lighting, color, safety, and suitability of the architectural design.

Learning Outcomes

1. Transform their own concise idea into a tangible design space with a very strong supporting researching background of knowledge.
2. Present the relevant information and design outcome with creative ideas by using effective infographic and mediums and tools effectively.
3. Initiate and develop a design concept based on students' understanding of the context.
4. Demonstrate interior architectural drawing skill through various tools following interior architectural professional standard.
5. Demonstrate the integration of multidisciplinary knowledge through the interior architectural design outcome.

INA 344 Interior Architectural Design IV 6 (1-10-12)
Prerequisite: INA 243

This course focus on commercial aspects through the complexity of the hospitality and hotel design as well as the retail space as a typology offers students a sufficient challenge for this stage of their education. Following immediate site analysis and investigation into personal interests regarding the given site, students put forward an initial proposal through weekly tutorials, refine their proposals, and simultaneously create complexity through additional program. Emphasis is placed on materials, light, color, safety, appropriateness to architectural design.

Learning Outcomes

1. Describe and prioritize the information within the context that influenced the design using design thinking process with valid sources and references.

2. Summarize and present the relevant information using infographic with creative idea effectively.

3. Initiate and develop a design concept based on students' understanding of the context.

4. Demonstrate interior architectural drawing skill through various tools following interior architectural professional standard.

5. Present the design outcome using mediums and tools effectively.

6. Demonstrate the integration of multidisciplinary knowledge through the interior architectural design outcome.

INA 345 Interior Architectural Design V 6 (1-10-12)
Prerequisite: INA 344

Studies focus on advanced interior architectural design I that enables students to focus on their own interests relating to the field of interior architecture with his/her selected choice of design studio units. Design development process and relating various spatial concerns is on psychology, living and working habits, and specific needs. Emphasis is placed on spatial design potentials in an architectural context with thorough analysis of all related elements, related theoretical studies and applying the knowledge studying from the previous semesters.

Course Outcomes

1. Acquiring advanced knowledge of spatial design, architectural design and building safety taught in class and being able to apply to the given interior architectural design brief with complex programming.

2. Formulating effective research data associated with architectural context and design development.

3. Identifying and solving problems in relation to interior architecture individually and within a group.

4. Producing advanced interior architectural design with aesthetic sense and creativity.

Communicate design solutions to peers and wider audiences.

INA 446 Interior Architectural Design VI 6 (1-10-12)
Prerequisite: INA 345

Studies focus on advanced interior architectural design that enabling students to focus on their own interests relating to the field of interior architecture with their selected choice of design studio units. Design development process and relating various spatial concerns is on psychology, living and working habits, and specific needs. Emphasis is placed on spatial design potentials in an architectural context with thorough analysis of all related elements, related theoretical studies and applying the knowledge studying from the previous semesters.

Learning Outcomes

1. Produce, prioritize, select and analyze all research information that related to the context and users of the project.

2. Present the relevant information and design outcome with creative ideas by using effective infographic and mediums and tools effectively.

3. Initiate and develop a design concept based on students' understanding of the context.

4. Demonstrate interior architectural drawing skill through various tools following interior architectural professional standard.

5. Demonstrate the integration of multidisciplinary knowledge through the interior architectural design outcome.
6. Design interior architectural project under the consideration of users, culture, context, as well as law and regulation of building control act that related to the project.

INA 501 Thesis Preparation 3 (1-4-6)
Prerequisite: INA 446

The course covers research, study and design of an interior building type of specific group of spaces. Studies include special application interior projects with unique requirements, program analysis and organization. Students establish thesis topics, which allow them to be creative and innovative, and the rationale of the proposed projects with supporting information. The project should provide an opportunity to research and explore new directions in Interior Architecture, such as new needs in the way society performs, fresh solutions and new meaning to architectural spaces including new requirements and functions. The project concept will be developed throughout the first semester to be ready for the detailed execution stage in the second semester.

Course Outcomes

1. Utilize architectural research methods to generate logical thesis argument.

2. Initiate responsible and creative programs and design concept through research process.
3. Stablish an interesting thesis question which allowed their studies to explore for new need and solution of interior architectural space and design.

INA 502 Thesis 9 (0-18-36)
Prerequisite: INA 501

This course continues from Thesis Preparation, which covered intensive research and study of the thesis and project proposal. At this stage, the concept is well developed for the project ready for design execution. Students demonstrate resolution of the proposals showing a logical progression from the schematic through to finalization and detailed execution, utilizing the design strategies established in previous stages. This studio class includes sketch problems, all aspects of graphic identification and presentation, research application, review process, applying knowledge gained from previous courses and corresponding use of computer aided programs.

Course Outcomes

1. Design complex interior architectural space followed responsible and creative programs and design concept.

2. Develop conceptual idea through logical design process.

3. Produce professional schematic space planning to final interior architecture outcome.

4. Select appropriate materials which reflect to the design concept.
5. Convince their interior architectural design to the public with professional presentation.

Technology Courses 26 Credits

ARC 161 Building Materials and Construction Technology I 4 (2-4-8)
Prerequisite: **none**

This course introduces principal construction materials such as wood and masonry and their properties, i.e. physical characteristics, qualifications and proper applications for building construction. Wood substituted materials will also be introduced in the course. The course focuses on the principles of construction for wood and masonry for small to medium scale buildings. All building components: foundations, column, floor, wall, stairs, and roof will be covered through lectures, drafting projects, and field trips. Basic skills and technical drawing techniques, and conventional symbols of the materials will also be covered to develop the professional skills of students.

Learning Outcomes

1. Evaluate the properties and applications of wood, masonry, and other related materials in building construction.

2. Apply construction principles using wood and masonry for small to medium scale buildings.

3. Develop technical drawing skills for appropriate construction documentation.

4. Perform professionally on the ethical issues in architecture design and practice.

ARC 262 Building Materials and Construction Technology II 4 (2-4-8)
Prerequisite: ARC 161
This course is a continuation of Building Materials and Construction Technology I. The course introduces another set of principal construction materials, their characteristics and application such as concrete and steel. Small-scale construction techniques and building accessories will also be introduced in this course through reinforced concrete construction. The skills and technical drawing techniques will be conducted in building components such as: foundation, column, floor, wall, door & window, stairs, roof, as well as related building systems, with the introduction of the Building Information Modeling (BIM) approach.
Learning Outcomes
1. Evaluate the characteristics and applications of reinforced concrete construction.
2. Develop technical drawing skills for various building components and systems.
3. Summarize the Building Information Modeling (BIM) introduction and approach in the construction industry.
4. Demonstrate professionalism on the ethical issues in architecture design and practice.

ARC 271 Structural Design I 3(3-0-6)
Prerequisite: None
This course introduces the structural design and its application in architectural design. Fundamental engineering mechanics and structural analysis are considered including the system of forces, stability and equilibrium of structures, structural systems, structural loads, load transfer mechanism, and analysis of simple trusses, beams, and frames. An introductory study of the mechanics of materials and properties of construction materials such as structural steel, timber, reinforced concrete, and composite materials is discussed. Behaviors of the materials under loads are investigated such as elasticity, deformation, and buckling of the compression member. This course introduces the typical structural members of buildings which are structural foundations, columns, walls, beams, floors, and roof structures. Examples are drawn from either existing buildings or students' design projects.
Learning Outcomes
1. Determine the stability and quantify forces and moments acting on a structure in equilibrium.

2. Identify the fundamentals of structural elements, stresses and strain, and concepts for determining the safety of simple structural members.
3. Define the structural loads and transfer them to the supports by expressing load path or approximate numerical calculation.

ARC 272 Structural Design II 3(2-2-6)
Prerequisite: ARC 271

The course emphasizes the engineering qualities of building components, such as structural foundations, columns, walls, beams, and floors. Each component is considered according to the materials from which it was made. Students will learn a variety of construction methods, construction detailing, and appraisals of components in terms of engineering, functional performance, aesthetics, and construction. The course also quantifies the approximate size of visible structures and discusses the advantages and disadvantages of structural systems and building components made from different materials. Advanced structural designs, such as multi-story buildings, long-span structures, and structural designs in case of fire, are included. Examples are drawn from existing buildings or students' design projects.

Learning Outcomes

1. Select appropriate structural systems and materials that suit their architectural design and meet the building performance requirements, such as strength, durability, and structural stability.

2. Analyze, qualitatively design, and quantitatively design vertical structural components including structural foundations, load-bearing walls, and columns.

3. Analyze, qualitatively design, and quantitatively design horizontal structural components including structural beams and slabs.

ARC 281 Environmental Technology I: Comfort Factors and Thermal Design 3 (3-0-6)
Prerequisite: None
Concept of carbon footprint and importance of sustainable design are introduced. The main focus is on comfort factors and thermal control. Psychometric Chart is used as a tool. Heat gain factors include internal and external, as well as solar geometry, sun-earth relationship, and solar impact on buildings. Concepts of passive and active design include orientation and site design fundamentals, zoning and layout strategies, effects from landscape and surroundings, shading design and effect of natural ventilation. Thermal performances of building components are introduced such as heat transfer modes, K, U value, SC, SHGC, OTTV and RTTV.
Learning Outcomes
1. Aware of Carbon footprint and SDGs
2. Evaluate and achieve principles of sustainable design
3. Design to achieve Thermal Comfort
4. Be able to justify passive and active design strategies.
5. Design and evaluate design with respect to Building Energy Code (BEC), OTTV, RTTV
6. Apply Building Material properties and be able to create their own wall section and performance such as Color, Reflectance, absorbance and transmittance, U value, K value, SC, SHGC, visible transmittance, thermal transmittance.
7. Summarize Basic A/C regarding air quality

INA 357 Furniture Design and Workshop 3 (1-4-6)
Prerequisite: INA 311
Studies include the examination and process of furniture design and development; the technical aspects of furniture construction; hands-on application of wood joinery, metal application, and plastic molding and production.
Course Outcomes
1. Able to understand basic principles of furniture design such as furniture categories, furniture design methodology, furniture proportion and ergonomics, materials and production processes.
2. Able to design furniture based on the given criteria and space.
3. Able to carry out 1:1 scale prototypes of their designs by learning how to make proper technical drawings and how to deal with the technicians at the factories to achieve the original designs.

INA 364 Interior Shop Drawing and Detailing 3 (1-4-6)
Prerequisite: ARC 262

Learn how to draw various interior details for construction. Provide study field trip opportunities in various locations that encourage students to experience more and varied interior construction work and techniques in order gain a deeper knowledge. Including practice in creating a construction drawing book to see design continuity throughout the project.

Learning Outcomes

1. Draw interior construction drawing in a standard level of professional practice.

2. Produce efficiency interior architectural detail for construction drawing from basic through advance level.

3. Select appropriate tools, programs and techniques that are used for construction communication to clients, and contractors.

4. Produce interior architectural detail under the consideration of law and regulation of building control act.

INA 373 Interior Architecture Construction and Detailing 3 (1-4-6)
Prerequisite: ARC 262

Studies include the study and exercises of more intricate constructions and details of architectural and building, with emphasis on interior architecture and detailing. Interior materials and their properties, methods of construction, construction systems, and construction techniques; producing working drawing and documents as a tool for understanding both building interior and furniture materials and construction.

Learning Outcomes

1. Acquiring basic knowledge of design culture by summarizing information taught in theory and practice series and being able to relate it through writing, hand and digital drawing skill, or other tools or see its fullest implications.

2. Identify and solve problems represented by interior drawing documentation and demonstrate proficiency in using various construction drawing mediums and tools.
3. Interpret interior architectural technical drawings appropriately, developing technical skills to finalize interior architectural details.

Supporting Courses 18 Credits

INA 352 Lighting & Acoustic Design for Interior Architecture 3 (2-2-6)
Prerequisite: ARC 382
This class introduces general lighting and acoustic design considerations for major interior architecture applications. It first presents key factors and fundamental processes in visual and sound perception. These include human factors, lighting characteristics, material properties, and room configurations. It then explains the effects of the luminous environment on the users' emotions and behaviors. The class also presents the lighting design process, tools, and current standards for major interior applications. For acoustic design, it focuses on the properties of sound and the control and design of sound in the interior. Topics include prediction and prescription, control at source, control in the sound path, building types, and architectural elements. The students will learn from lectures, hands-on experiments, design projects, and field trips.
Course Outcomes
1. Identify the human and design factors, and explain fundamental processes of the user's visual and sound perception.
2. Differentiate characteristics of light and sound sources and equipments and can select them appropriately for a given types of interior application.
3. Apply design principles and relevant standards to establish creative design concepts, responding to their assessment of users' requirements and interior configurations.
4. Select and implement appropriate design tools and techniques to achieve both functional and aesthetics lighting and acoustics design outcomes.
5. Present their design lighting and acoustics design process and outcomes clearly.

INA 394 Interior Specifications, Cost Estimation and Construction Management 3(2-2-6)
Prerequisite: none
Studies include the foundation of research, cost analysis and detailed specification for all elements of the interior architectural construction. Production and labor standard; material and labor estimation for interior construction; schematic outlines, preliminaries for approval, bidding process and alternatives; analysis and synthesis of bids; segmented awards and follow through, Studies also include cost estimation according to materials prices, wages, instruments and management costs. The courses cover introduction into the business aspects of construction management; organizational and financial concerns during entry into business and continued operation; interior architects, architects, engineers and builders relationships; organization of their work; construction planning and control by; contracts and tendering; control tools; construction laws and regulations; safety in construction.
Learning Outcomes
1. Summarize information taught in course fundamental series and being able to relate it through writing or other tools or see its fullest implications.
2. Demonstrate proficiency in using various tools for interior architecture specification and documentation by providing the material, specification, cost estimation and construction management of the individual design projects.
3. Perform professionally on the ethical issues involved in the formation of professional judgments and practice with English language as the method of communication and presentation.

INA 435 Research Methods for Interior Architecture 3 (2-2-6)
Prerequisite: none
This course outlines important relations between research and design works for Interior Architecture students. The coursework introduces students to the variety of 'research methods' which may induce creativity and innovation in the field of design and architecture. The course encourages students to learn and to try-out different research methods which are relevant to their research interests and design. This course is designed to help senior students: (1) formulating the topic of their thesis; (2) finding suitable methods of inquiry to investigate a particular issue, problem, or question; and (3) using relevant information to produce incisive projects and thesis.
Learning Outcomes
1. Define thesis problem, write a purpose statement of the topic based on review of the literature as well as design case studies.
2. Use appropriate method and tools to conduct investigation, data collection such as questionnaire, tracing and mapping method.
3. Summarize/Interpret the data findings using fundamental statistical indicators such as Mean, Standard Deviation, etc.

INA 496 Professional Practice and Code of Conduct for Interior Architecture 3(3-0-6)
Prerequisite: none
This course covers the principles and standards of professional practice for interior architects. It explores relevant regulations including the Architectural Profession Act, Building Construction Act, and regulations set by professional associations such as the Association of Architects, Council of Architects, and Association of Interior Architect. The course also addresses topics such as outsourcing design and construction supervision, professional practices in foreign countries, as well as ethics, morals, and professional etiquette. A key focus of the course is to develop critical thinking skills and their practical application in future careers.
Learning Outcomes
1. Understand professional ethics and architectural practice such as codes of ethics and conducts, architect's responsibilities, Laws, Liability, Organizational management teams, design contracts,

work process, preparation of bidding, contract and construction documents.

2. Apply the knowledge and basic principal professionally according and be able to perform on the ethical issues involved in professional judgments in interior architecture and practice

INA 491 Cooperative Learning 6 (0-35-18)

Prerequisite: INA 446

This required students to participate in interior architecture design-related industries according to individual interest for six months. It allows students to see the working process in different organization, to develop responsibility and self-confidence from working with other people, to accumulate knowledge and direct experiences needed for their interior architectural design project in the final semester. At the end of the program, students will be able to decide what kind of work they would like to participate after graduation.

Learning Outcomes

1. Gain working experience as an interior architectural intern for a considerable length of time.
2. Perform and practice their skills and insights to help develop and deliver tasks/assignments in relation to interior architectural design as part of the team at a professional level.
3. Get the opportunity to work on real projects, show off their skills and knowledge that help them prepare for their career path after graduation.

INA 492 Cooperative Learning 3 (S/U)

Prerequisite: INA 446

Supervised field experience in interior architectural, architectural, and other related design offices that could give an understanding of the professional fields of interior architecture. A two-month full-time internship in architecture or a comparable design office is required.

Learning Outcomes

1. Gain a working experience as an interior architectural interns for a limited period of time.

2. Perform and practice more on their skills and insights to help develop and deliver tasks/assignments in relation to interior architectural design as part of the team in a professional level.

3. Get the opportunity to work on real projects, show off their skills and knowledge that help them prepare for their career path after graduation.

***Elective Courses Not less than 9 Credits

ARC 329 Analysis of Contemporary Architecture 3 (2-2-6)

Prerequisite: none

This course offers learners a comprehensive exploration of the theories, concepts, and methodologies employed in the analysis and critique of contemporary architectural works. Through a combination of theoretical discussions, case studies, site visits and critical examinations of notable architectural projects, learners will develop a nuanced understanding of the social, cultural, and technological contexts that shape contemporary architectural design. This aims to develop learners' analytical and critical thinking skills, enabling them to assess and interpret the formal, spatial, and experiential qualities of architectural works. Learners will examine the influences, inspirations, and philosophies that inform contemporary architectural practice, as well as the impact of environmental, economic, and socio-cultural factors on the built environment.

Learning Outcomes

1. Apply various analytical methods and tools to interpret and evaluate the formal, spatial and experiential qualities of contemporary architectural works.
2. Develop effective critical thinking skills to formulate and articulate well-founded arguments and opinions about contemporary architectural works, considering factors such as context, programmatic requirements, sustainability, aesthetics, and social impact.
3. Communicate effectively and professionally through written assignments, research papers, presentations, and class discussions, demonstrating the ability to convey complex architectural analyses and ideas.

ARC 330 Analysis of Western and Architecture

Prerequisite: none **3 (2-2-6)**

This course offers learners a comprehensive exploration of the theories, concepts, and methodologies employed in the analysis and critique of contemporary architectural works. Through a combination of theoretical discussions, case studies, site visits and critical examinations of notable architectural projects, learners will develop a nuanced understanding of the social, cultural, and technological contexts that shape contemporary architectural design. This aims to develop learners' analytical and critical thinking skills, enabling them to assess and interpret the formal, spatial, and experiential qualities of architectural works. Learners will examine the influences, inspirations, and philosophies that inform contemporary architectural practice, as well as the impact of environmental, economic, and socio-cultural factors on the built environment.

Learning Outcomes

1. Apply various analytical methods and tools to interpret and evaluate the formal, spatial and experiential qualities of contemporary architectural works.
2. Develop effective critical thinking skills to formulate and articulate well-founded arguments and opinions about contemporary architectural works, considering factors such as context, programmatic requirements, sustainability, aesthetics, and social impact.
3. Communicate effectively and professionally through written assignments, research papers, presentations, and class discussions, demonstrating the ability to convey complex architectural analyses and ideas.

ARC350 Professional Communication and Presentation 3 (2-2-6)

Prerequisite: none

The content of this course is comprised of two different yet closely interrelated parts: visual and verbal presentation. The visual part introduces various tools and techniques for visual presentation including building up image library, mood board, material catalogues, diagramming technique, and presentation lay-out and composition. The verbal part includes how to organize the content and put it in a clear and comprehensible order, selection of information, preparation of space and equipment, and how to handle criticism.

Learning Outcomes

1. Communicate professionally and apply relevant software to prepare and produce visual presentation materials.
2. Develop professional verbal presentation skill in English and conduct themselves professionally in architectural design and practice.

ARC 358 Design for Sustainable Tourism Development 3(2-2-6)

Prerequisite: none

The course will emphasize the idea and concept of sustainable development that supports the tourism industry and environmental awareness concerns. The course will cover the definition and concept of sustainable development, suitability study of factors related and the exploration of planning and/or design that is suitable for tourism development in valuable socio-environmental areas. The course will study the real case.

Learning Outcomes

1. Investigate and engage in knowledge (and information) exchange with stakeholders with empathy.
2. Develop sensitivity in observing, listening, and critical thinking about cultural and landscape geographical value.
3. Describe ideas and concepts, plan for sustainable tourism development, and evaluate the suitability of factors related in valuable socio-environmental areas.

ARC 436 Architectural Conservation: An introduction 3 (1-4-6)

Prerequisite: none

Study the basic concepts of architectural conservation and their applications in Europe and Thailand. Analysis of value in historic architecture, group of buildings, space and community based on the rationales behind the international conservation charters (UNESCO). Applying principles of architectural conservation to formulate project proposals which relate to architecture of cultural and historical values.

Learning Outcomes

1. Choose appropriate conservation charter for the building to be conserved in order to explain the rationale behind the acts of conservation
2. Formulate a project brief that correspond to architectural conservation and specific context of the buildings.

ARC 455 Computer in Architectural Design

Prerequisite: none **3 (1-4-6)**

The use of computers in architectural design, exhibition, communication and searching of various methodologies that could be applied in the design process by emphasizing in the creation of architectural space.

Learning Outcomes

1. Summarize and can use computers to explore architectural design and produce professional communication materials.
2. Summarize workflow and computer application through lectures and assignments.

ARC 456 Building Information Modeling 3 (2-2-6)

Prerequisite: none

This course introduces Building Information Modeling (BIM) and tools for parametric building design and documentation. The course offers hands-on exercises, concepts of BIM through the modelling of a basic building, from creating the building to making form, window/door, materials, room schedule, and shadow studies as well as rendering including generating documentation at professional level.

Learning Outcomes

1. Apply structural and construction knowledge to build comprehensive models
2. Produce professional architectural drawing sets by BIM software.
3. Able to organize workflow of production of construction drawing set and coordination with other disciplines.

ARC 457 Housing 3 (2-2-6)

Prerequisite: none

The study focuses on standards and classifications of residential units, including the procedure, regulations, and guiding concept in proving living accommodation for the community. The study includes problems affecting peoples' accommodation both in urban and rural areas. Instruments, building codes, occupancy standards, and zoning by-laws are examined.

Learning Outcomes

1. Summarize the housing design principles, theories and concepts and design guidelines.
2. Gain working experience with the community and stakeholders.
3. Summarize the participatory design process and community involvement, along with some exposures to the fieldwork study.
4. Awareness of the architect/designer’s broader role in society, especially for the urban poor, marginalized and underprivileged group of people.

ARC 459 Exploring Narrative and Art in Residential Design 3 (3-0-6)

Prerequisite: none

This cross-disciplinary elective course delves into the fusion of narrative and art within contemporary residential design, combining theory and practice to enhance the quality of life. Through 15 lectures divided into three key topics, you will gain a comprehensive understanding of the field.

Design Theory and Concepts: Analyze influential case studies, including Narrative Design Theory and Descriptive Programming in Architectural Space Design, to explore major movements in house design concepts. Gain insight into the theoretical foundations and design principles that drive success.

Present Design Movements: Examine topics like the Aging Society, Energy Plus Design, and Sustainable Design that directly impact new proposals in residential design. Engage in discussions to

understand their influence on shaping innovative solutions.
Current Trends: Explore emerging trends in residential design, such as A Modular House Design by Muji, the Micro-living trend, and ADU - Accessory Dwelling Unit or Plug-in House. Gain foresight into the future direction of the field.
Through collaboration, critical thinking, and practical exercises, you will develop a nuanced understanding of integrating narrative and art to create meaningful residential spaces. By analyzing case studies and participating in interactive discussions, you will gain the skills to design captivating, purposeful, and inclusive environments.

<u>Learning Outcomes</u>

1. Analyze: Apply narrative theory to evaluate its effectiveness in supporting residential design.
2. Evaluate: Assess the suitability of different media in addressing the concept of human engagement in domestic spaces.
3. Understand: Explain the relationship between design movements and social demands, considering various living conditions in contemporary issues.
4. Evaluate: Critically evaluate the relevance of future residential design solutions from case studies to the Thai context.

ARC 462 Prefabricated Design and Construction
Prerequisite: none **3 (1-4-6)**

This course is a study about prefabricated design and construction. Specific materials and construction methods are introduced and discussed along with building systems. Students will also gain essential understanding of construction methods through field trips to fabrication facilities and construction sites.

<u>Learning Outcomes</u>

Recognize basic prefabricated construction processes, materials, benefits and constraints of these construction methods including how they are implemented in architectural practices.

ARC 499 Hospitality Design and Hotel Operation Management **3 (2-2-6)**

Prerequisite: None

Hospitality Design and Hotel Operation Management, this class will teach you how to start a successful hotel business focused on Boutique Hotel and Hostel. Not only architectural and interior design aspects are studied, but hotel operations are included. Moreover learners will better know the chains-hotel criteria, hotel related law and Regulation and understanding hotel departments for example front office, reservation, housekeeping, and food and beverage (F&B).

<u>Course Outcomes</u>

Summarize an integrative design approach and management for a small hotel business focusing on boutique hotel and hostel, chains-hotel criteria, hotel related law and regulations.

INA 314 Aesthetics **3 (2-2-6)**
Prerequisite: none

An investigation into appreciation of design philosophy in form and other elements and the meaning of aesthetic values in relation to other elements of architecture and interior architecture. Aesthetics in design is aiming to study different alternative ways of seeing and of perceiving the world. 'Critical reflection on design, art, culture and nature' will be examined to defy the meaning of aesthetic values - "aesthetics – the beauty of design concept + design process".

<u>Course Outcomes</u>

1. Broaden the vision of creativity through media as well as personal direct experience
2. Summarize and identify various approach of different design direction
3. Explain, analyze and criticize the art of design
4. Practice thinking processes to integrating philosophy and meaning into the design
5. Strengthen the ability of creating phenomena through design elements

INA 317 Introduction to Painting **3 (1-4-6)**
Prerequisite: none

Study includes the basic color and brush manipulations and terminology, the use of glazes, varnishes, media, building and stretching canvases, preparation of alternative supports. The objectives of this class is to encourage the development of a personal creative sensibility and analytic abilities through critiques and discussions, increase visual literacy and the capacity to evaluate and describe works of art, demonstrate and develop variety of space and color relationships and produce work employing various compositional strategies.

<u>Course Outcomes</u>

Upon completing this course, students understand fundamental terminology and various type of painting. Students can apply knowledge of painting creatively to design related works. Students develop their personal creative sensibility and analytic abilities. Students can demonstrate and develop variety of painting compositions.

INA 326 Thai Ornament **3 (2-2-6)**
Prerequisite: none

This course aims to encourage students to learn and understand the art of Thai traditional architectural ornaments, architectural space, interior design motifs, Thai material, pattern and color and procedures and techniques. The study includes theory, field surveys and design practice exercises and way to transform the knowledge to contemporary design in modern context.

<u>Course Outcomes</u>

1. Learn and understand of the art of Thai traditional architecture and interior design ornaments, architectural space, interior design motifs, Thai material, pattern and color and procedures and techniques.
2. Apply and transform the knowledge taught in theory series and being able to relate it through two-dimensional and three-dimensional ornaments meaningfully.
3. Perform professionally in interior design space and interior design elements involved in the new formation of building program and its environments.

INA 327 Adaptive Heritage Reuse 3 (2-2-6)
Prerequisite: none

This course examines the history and theory of historic preservation, focusing on Thailand, but with reference to traditions and practices in other countries. The class is designed to examine the largely untold history preservation movement in this country, and explore how laws, public policies and culture attitudes. The class gives students a grounding in the history, to theory and practice of historic preservation, but is not an applied, technical course.

Course Outcomes

1. Describe and Understanding: Knowledge-Understanding heritage conservation provides economic, cultural, and social benefits to urban communities. The decision whether to reuse a building entails a complex set of considerations including location, heritage, architectural assets, and market trends.

2. Describe and Understanding: Generic Skill of collaboration skills, communication skills, critical thinking skills, study skills, higher order thinking skills – decision making (with the help of graphic organizer)

3. Summarize and Present: Expertise and Specific Skill related to the analysis of the existing situation of the built heritage. Ability to identify and interpret the physical, social, and economic characterization, and values and their relationship with the physical and functional structure of the context. Ability to investigate the historic development process of a city.

4. Apply: Architecture and Interior architectural design skill through various tools following interior architectural professional standard.
5. Presentation: Design C communication and personal verbal the design outcome using mediums and tools effectively.

INA 355 Sustainable Lighting for Interior 3 (2-2-6)
Prerequisite: INA 352

This elective course is designed for students who did take the INA 352 Lighting Design and would like to focus more on sustainable lighting strategies for interior applications. These include office buildings, museums, retails and hospitality interiors. The course introduces sustainable lighting design concept and methods for an effective integration of daylight and artificial light. It also gives an overview of lighting control strategies for different applications and space layouts. Additionally, it introduces main sustainable design labelling schemes - internationally (LEED) and locally (TREE). The design goals are achieving energy efficiency and low maintenance, while maintaining or even improving lighting quality for the user and specific purposes of the project such as conservation of artefact in a museum. The student will learn from theories, case studies of real projects and hands-on experiments.

Course outcomes

1. Describe sustainable lighting design principles to achieve both energy efficiency and quality for main interior applications.

2. Evaluate the impact of daylight, quantitatively and qualitatively, in the interior space using appropriate tools and criteria

3. Select and apply suitable design and control strategies for the integration of daylight and artificial lighting to achieve visual and space requirements.

4. Perform simple lighting calculations and simulations, using both manual and softwares, to verify the sustainable goals of the project.

INA 411 Advanced Presentation Method 3 (1-4-6)
Prerequisite: none

This course is designed to enhance and develop advanced presentation skills through the application of various techniques. The emphasis is on utilizing analytical experiences to strengthen presentations and employing logical processes for effective communication. Students will learn how to prepare presentation materials using a diverse range of tools, techniques, and equipment. This includes creating diagrams, utilizing landscape models for visual representation, and utilizing effective communication strategies tailored to specific situations. The course aims to equip students with the necessary skills to deliver impactful and engaging presentations in a variety of contexts.

Learning Outcomes

1. Understand the process of delivering effective presentations in interior architectural projects, including both soft and hard skills.

2. Develop personal presentation techniques, methods, and tools for advanced presentations.
3. Apply these skills in various presentation scenarios, particularly within the context of interior architectural projects.

INA 412 Advanced Computer Applications in Interior Architectural Design 3 (1-4-6)
Prerequisite: none

Studies include the introduction into the use of advanced Computer Aided Design software and its application to interior architectural design and presentation; experience in using existing software tools and exploration of computer graphics media. Emphasis is placed on advance interior architectural drafting, drawing (2 and 3 dimensional) and rendering; animation; file establishment with corporate users; and computer-aided design software use.

Course Outcomes

1. Use advanced Computer Aided Design software such as AutoCAD, 3D Max, Sketch-Up, Photoshop and other software applications for creating interior architectural design outcome as well as presentation.
2. Combine the use of different programs and variety of techniques both 2D and 3D to meet the professional quality level.

INA 452 Exhibition Design 3 (1-4-6)
Prerequisite: none

The course aims to study an exhibition content creating that reflected in user interpretation.

As well as the construction design of permanent and temporary display units for exhibitions. The practicing in design and construction with the use of wide range of considered such as budget allocation and installation systems.

Learning Outcomes

1. Critique public exhibition content both temporary and permanent exhibition.

2. Set up simple content for temporary or permanent exhibitions that are related to selected groups of users and sites.
3. Design and apply the ideas of construction process responding to each exhibition content following the basic research, logical thinking, and user study.

INA 454 Special Topic Study I 3 (x-x-x)
Prerequisite: none

Special study about Architecture topic that adjusted to individual needs.

Learning Outcomes

1. Identify solutions for problem solving of the specific giving design task.
2. Analyze then apply information and logical thinking to solve specific design issues for the given design task.

INA 455 Special Topic Study II 3 (x-x-x)
Prerequisite: none

Special study about Architecture topic that adjusted to individual needs.

Learning Outcomes

1. Identify solutions for problem solving of the specific giving design task. .
2. Aanalyze then apply information and logical thinking to solve specific design issues for the given design task.

INA 456 Special Topic Study III 3 (x-x-x)
Prerequisite: none

Special study about Architecture topic that adjusted to individual needs.

Learning Outcomes

1. Identify solutions for problem solving of the specific giving design task.
2. Analyze then apply information and logical thinking to solve specific design issues for the given design task.

INA 497 Interior Architectural Case Studies and Fieldtrips 3 (1-4-6)
Prerequisite: none

The Study is to familiarize students with basic concepts, design philosophy and design analysis in various aspects relating to commercial interior planning, design and construction. The study is done by way of visiting real sites, self-research and discussion with professional designer and design project team.

Course Outcomes

1. Summarize correctly for an information taught in theory series, case studies, site/ place visits and being able to relate it through digital drawing skill, analytic skill, visual/data presentation skill.

2. Understand and be able to identify design idea/concepts/problems and suggest for new creative or problem solving-based solutions individually or within a group.
3. Aware of the context of sites, communities, users, and project stakeholders and be prepared to perform professionally on the critical issues involved in the formation of professional judgments in interior architecture design and practice.

INA 498 Feasibility Study for Real Estate Project
Prerequisite: none 3 (2-2-6)

The study covers on feasibility study for real estate project, which is an integrated issue and involves several related factors. This study will provide knowledge and understanding of feasibility study process starting from physical analysis, market analysis, and financial analysis until the completion of investment proposal.

Course Outcomes

1. Perform analytical skills in project feasibility study this includes architectural design, marketing strategy, and financial issue.
2. Propose the project development ideas and strategies based on key factors and relevant information in regarding feasibility study.

INA 553 Independent Study I 3 (1-4-6)
Prerequisite: none

The primary purpose of an independent study course is to provide students with the opportunity to explore a special study topic that is not available through regular course offered. The topic is mutual interest to the faculty and the student.

Learning Outcomes

1. Display their personal drive and their desire to improve their knowledge, research skill,
2. Achieve the goals and meet the class expectations while building up their own aspect of interest.

INA 554 Independent Study II 3 (1-4-6)
Prerequisite: none

The primary purpose of an independent study course is to provide students with the opportunity to explore a special study topic that is not available through regular course offered. The topic is mutual interest to the faculty and the student.

Learning Outcomes

1. Display their personal drive and their desire to improve their knowledge, research skill,
2. Achieve the goals and meet the class expectations while building up their own aspect of interest.

INA 596 Business Management and Ministration 3 (2-2-6)

Prerequisite: none

Studies include a fundamental understanding in business management, codes of professional practice, basic principles in management, guiding concepts in business; marketing, operations, accounting and finance and human resources, and business model for creative and design company.

Learning Outcomes

1. Summarize information taught in theory series/ business case studies and be able to implement it through design business model creation, business skills, and business culture.

2. Understand and be able to identify business opportunities and be able to propose creative products or services to enter or penetrate to the target market.
3. Perform professionally on the ethical/moral issues involved in the formation of local and international business.

CMD 364 Web Design **3 (2-2-6)**
Prerequisite: none

This course introduces students to the web design and development lifecycle. The course focuses on theory, tools, techniques and standard in the design phase including layout design, interface design, components of web e.g. typography, color, media, contents, etc. It also covers the standards and trend in modern web design such as responsive web design (RWD) and other modern concepts in web design. The practical exercises cover the usage of tools and techniques in design a web including the implementation of design into a real web site using a current available instant web implementation tools.

Learning Outcomes

1. Summarize the website development process, methodologies, tools & techniques in the design phase including the up-to-date trend in web design.

2. Apply the knowledge to design a website.

CMD 365 Web Development for Designer **3 (1-4-6)**
Prerequisite: none

This course introduces students to development concepts, processes, standards, tools, and techniques that use to create a modern web site. The course includes practical exercises on creating web pages using modern concepts, tools, and techniques.

Learning Outcomes

1. Summarize the foundation of web development, process, methodologies, tools & techniques for developing a website.

2. Apply the knowledge with their design knowledge to develop and implement a website.

DIP 158 Photography **3 (1-4-6)**
Prerequisite: none

Principles of Photography. Processes of Photography. Tools and techniques exploration. Artistic and aesthetic self-expression through photography.

Learning Outcomes

1. Deliver photography work that communicates narratives and their concepts.
2. Implement aesthetic principles and technical principles relating to photography in their photography projects.

Free Electives Not less than 6 Credits