

Architectural Studies

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Course Description

ARC 1110

Introduction to Architectural Design I

5 U; 12 Studio; 1st term

This course establishes the foundation for the design stream of the curriculum. It introduces fundamental concepts, principles and methods in architectural design and aims to develop the students' skill in the exercise of the process of design: observation, documentation, analytical studies of existing designs and design. The exercises concern collective and individual form - the community and the hut - and focus on the study and design of "the room" as the unit of space in architecture.

* Course offered in 2001-02.

ARC 1120

Introduction to Architectural Design II

5 U; 12 Studio; 2nd term

This course is a continuation of ARC 1110. It advances the studies of ARC 1110 through their application to the study and design of the house as a “community” of rooms. The “house” is regarded as the seminal unit of form in architecture as the “family” might be regarded in relation to the society. The exercises concern human intention and activities and their architectural embodiment. Prerequisite: ARC 1110.

ARC 1210

Graphics and Visual Studies

3 U; 2 Lect. 2 Tut.; 1st term

The aim of this course is to develop student’s visual sensibility and graphic skills in visual communication. The course covers three knowledge and skill areas. The study of drawing is to give students confidence using different drawing media and to develop a high level of hand-eye coordination. The study of drawing systems is about basic principles and methods of pictorial projection systems and their application in drawing, visual study and design. The study of form is to introduce students to various visual elements and their interrelationships, such as shape, space, mass, light, texture, color, etc.

ARC 1311

Introduction to Architecture

3 U; 3 Lect.; 1st term

This course introduces architecture in terms of its scope, structure, and its underlying imperatives. Architecture is presented as the embodiment of human culture arising out of the human needs for shelter and permanence. The approach in this course is learning to see architecture - observation, description, de-composition and composition. This proceeds from physical appearance to meta-physical aspects of form in architecture, from form to aspects of form (e.g., structure, complexity), the process of formation (i.e., design, growth and change), and to intention in design. It is intended to help develop the basic skills of observation, analysis and discovery, and to cultivate a sense of intention and focus in the study of architecture.

ARC 1322

Architectural History and Theory I

3 U; 3 Lect.; 2nd term

Building upon the foundation of ARC 1311, this course stresses the importance of understanding the history and theory associated with architectural form and space. It will reach this goal by identifying and investigating historic works of architecture from China and other cultural contexts that endure to the present. Those investigations, which will employ the methods that historians currently use to analyse architecture, will provide students with the means to study other building types and architectural dynamics in the second and third courses of the architectural history and theory sequence.

ARC 1411

Introduction to Building Technology

3 U; 2 Lect. 2 Lab.; 1st term

An empirical introduction to building technology - structure, environmental technology, materials and construction - in architectural design, emphasizing the relation between natural phenomena, physical forces and building form. Organized around physical modelling projects, with supporting lectures. Addresses thermal comfort, solar movement and shading, and transfer of loads through tension and compression. Explores technological possibilities as generators of appropriate and creative architectural design.

ARC1420

Building Technology I (Materials and Construction)

3 U; 3 Lect.; 2nd term

Studies materials and construction based on precedent analysis and design application. Introduces an appreciation and exploration of the essential knowledge of materials and construction, with particular reference to application in the context of Hong Kong and the region - high-rise, high-density and high-humidity. Emphasis on the process of integrating knowledge and field observation related to architectural and construction practice. Discover the nature, performance, limitations and developments of various construction and material systems, including structural systems, envelope systems, finishes systems, etc. Prerequisite: ARC 1411.

ARC 2210

Computer-Aided Architectural Design

3 U; 2 Lect. 3 Tut.; 1st term

This course is an introduction to the hardware and software components of computer-aided design (CAD) systems. Its aim is to provide a foundation for design computing. The course will emphasize the use of computer as tools to complement paper-based design media, and to bring awareness of the difference between the two media in terms of design creation, operation, distribution and storage. Students will gain a working knowledge of image processing, computer-aided drafting, modelling, rendering and computer-aided design as they relate to architecture. This will be accomplished through lectures, labs, readings, exercises and seminars.

ARC 2311

Architectural History and Theory II

3 U; 3 Lect.; 1st term

This course explores works of architecture that exemplify significant cultural changes associated with the political and economic powers that largely generated architecture after the Renaissance. It focuses on new building forms that largely comprised the public domain: town halls, industrial buildings, transportation structures, universities, etc. The examples chosen for closer scrutiny will be taken from several cultural and geographic contexts, all of which were affected by the emerging economic and political order. Having applied methods of historical inquiry to a range of significant building types, students are expected to be prepared to better understand the architectural theories and histories regarding the 20th and 21st centuries.

ARC 2321

Architectural History and Theory III

3 U; 3 Lect.; 2nd term

The three-course sequence in architectural history and theory culminates in the analysis of architectural works produced in conjunction with changes during and after the 20th century. In these works - office buildings, shopping centers, airports, multifunctional urban complexes, etc. - students will examine what occurred, architecturally and globally, as a result of the historical changes they have studied in the first two courses of the sequence. In so doing, students will be well-grounded in understanding historical continuities and ruptures, as well as the unity of forms and diversity of solutions. They will also be better prepared to analyse with a degree of impartiality the historical and theoretical dynamics associated with works of architecture.

ARC2411

Building Technology II (Building Structure)

3 U; 3 Lect.; 1st term

This course introduces the fundamental concepts of building structure and explores the relationship of structure to architectural design. Examines the characteristics and performance of a few basic structural assemblies, such as trusses, arch and cable systems, and frames. Examples of building structures from around the world are used to illustrate the relationship between material, structure and form. Prerequisite: ARC 1411.

ARC 2420

Building Technology III (Environmental Technology)

3 U; 2 Lect. 2 Lab; 2nd term

Introduces the fundamental concepts of passive environmental design. Examines the effect on buildings and their occupants of environmental conditions of light, temperature, air movement and sound. Case studies are used to review both traditional and current approaches of representative building types in more depth. Prerequisite: ARC 1411.

ARC 3310

Land and City

3 U; 3 Lect.; 1st term

This course introduces key concepts of design on the land and in the city. The method of teaching is a critical survey of the issues through historical precedents in architecture, landscape architecture and city planning. The course will focus on three conditions: 1) design that respects and builds upon the natural qualities of the land; 2) design that extends and reacts to the urban fabric of the city; and 3) design that challenges and defines the in-between zones of land and city. The method of learning is to develop awareness and appreciation of the physical attributes of the land and city through direct experience, analysis and conceptualization.

ARC 3411

Building Systems Integration

3 U; 3 Lect.; 1st term

This course consolidates principles established in ARC 1420, 2411 and 2420 through the integration of structure, envelope, mechanical and interior systems. Deals with theory of inter-relationship among the various systems, multi-disciplinary design, roles of specialists and their contributions to systems integrations. Examines possibilities and implications of building systems on design. Explores topical issues of related contemporary thoughts and architectural practice. Prerequisites: ARC 1420, 2411 and 2420.

ARC 3510

Professional Practice

3U; 3 Lect.; 2nd term

The course connects the architecture school with architectural practice and introduces the student to the concept of professionalism; that is, the professional person's position in and responsibilities towards society. The approach is to broaden the student's appreciation of the culture within which architecture is formed. This course is on the role of the architect working in relationship with others and the contractual, ethical, economic, legal and socio-communal issues that relate to the profession.

ARC 4110
Habitation Studio
5 U; 12 Studio; 1st and 2nd terms

ARC 4120
Technics Studio
5 U; 12 Studio; 1st and 2nd terms

ARC 4130
Tectonics Studio
5 U; 12 Studio; 1st and 2nd terms

ARC 4140
Urbanization Studio
5 U; 12 Studio; 1st and 2nd terms

The above four courses deal with architecture of the public domain at increasing levels of complexity. All courses are conducted in “studios” which are defined in terms of approach to design. They are: habitation, technics, tectonics and urbanization, which run parallel each term. Each studio comprises students of years 2 and 3, and M.Arch. 1 and 2, working at different levels of similar projects and issues. A student will select a studio each term by his or her own choice but has to pass all four studios before graduation.

The work in studios consists of two parts: studio projects and school projects. Studio projects are formulated by the studio to explore that studio’s particular issues and approach. School projects are defined on the basis of one of the following “fundamental” architectural programmes -places for living, working, learning, worshipping, moving, playing and performing. Historically buildings of fundamentally similar programmes evolve from one another. It is therefore possible as an example to see a room, a house and a village as buildings nested within a line of development of places for living. This course structure makes it possible for a student to work on a “same” project with his or her peers but from a particular approach defined by the selected studio. Prerequisite: ARC 1120.

ARC 4201
Digital Design Media
3 U; 3 Lect.

The course deals with the design computing studio as an integrated design environment. The environment is composed of digital design theory, software tools and physical experiments. The students will be able to represent and manipulate the design idea using various CAAD systems in various platforms. The course will focus on the horizontal integration on digital data routing via supporting activities, using different tools, at a particular stage of the design process. The activities may include digital design communication, visual impact study, free-form modelling and rapid prototyping technologies.

ARC 4301
Issues in Architectural Theory and Design
3 U; 3 Lect.

This course concerns theoretical issues in architectural design and practice. Using significant texts and relevant architectural examples, the course will focus on a selection of crucial issues that have challenged designers from the 20th century to the present time, such as modernism, post-modernism, semiotics, historicism, critical regionalism, deconstruction, architectural conservation, etc.

ARC4302

Studies of Selected Periods or Works of Architecture

3 U; 3 Lect.

This course deals with studies focused on a selected period, e.g., Gothic, Baroque, or works of a particular architect, e.g., F.L. Wright, Aalto.

ARC 4303

Aspects of Asian Architecture

3 U; 3 Lect.

This course examines some of the significant historical dimensions of Asian architecture, ranging geographically from Japan to Southeast Asia and from China to island settlements of the Eastern Pacific. Conceptually, the course will probe the myriad relationships between culture, religion, anthropology and architecture in the vast Asian region. The specific nature of the course's content will vary according to which aspects of the region's rich architectural traditions are selected for study.

ARC 4304

History of Cities: Form and Fabric

3 U; 3 Lect.

The course explores the evolution and form of cities: how, why, where and in what forms cities have evolved into significant human settlements. The course will pay particular attention to the nature of enduring urban patterns, the range of their variation and the morphology of urban fabric.

ARC 4401

Topical Studies in Structural Design and Building Structures

3 U; 3 Lect.

The course consists of directed investigation into selected current issues and practice in structural design and building structures.

ARC 4402

Topical Studies in Materials and Methods of Construction

3 U; 3 Lect.

The course consists of directed investigation into selected current issues and practice in materials and methods of construction.

ARC 4403

Topical Studies in Environmental Systems and Design

3 U; 3 Lect.

The course consists of directed investigation into selected current issues and practice in environmental systems and design.

Study Scheme

Major Programme

A. Applicable to students admitted in 2002-03 and thereafter

Students are required to complete a minimum of 78 units of courses as follows:

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|-----|---|----------|
| (i) | Studio Courses: | 20 units |
| | <i>Second and Third Years of Attendance</i> | |
| | ARC 4110, 4120, 4130, 4140 (Note 1) | |

(ii)	Required Courses:	49 units
	<i>First Year of Attendance</i>	25 units
	ARC 1110, 1120, 1210, 1311, 1322, 1411, 1420	
	<i>Second Year of Attendance</i>	15 units
	ARC 2210, 2311, 2321, 2411, 2420	
	<i>Third Year of Attendance</i>	9 units
	ARC 3310, 3411, 3510	
(iii)	Elective Courses (Notes 2 and 3):	6 units
	ARC 4201, 4301, 4302, 4303, 4304, 4401, 4402, 4403	
		Total : 75 units
(iv)	English Writing Course ELT 2410 (Note 4):	3 units
		Total Major Required: 78 units

B. Applicable to students admitted in 2001-02

Students are required to complete a minimum of 79 units of courses as follows:

(i)	Studio Courses:	20 units
	<i>Second and Third Years of Attendance</i>	
	ARC 4110, 4120, 4130, 4140 (Note 1)	
(ii)	Required Courses:	47 units
	<i>First Year of Attendance</i>	23 units
	ARC 1110, 1120, 1210, 1311, 1321, 1411, 1420	
	<i>Second Year of Attendance</i>	15 units
	ARC 2210, 2311, 2321, 2411, 2420	
	<i>Third Year of Attendance</i>	9 units
	ARC 3310, 3411, 3510	
(iii)	Elective Courses (Notes 2 and 3):	9 units
	ARC 4201, 4301, 4302, 4303, 4304, 4401, 4402, 4403	
		Total: 76 units
(iv)	English Writing Course ELT 2410 (Note 4):	3 units
		Total Major Required: 79 units

- Notes: 1. Students are required to take all four studio courses in their second and third years of attendance and they can select one from four in each term.
2. Elective courses are offered to students in their third year of attendance.
3. Students are allowed to take these courses for more than once provided that the course contents are different, and gain the units each time they pass the course. However, students cannot take courses with the same course code more than once in a single term.
4. Students are required to take this course in their second year of attendance. The units gained from ELT 2410 will be counted as course requirement for graduation but will not be counted as Major required unit.