

## Elective Courses for Semester 1/2022

5 August 2022

### ARC 484 Environmental Technology IV: Energy-Efficient Building Design

Techniques and Simulation

3(3-0-6)

**Prerequisite:** ARC 383 Environmental Technology III

The main focus is on energy-efficient building design techniques and evaluation: definition of sustainability, climate change, global warming, and natural disasters, reasons to conserve energy, definition and strategies of energy-efficient buildings, energy sources: renewable and non-renewable, energy consumption including carbon footprint and carbon credit. Architects' role in energy conservation are included into an advanced level towards the links between the micro/macro environment, energy and building form and reviews the development of building skin. The state of the art in building energy conservation evaluates via the use of environmental design software and assessment of climate data, the simulation of solar, ventilation, thermal and lighting processes in-and-around real-or-virtual buildings with minimum use of non-renewable energy sources comparing to building codes and regulations. Operation and maintenance will be taken into consideration as well as life-cycle cost analysis.

### ARC 451 Special Topic Study: Supporting Skills for Architects and Designers

3(2-2-6)

Students will learn additional skills that they can apply to support in their architectural and design works. The course contains knowledge modules that not have in normal required courses but they are useful in supporting students' works such as digital knowledge, model making, specific professional English etc. Students can individually select their interested knowledge modules that they can apply for their studies or works on architectural and design.

**Remark:** Please study guideline to select the topic you interest and check the schedule details from this link: <http://mysoad.arch.kmutt.ac.th/Courseware/SSC>

**INA 452 Exhibition Design****3(1-4-6)**

Studies include the design and construction of permanent and knock-down display units for exhibitions; exercises in design and construction of units with the use of wide range of considered; budget allocation; installation; systems; and typical packaging, handling and transportation methods.

**INA 455 Special Topic Study: Adaptive Heritage Reuse****3(1-4-6)**

This subject 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 will give students a grounding in the history, to theory and practice of historic preservation, but is not an applied, technical course.

**IND 256 Special Topic Study: Jewelry and Small Metalsmiths Design 3(1-4-6)**

This class is suitable for Participants who would like to learn jewelry making from basic to advance. The Participants will learn many techniques and getting the special exercises of jewelry making to develop your skill and creative concept in your own way. Participants work in copper, brass, sterling silver.

**IND 232 Craft Product Design 3(2-2-6)**

Principles of handicraft and industrial craft design. Aesthetics, values, design and making processes of handicrafts. Exploration of materials and techniques.

**IND 336 Toy Design 3(2-2-6)**

Toy design for different age groups of children. Types of toy. Children development. Research, design and manufacturing for toys. Rules and regulations regarding toy safety. Toy testing. Current market trend.

**IND 347 Applied Product Graphics 3(1-4-6)**

Graphic design on software and hardware products. Two and three dimensional graphics. Graphics on packages. Product brand, identity, image, styles, form and functionality in product graphic design.

**IND 435 Product Form and Surface 3(1-4-6)**

Form and surface design for industrial design. Principles of surface design work flow. Relevant tools, techniques and computer software. Application to design.

**IND 465 Product Characteristics 3(2-2-6)**

Analysis of products serving same function in terms of product attributes, product properties, product appearance, product identity, product differentiation, manufacturing, marketing, consumers, design direction, tradition and culture influencing design. Application to design.

**CMD 216 Practice in Drawing****3(2-2-6)**

Introduce drawing as a fundamental form of Art, emphasizing the practice in conceptual and experimental sense. This class introduces hands on skill, handling of drawing tools and paper materials by Artist.

**CMD 317 Advanced Practice in Motion and Sound****3(2-2-6)**

**Prerequisite:** CMD 213 Communication with Sequence, Sound and Motion

Introduction to motion and sound media. Understanding of design and communication. Practice advanced technique for combining sound and image. Experimental techniques for sound and video recording. Explore audio visual genres.

**CMD 333 Screenwriting****3(1-4-6)**

A practical introduction to the art and craft of screenwriting. Basic elements and principles of screenwriting, such as: synopsis, treatment, characterization, dialogue, visual writing, story paradigm, storytelling strategies, and narrative structure, as well as film conventions and theories are introduced. This course locates screenwriting within the context of cinema production specifically, as well as within the arts as whole. As an outcome students produce short works written in conventional screenplay format.

**CMD 361 Special Topic Study: Introduction to Printmaking****3(1-4-6)**

This course covers the distinctive nature of printmaking including: tools, inks, paper, plate preparation, registration, printing processes and qualities of prints e.g. overlays, transparency, offset. The goal is for students to gain the skills and confidence to produce multiple images by hand printing and on a press while exploring visual expression. Hand printmaking techniques will engage the student with problem solving in drawing, design and color. Topics may include editions, suites and designation systems. Class sessions will comprise independent and collaborative printing and, lecture, demonstrations, discussion, and critique.

**CMD 362 Special Topic Study: Content creation for Social Media****3(2-2-6)**

Explores how to create content across different social media platform based on video, audio, written and images. Learning how to use tool such as blue screen, camera gears, and multimedia software. Strategy of content creation for live broadcasting, webinar, product reviews and on-line marketing.

**CMD 364 Web Design****3(2-2-6)**

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.

**CMD 365 Web Development for Designer****3(2-2-6)**

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.

**These courses are offered as free elective course which open for all design programs.**

**IND 256 Special Topic Study: Jewelry and Small Metalsmiths Design 3(1-4-6)**

This class is suitable for Participants who would like to learn jewelry making from basic to advance. The Participants will learn many techniques and getting the special exercises of jewelry making to develop your skill and creative concept in your own way. Participants work in copper, brass, sterling silver.

**IND 336 Toy Design****3(2-2-6)**

Toy design for different age groups of children. Types of toy. Children development. Research, design and manufacturing for toys. Rules and regulations regarding toy safety. Toy testing. Current market trend.

**LAN 251 Plant Materials****3(3-0-6)**

Importance of plants as design elements in natural and cultural context. The content covers botanical characteristics and field identification of common landscape plants in tropical region.

**LAN 332 Contemporary Landscape Design and Environmental Sustainability****3(3-0-6)**

Study the inspiration of sustainable and ecological landscape architecture. Investigate, analysis, and examine landscape architecture roles and strategies towards the sustainability challenges today. This course covers essential concepts and relevant theories of landscape architecture and sustainable development.

**LAN 353 Forestry****3(2-2-6)**

Forest ecology, forest types and benefits, aerial photo interpretation for forest mapping and land use: mapping, scaling, and analysis of environment and topography including soils, water, air, minerals and plants, national park and forest reserves, forest fire benefit and protection, forest plantation and community forest, forest for recreation, principle of management and planning of forest recreation areas.

**LAN 363 Landscape System and Technology****4(2-4-8)**

Principles of site surveying, contour, grading and alignment as well as designing surface and underground drainage systems Creating slopes, construction methods, basic calculations and parameters, and roadway design.