

**SYLLABI FOR THE DEGREE OF  
BACHELOR OF ARTS IN ARCHITECTURAL STUDIES  
[BA(ArchStud)]**

*These syllabi are applicable to candidates admitted under the 4-year '2012 curriculum' to the first year of the Bachelor of Arts in Architectural Studies in 2012-13.*

Students entering the 4-year Bachelor of Arts in Architectural Studies curriculum in the academic year 2012-13 will take a professional core of 186 credits (including 150 credits of core courses, 24 credits of Faculty Foundation courses and 12 credits of disciplinary elective courses), plus a total of 54 credits in language and Common Core courses, totalling 240 credits for the 4-year curriculum.

The syllabi of the Bachelor of Arts in Architectural Studies shall comprise the following requirements:

**University Requirements**

54 credits of compulsory University requirements which must be completed successfully:

One 6 credit course in Core University English <sup>1</sup> ; one 6 credit course in English language enhancement; and one 6 credit course in Chinese language enhancement <sup>2</sup>	18 credits
36 credits of courses in the Common Core Curriculum, comprising at least one and not more than two courses from each Area of Inquiry with not more than 24 credits of courses being selected within one academic year except where candidates are required to make up for failed credits	36 credits

**Faculty Requirements**

24 credits of compulsory Faculty requirements which must be completed successfully:

Four 6-credit Faculty Foundation courses - Introduction to Building Technology	24 credits
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<sup>1</sup> Candidates who have achieved Level 5\*\* in English Language in the Hong Kong Diploma of Secondary Education Examination, or equivalent, may at the discretion of the Faculty be exempted from this requirement and should take an elective course in lieu, see UG6 of the Regulations for First Degree Curricula.

<sup>2</sup> Students are required to successfully complete the 6-credit Faculty-specific Chinese language enhancement course, except for:

- Putonghua-speaking students who should take CUND9002 (Practical Chinese and Hong Kong Society) or CUND9003 (Cantonese for Non-Cantonese Speaking Students); and
- students who have not studied Chinese language during their secondary education or who have not attained the requisite level of competence in the Chinese language to take the Chinese language enhancement course should write to the Faculty Office to apply to be exempted from the Chinese language requirements, and (i) take a 6-credit Cantonese or Putonghua language course offered by the School of Chinese especially for international and exchange students; OR (ii) take an elective course in lieu.

<ul style="list-style-type: none"> <li>- Visual Culture</li> <li>- Housing and Cities</li> <li>- Sustainability and the Built Environment</li> </ul>	
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### **Professional Core of Architectural Studies**

The Architectural Studies curriculum has five types of courses which are taught using distinct learning modes. These are: Design Studios, Architectural History and Theory, Technology, Visual Communications and Disciplinary Elective courses.

All courses are 6 credit courses with the exception of the Design Studios which are 12 credits. All Design Studios and the majority of Architectural History and Theory, Technology, and Visual Communication courses are offered in two parts with Part I running in the first semester and Part II running in the second semester of a single academic year. This split is designed so that the knowledge and skills learnt in each course can be directly related to concurrent project work in the Design Studio course, to allow a more specific and structured approach to student learning.

The Design Studio and Visual Communication courses are assessed through 100% continuous coursework assessment. Courses on Architectural History and Theory, and Technology are assessed through combinations of continuous coursework assessment and examination.

### **Architectural Design Studio Courses**

(12 credits requiring approximately 360 hours of student learning activities per course)  
Each of the studio courses is a semester course.

These courses engage students, under staff guidance and supervision, through a range of problem-based design exercises addressing core and related issues essential to the training of an architect. The studio projects provide opportunities to apply key architecture theories and concepts learned in concurrent courses.

Teaching is conducted in lectures / workshops / review sessions (total of 96 hours of student learning activities for 12 credit courses), and involves working on projects in both group and individual formats. Work is regularly presented and discussed in critical review sessions. Site visits, data research and practical workshops are required. The courses are assessed on the portfolio of project work produced, as well as contributions to discussions and activities in the studio sessions. Assessment is by 100% continuous coursework assessment of drawings, diagrams, photos, renderings, animations, physical models, prototypes and project presentation (up to 5,000 words for the whole course).

ARCH2054	Introduction to Architectural Design	(12 credits)
ARCH2057	Architectural Design 1	(12 credits)
	(Pre-Requisite: Introduction to Architectural Design)	
ARCH3055	Architectural Design 2	(12 credits)
	(Pre-Requisite: Architectural Design 1)	
ARCH3059	Architectural Design 3	(12 credits)
	(Pre-Requisite: Architectural Design 2)	

ARCH4601	Architectural Design 4 (Pre-Requisite: Architectural Design 3)	(12 credits)
ARCH4604	Architectural Design 5 (Pre-Requisite: Architectural Design 4)	(12 credits)

### **Architectural History and Theory courses**

(6 credits requiring approximately 120-180 hours of student learning activities per course)

Collectively these courses examine the theories and practice of architecture through a comparative study of the history of architectural design and urbanism, in various geographic and cultural contexts. Teaching is conducted in lectures / workshop / review sessions (24-36 contact hours per course), and the course work includes reading of critical texts, site visits, research, case studies and the preparation of assignments, essays and reports. Work is regularly presented and discussed in critical review sessions. The courses are assessed through a combination of continuous coursework assessment and examination. Continuous assessment is usually by various methods including PowerPoint presentation, reports (up to 10,000 words), short essays (1,500 – 2,000 words), quizzes, projects and/or sketch books.

ARCH2058	Architectural History and Theory 1	(6 credits)
ARCH3058	Architectural History and Theory 2	(6 credits)
ARCH3062	Architectural History and Theory 3	(6 credits)
ARCH4603	Architectural History and Theory 4	(6 credits)
ARCH4606	Architectural History and Theory 5	(6 credits)

### **Technology courses**

(6 credits requiring approximately 120-180 hours of student learning activities per course)

The Building Technology courses explore issues of materials, construction, structures and environment as they relate to the built environment. Particular emphasis is placed upon overarching concepts of environmental sustainability and ecological design in all courses. The curriculum examines state-of-the-art “high” technology in combination with comparative studies of vernacular “low” technological practices of construction. Students are equipped with a global understanding of divergent technological practices found in numerous regionally specific conditions. The courses establish key technical concepts and knowledge that underpin students’ architectural design work. Much of the course relates to projects undertaken in the design studios. Teaching is conducted in lectures / workshops / review sessions (24-36 contact hours per course), and activities include site visits, case studies, practical demonstrations, detailed design exercises and the preparation of assignments and reports. The courses are assessed through a combination of continuous coursework assessment and examination. Continuous assessment is usually by various methods including homework, group work, quizzes, group projects, assignments, integrated coursework, presentation, and individual study. The usual output mainly comprises annotated diagrams and short written descriptions (up to a total of 5,000 words for the whole course).

ARCH2056	Building Technology 1	(6 credits)
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ARCH3067	Building Technology 2	(6 credits)
ARCH3068	Building Technology 3	(6 credits)
ARCH4602	Building Technology 4	(6 credits)
ARCH4605	Building Technology 5	(6 credits)

### **Visual communication**

(6 credits requiring approximately 120-180 hours of student learning activities per course)

These courses introduce students to the essential tools of design communication, and teach the fundamentals of graphic design as a means to describe space visually. Students learn freehand drawing, computer aided drafting, physical model building and 3D computer modelling. They investigate approaches and techniques to manage, manipulate, and envision information, using various computer software to link photography, drawing, and other media.

Teaching is conducted in lectures / workshops / review sessions (24-36 contact hours per course), and activities include case studies, practical exercises, demonstrations, and the preparation of assignments and reports. The courses are assessed through submitted course work. Assessment is 100% continuous coursework assessment of drawings, diagrams, photos, renderings, animations, physical models, prototypes and project presentation (up to 5,000 words for the whole course).

ARCH2055	Visual Communication 1	(6 credits)
ARCH3056	Visual Communication 2	(6 credits)
ARCH3060	Visual Communication 3	(6 credits)

### **Disciplinary Electives**

(6 credits requiring approximately 120-180 hours of student learning activities per course)

Disciplinary electives offer students the opportunity to gain advanced knowledge in a chosen area of study. The topics offered fall within the categories of:

- Category I: History and Theory
- Category II: Urbanism and Habitation
- Category III: Technology and Sustainability
- Category IV: Digital Media and Design Computation
- Category V: Practice and Management

Not only will students receive specialized knowledge through lectures, they will also acquire knowledge through research methodologies, as well as interactive learning and active engagement. The themes of these courses will cover contemporary and emergent issues. Students are required to take two elective courses, one in each semester, from two different categories.

It should be noted that not all courses in Categories I, II, III, IV and V would be offered every year and that new course(s) may be introduced in any year.

Category I: History and Theory

- ARCH7160 The Modern Movement and Beyond (6 credits)
- ARCH7161 Vernacular Architecture of Asia (6 credits)
- ARCH7162 Architecture and Memory (6 credits)
- ARCH7163 Architectural Histories (6 credits)
- ARCH7164 ReBuilding Utopia: Visions of Architecture in the Post-war World (6 credits)
- ARCH7165 Modern Architecture and the Visual Realm (6 credits)
- ARCH7166 Research Seminar in Visual Cultures (6 credits)
- ARCH7167 Topics in Modernism (6 credits)
- ARCH7168 The Genealogy of Contemporary Paradigms (6 credits)
- ARCH7169 Topics in Architectural History and Theory I (6 credits)
- ARCH7170 Topics in Architectural History and Theory II (6 credits)
- ARCH7174 History and Theory Field Workshop (6 credits)
- ARCH7175 Architectural Studies Field Workshop (6 credits)
- ARCH7177 Critical Readings in Modernism (6 credits)
- ARCH7178 Buddhist Architecture (6 credits)

Category II: Urbanism and Habitation

- ARCH7260 Housing in Urban Development (6 credits)
- ARCH7261 The Design of Chinese Cities (6 credits)
- ARCH7262 Topics in Urban Studies I (6 credits)
- ARCH7263 Topics in Urban Studies II (6 credits)
- ARCH7264 Contemporary Urbanism (6 credits)
- ARCH7265 Inter Cities (6 credits)
- ARCH7266 Globalization and Resistance in Architecture (6 credits)
- ARCH7267 Case Studies of Urban Development in Hong Kong (6 credits)
- ARCH7268 Urbanism Field Workshop (6 credits)

Category III: Technology and Sustainability

- ARCH7360 Building Structures and Systems (6 credits)
- ARCH7361 Sustainable Building Systems (6 credits)
- ARCH7362 Design Research on Architectural Sustainability (6 credits)
- ARCH7363 Materials, Services and Structure (6 credits)
- ARCH7364 Nonspace: Materials, Processes, and Constructions (6 credits)
- ARCH7365 Design Research on Architecture and the Environment (6 credits)
- ARCH7366 Topological Structures (6 credits)
- ARCH7367 Topics in Architectural Technologies I (6 credits)
- ARCH7368 Topics in Architectural Technologies II (6 credits)
- ARCH7369 Building Technology and Prospects (6 credits)
- ARCH7370 Sustainable Design Methods (6 credits)
- ARCH7371 Topics in Advanced Structures (6 credits)
- ARCH7372 Sustainability Field Workshop (6 credits)
- ARCH7373 Technology Field Workshop (6 credits)
- ARCH7374 Performative Membranes (6 credits)

Category IV: Digital Media and Design Computation

ARCH7460	Computer Graphics for Architects (6 credits)
ARCH7461	The Computer in Architecture (6 credits)
ARCH7462	Computer-aided Architectural Design Methods (CAAD Methods) (6 credits)
ARCH7463	Topics in Advanced Technology I (6 credits)
ARCH7464	Topics in Advanced Technology II (6 credits)
ARCH7465	Digital Media and Methods (6 credits)
ARCH7466	Parametric Structures (6 credits)
ARCH7467	Making Ways and Ways of Making (6 credits)
ARCH7468	Paradigms and Prototypes (6 credits)
ARCH7469	Explorative Architecture Techniques (6 credits)
ARCH7470	Architecture by Nature (6 credits)
ARCH7471	Fabrication Field Workshop (6 credits)

Category V: Practice and Management

ARCH7560	Aspects of Contract Management (6 credits)
ARCH7561	Principles and Practices of Building Codes (6 credits)
ARCH7562	Synthetic Information Modeling for Architectural Practice (6 credits)
ARCH7563	Community Building Workshop (6 credits)
ARCH7564	Building Information Modeling in Architectural Practice (6 credits)
ARCH7565	Introduction to Building Information Modeling and Management (6 credits)
ARCH7566	Topics in Practice and Management I (6 credits)
ARCH7567	Topics in Practice and Management II (6 credits)
ARCH7568	Design Practice Field Workshop (6 credits)

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First Year of Study

[First Semester courses]

- Visual Culture	(6 credits)
- Sustainability and the Built Environment	(6 credits)
- Core University English	(6 credits)
- 2 Common Core courses	(12 credits)

[Second Semester courses]

- Housing and Cities	(6 credits)
- Introduction to Building Technology	(6 credits)
- Chinese Language Enhancement Course	(6 credits)
- 2 Common Core courses	(12 credits)

## Second Year of Study

### [First Semester courses]

- Introduction to Architectural Design (12 credits)
- Visual Communication 1 (6 credits)
- Building Technology 1 (6 credits)
- English Language Enhancement Course (6 credits)

### [Second Semester courses]

- Architectural Design 1 (12 credits)
- Architectural History and Theory 1 (6 credits)
- 2 Common Core courses (12 credits)

## Third Year of Study

### [First Semester courses]

- Architectural Design 2 (12 credits)
- Visual Communication 2 (6 credits)
- Architectural History and Theory 2 (6 credits)
- Building Technology 2 (6 credits)

### [Second Semester courses]

- Architectural Design 3 (12 credits)
- Visual Communication 3 (6 credits)
- Architectural History and Theory 3 (6 credits)
- Building Technology 3 (6 credits)

## Final Year of Study

### [First Semester courses]

- Architectural Design 4 (12 credits)
- Building Technology 4 (6 credits)
- Architectural History and Theory 4 (6 credits)
- Disciplinary Elective (6 credits)

### [Second Semester courses]

- Architectural Design 5 (12 credits)
- Building Technology 5 (6 credits)
- Architectural History and Theory 5 (6 credits)
- Disciplinary Elective (6 credits)

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## **Year 1**

### **Semester 1**

#### **ARCH1027 Visual Culture (6 credits)**

This course introduces students to visual literacy and visual thinking. Critical thinking, visual analysis and reflection on personal experience will be emphasized. Students will

develop creative observations through taxonomies of visual grammars; and understand their active participation as both consumer and producer in the world of visual culture. Students will explore a broad introduction to art history and visual culture, introducing key themes, figures, and movements.

Assessment: 100% continuous coursework assessment

**ARCH1028 Sustainability and the Built Environment (6 credits)**

The course examines the broad range of issues confronting mankind's search for a sustainable future, such as population and urbanization; transportation and logistics; technology and mobility; water; waste; energy; food; (natural) disasters; and community and governance. Through the perspective of contemporary and historical case studies students explore how people, in their visions of the future, have sought to perfect built environments as the setting for model communities.

The ideas raised in the lectures, reinforced through weekly readings and weekly tutorial sessions, are brought together at the end of the course with an intensive workshop, in which students look to define their own vision of a sustainable community. This course is intended to inspire thinking about the way we should construct our living environments in future, in order to find a sustainable balance.

Assessment: 100% continuous coursework assessment

**CAES1000 Core University English (6 credits)**

The Core University English (CUE) course aims to enhance first-year students' academic English language proficiency in the university context. CUE focuses on developing students' academic English language skills for the Common Core Curriculum. These include the language skills needed to understand and produce spoken and written academic texts, express academic ideas and concepts clearly and in a well-structured manner and search for and use academic sources of information in their writing and speaking. Students will also complete four online-learning modules through the Moodle platform on academic grammar, academic vocabulary, citation and referencing skills and understanding and avoiding plagiarism. This course will help students to participate more effectively in their first-year university studies in English, thereby enriching their first-year experience.

Assessment: 60% continuous coursework assessment and 40% examination

**Two Common Core courses (12 credits)**

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## **Year 1**

### **Semester 2**

#### **RECO1200 Housing and Cities (6 credits)**

The aim of this course is to develop students' abilities to identify, describe and analyze critically the role and function of cities at different stages. In addition, students will be encouraged to correlate between city formation and various elements in urban development, particularly housing issues, in an increasingly globalized context. The course is explicitly interdisciplinary, and introduces recurrent and emerging debates about housing and the role and function of cities in the 21<sup>st</sup> century together with a parallel analysis of an increasingly complex matrix of social, political and economic issues as the pace of urbanization increases. Upon completion of the course students will have an appreciation of the complexity of urban issues in an increasingly urban world, and an appreciation of one of the major functions of cities - housing people.

Assessment: 100% continuous coursework assessment

#### **RECO1201 Introduction to Building Technology (6 credits)**

This course provides the fundamental knowledge and concepts for functional design and construction of buildings. The aim of the course is to help students to explain why the building stands up, identify the function of essential elements and components of buildings, including the materials used and their installation methods.

A morphological approach will be used to explain the building elements and components. Students will learn how to read from drawings and sketches, and appreciate their practical application from site visits.

Topics will cover structural elements, building envelopes and services of buildings, including the materials and methods of their installation.

Assessment: 100% continuous coursework assessment

#### **CARC9001 Practical Chinese for Architecture and Landscape Students (6 credits)**

The main objective of this course is to enhance the students' command of Chinese for the architecture profession through basic training in presentation skills and in specific techniques for the preparation of target-oriented letters, proposals, plans and reports. This course also aims to develop students' ability to engage in negotiations, debates as well as critical and creative thinking. In order to promote artistic and aesthetic appreciation, thematic lectures and topical workshops on Chinese calligraphic and artistic representations will be conducted. Site visits to traditional Chinese temples, gardens and museums will be organized to provide students with opportunities to gain hands-on experiences of the inner dynamics of Chinese culture. Students will be able to acquire sophisticated Chinese language skills and knowledge of Chinese culture within the context of the discipline of architecture.

Aims and Objectives

1. Demonstrate ability in using effective spoken and written language skills required for daily life communication, surveying and architecture related professions and academic studies.
2. Reflect on their language learning experience and devise strategies for further improvement
3. Have in-depth oral presentation, discussion and debating skills.
4. Have an overall understanding between language and cultural concepts.
5. Have a better awareness and sensitivity toward language usage, critical thinking and aesthetic quality.

Assessment: 50% continuous coursework assessment and 50% examination

## **Two Common Core courses (12 credits)**

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### **Year 2**

#### **Semester 1**

##### **ARCH2054 Introduction to Architectural Design (12 credits)**

Introduction to Architectural Design is the first in a two-course sequence forming a comprehensive introduction to the foundation studies of architecture, addressing the core and related issues essential to the training of an architect. The course aims to teach architectural literacy, to develop critical and analytical skills, to enhance visual, spatial and ideological sensibilities with certain emphasis on the presentation of ideas, concepts, and design both in the visual and verbal format. Field trips form an integral part of the course.

Assessment: 100% continuous coursework assessment

##### **ARCH2055 Visual Communication 1 (6 credits)**

###### **Drawing**

Visual Communication 1 relates the study of architecture to the study of representational forms and methods. Taught through lectures that introduce fundamentals of visual communication including: grid, line, perspective, movement studies, projection, and composition, the course is a preliminary immersion in the culture of visual studies. Visual Communication 1 also provides students with basic skills and techniques (in freehand drawing, 2D and 3D CAD drawing, laser cutting, model making, Illustrator and Photoshop software) which allow the students to experiment with many of the issues and ideas introduced. Students will be responsible for individual projects which exhibit their grasp of the lecture topics. [Note: Software involved will be Photoshop, Illustrator, InDesign and AutoCad]

Assessment: 100% continuous coursework assessment

**ARCH2056 Building Technology 1 (6 credits)****Building Principles**

This course addresses the elemental aspects of building and the fundamental principles of structure. It will present building structures in masonry, timber, concrete, steel, glass and composite and examine the constructional possibilities and limitations of these materials. Furthermore it will seek a broad based understanding of how material and constructional choices are determined by its physical site, program, culture, era and environment. The course presents the historical culture of building technology and how material, structural, construction and detail decisions influence the overall architectural project. It will be further demonstrated how the importance of well-articulated geometries and proper means of measurements in drawing and modeling are an essential and integral part of construction methods and processes. The course material will be presented through a series of lectures specific to a material and through analyses of relevant case studies.

Assessment: 100% continuous coursework assessment

**CAES9120 Communication Course for Architecture Students (6 credits)**

This English-in-the-Discipline course aims to complement the Design Studio component as well as the core curriculum of the Architecture degree programme. The focus is on the language & communication skills required to facilitate students' approach to architectural literacy.

Through spontaneous speaking tasks on their personal and social experience of architecture in HK and through critical reading & discussion of selected texts, students will focus on the language needed to express their views on architectural issues.

The out-of-class learning component of the course will supplement the main aims by consolidating students' use of architectural vocabulary and enhancing cohesion in their writing. Students will be encouraged to take responsibility to improve their own language skills in future through tutor feedback and by exploring sources of grammatical & lexical input.

Assessment: 100% continuous coursework assessment

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**Year 2****Semester 2****ARCH2057 Architectural Design 1 (12 credits)**

Architectural Design 1 is the second in a two-course sequence forming a comprehensive introduction to the foundation studies of architecture, addressing the core and related issues essential to the training of an architect. The course aims to teach architectural literacy, to develop critical and analytical skills, to enhance visual, spatial and ideological sensibilities with certain emphasis on the presentation of ideas, concepts, and design both in the visual and verbal format. Field trips form an integral part of the course.

Assessment: 100% continuous coursework assessment

Prerequisite: ARCH2054 Introduction to Architectural Design

**ARCH2058 Architectural History and Theory 1 (6 credits)**  
**Modern Architecture**

This course examines the history of modern architecture, from the apex of the Industrial Revolution to the emergence of post-modernism in the late 1960s. Students will explore modern architecture not as a cohesive or isolated product of any formal school of thought but rather as a complex and contradictory history bound by key formal, theoretical, social, cultural, technological, economic, as well as political moments in time. Throughout the course, students will touch upon two key influences in the development of modern architecture: the key material changes brought about by technology and industrialization as well as received ideas of progress stemming from the utopian legacy of the Enlightenment. This course raises major disciplinary questions, themes, and issues that will reverberate throughout the subsequent Architectural History and Theory curriculum. Content will focus primarily upon the European avant-garde, though parallel architectural developments in both North America and Asia will also be covered.

Assessment: 100% continuous coursework assessment

**Two Common Core courses (12 credits)**

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**Year 3**

**Semester 1**

**ARCH3055 Architectural Design 2 (12 credits)**

Architectural Design 2 is the first in a two-course sequence that focuses on architectural and its context with an emphasis on program, spatial organization and the use of digital tools to conceptualize and present design ideas. The course aims to develop both an awareness of architecture within an urban context and an ability to develop an architectural language and design process. A study of an existing area will be made paying particular attention to its architectural, social and environmental characteristics. This study, which includes basic site analysis, will form the basis of ensuing design projects, sketch designs and field studies. Field trips form an integral part of the course.

Assessment: 100% continuous coursework assessment

Prerequisite: ARCH2057 Architectural Design 1

**ARCH3056 Visual Communication 2 (6 credits)**  
**Visual Content**

Visual Communication 2 focuses on producing visual content through digital modelling and the communication among a variety of associated digital tools for drafts, analysis, diagrams and fabrication. Based upon the knowledge in geometry and computational logic, this course will construct a series of digital and physical models

alongside the design studio projects including topography models out of the information available to the public domain, parametric massing and envelop models with a high degree of precision, communicative models for visualizing information through different format of the visual content, analytical models for design evaluation feedback, and the production models from a series of computer controlled fabrication devices, including the CNC milling machine, the large-format laser cutter, and a three-dimensional printer.

Assessment: 100% continuous coursework assessment

**ARCH3058 Architectural History and Theory 2 (6 credits)**  
**Global Perspectives I**

The purpose of this course is two-fold: to introduce students to the development of major architectural ideas and a selected group of significant architectural monuments in Europe, from ancient times to the nineteenth century, and the unique aesthetic, cultural, and historical issues that frame them; and to present the main issues in the study of architecture and the various methods used to analyze and interpret buildings in various spatial and temporal contexts. Lectures and course content will emphasize key themes of cultural, economic, and political interconnectivity and their impact upon architectural production, not only within Europe, but around the world.

Assessment: 100% continuous coursework assessment

**ARCH3067 Building Technology 2 (6 credits)**  
**Building Sustainability**

This course introduces the ideas of sustainability through the underlying ecological principle of whole systems. Ecological systems by nature are dynamic. Therefore, a critical understanding of the functioning, limitations and requirements of the system are fundamental. Lectures and projects will explore the latent potential of these different systems (whether natural or artifice) and how they effect and are affected by the built environment.

Assessment: 100% continuous coursework assessment

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**Year 3**

**Semester 2**

**ARCH3059 Architectural Design 3 (12 credits)**

Architectural Design 3 is the second in a two-course sequence that focuses on architecture and its context with an emphasis on program, spatial organization and the use of digital tools to conceptualize and present design ideas. The course aims to develop both an awareness of architecture within an urban context and an ability to develop an architectural language and design process. A study of an existing area will be made paying particular attention to its architectural, social and environmental characteristics. This study, which includes basic site analysis, will form the basis of ensuing design projects, sketch designs and field studies. Field trips form an integral part of the course.

Assessment: 100% continuous coursework assessment

Prerequisite: ARCH3055 Architectural Design 2

**ARCH3060 Visual Communication 3 (6 credits)**

**Animate Systems**

Visual Communication 3 examines techniques associated with forming narratives in architecture. Beginning with modelling complex spaces, the focus will be on producing images and presentation line drawings. The course will introduce the concept of digital analysis for environmental and structural systems. The final project consists of an animated series of drawings which will utilize motion studies as a tool of design and discourse. [Note: Software involved will be Rhino, Grasshopper, Vray, Keyshot, Ecotect, Photoshop, and Illustrator]

Assessment: 100% continuous coursework assessment

**ARCH3062 Architectural History and Theory 3 (6 credits)**

**Global Perspectives II**

The purpose of this course is two-fold: to introduce students the development of major architectural ideas and a selected group of significant architectural monuments in East, South, and Southeast Asia, from ancient times to the nineteenth century, and the unique aesthetic, social-cultural, technological and historical issues that frame them; and to present the main issues in the study of architecture and the various methods used to analyze and interpret buildings in various spatial and temporal contexts. Lectures and course content will emphasize key themes of cultural, economic, and political interconnectivity and their impact upon architectural production, not only within Asia, but around the world.

Assessment: 100% continuous coursework assessment

**ARCH3068 Building Technology 3 (6 credits)**

**Building Structures**

The course aims provide students with an appreciation and understanding of the behavior of both horizontal spanning as well as vertical structures. The relationships between load carrying mechanisms and various structural and architectural forms will be explored and case studies of significant structures of these types will be discussed and analyzed in relation to architectural planning and design processes. Structural aspects of site investigation, foundations and retaining structures will also discussed within the context of relevant case studies.

Assessment: 100% continuous coursework assessment

## **Year 4**

### **Semester 1**

#### **ARCH4601 Architectural Design 4 (12 credits)**

Architectural Design 4, a capstone experience in the BAAS program, is the first in a two-course sequence that places emphasis on the development of a design ability to organize building processes of medium complexity within a social and economic framework and in the environmental context of Hong Kong. The course culminates with an integrated design project and is assessed by an oral examination. Other design projects, measured drawings and sketch designs supplement the main coursework. Field trips form an integral part of the course.

Assessment: 100% continuous coursework assessment

Prerequisite: ARCH3059 Architectural Design 3

#### **ARCH4602 Building Technology 4 (6 credits) Building Construction and Practice**

This course has its focus on the thorough relationship of building materials and technology with architectural design and practices. It explains various design theories as reflected in general architectural design and detailing. Topics of building types and building enclosure are identified with reference to both local and international examples. Documentation of technical documents and stages of practices in accordance with the Hong Kong Institute of Architects are interpreted.

Assessment: 100% continuous coursework assessment

#### **ARCH4603 Architectural History and Theory 4 (6 credits) The City**

This course is intended to introduce students to the scholarly study of the city, from ancient Greece to the Shenzhen Special Economic Zone. Understanding the city as a global entity shaped by dynamic and ever-changing cultural, industrial, political and social processes forms a major goal of the course. Each lecture will be devoted to the examination of several key case-studies in coordination with an important concept or methodological concern in the study of the built environment. Recognizing how these processes manifest themselves spatially, and how they impact both architectural and urban form and development over time, constitutes another major course objective. Students will be expected to complete a final research project on a topic related to a city of their own choosing.

Assessment: 100% continuous coursework assessment

#### **Disciplinary Elective (6 credits)**

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## **Year 4**

### **Semester 2**

#### **ARCH4604 Architectural Design 5 (12 credits)**

Architectural Design 5, a capstone experience in the BAAS program, is the second in a two-course sequence that places emphasis on the development of a design ability to organize building processes of medium complexity within a social and economic framework and in the environmental context of Hong Kong. The course culminates with an integrated design project and is assessed by an oral examination. Other design projects, measured drawings and sketch designs supplement the main coursework. Field trips form an integral part of the course.

Assessment: 100% continuous coursework assessment

Prerequisite: ARCH4601 Architectural Design 4

#### **ARCH4605 Building Technology 5 (6 credits) Building Integration**

Building Integration examines the architecture of integrated building systems. This course introduces methods of integration and procedures for analyzing building systems in relation to specific environmental considerations, architectural design, construction, and building life-cycle operations. Students will study exemplary case studies to understand how they work as integral buildings, what went into their consideration, and what they add to the accumulated knowledge of contemporary architectural practice. Emphasis is placed on understanding how successful integration brings all building components together in a sympathetic way - while reinforcing the synergy of the whole without sacrificing the integrity of the individual building components. Workshops, site visits, and direct engagement with local expert practitioners will form an essential part of this course. Students shall prepare analytical drawings which explore methods of building integration through appropriate selection, configuration, and combination of architectural technologies within their design studio projects.

Assessment: 100% continuous coursework assessment

#### **ARCH4606 Architectural History and Theory 5 (6 credits) Contemporary Issues in Architecture**

This course examines key discursive issues that impact architecture and the built environment today. Emphasis will be placed on understanding contemporary challenges in architectural practice and theory and their origins vis-à-vis the continuation, diversification, and transformation of the modernist tradition over the course of the last century leading up to the millennium. Major issues to be addressed include the inextricable relationship between architecture and the global-local context, the digital revolution, the conservation of urban and cultural heritage, public housing, sustainability and the impact of the impending energy crisis upon future urban development, and the interconnectedness of architecture and other disciplines. Multidisciplinary discourses on mass culture, globalization, place-making, identity and post-colonialism will also be introduced.



Assessment: 100% continuous coursework assessment

### **Disciplinary Elective (6 credits)**

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#### **Disciplinary Elective Courses List**

**Students can choose to take the disciplinary elective courses from this approved list only.**

#### Category I: History and Theory

##### **ARCH7160 The Modern Movement and Beyond (6 credits)**

The course is concerned with theoretical aspects of design activities in architecture. It attempts to trace the evolution of spatial concepts significant to the modern movement and beyond. The course consists of two parts: analytical and synthetic. The analytical part is to develop the students' skill for deeper understanding of the complexity of the built form. The synthetic part attempts to follow the vicissitudes of architectural design through the examination of the works of significant architects.

Assessment: 100% continuous assessment

##### **ARCH7161 Vernacular Architecture of Asia (6 credits)**

Vernacular built-form is the most obvious and direct means of expression of a people and their culture. Through the examination of different indigenous building types in different parts of Asia, viz. China, Japan, Indonesia, Malaysia and Thailand, students are able to develop a broader sense of understanding of the relationship between architecture, climate and culture.

Assessment: 100% continuous assessment

##### **ARCH7162 Architecture and Memory (6 credits)**

This course introduces students to a broad and critical approach in the making and memorializing of our built environment and cultural landscapes. With an increased focus on appropriateness and conservation in architecture and the city today, it is imperative for students and architects to come to terms with the arguments, philosophies and genealogies leading up to the formulations of building practices and design methods in architecture. Readings for this course include foundational texts from interdisciplinary fields of philosophy, literature, political science, theology, anthropology, sociology, psychology, history, geography, fine arts, journalism, architecture and urbanism. The socio-political impetus behind these operative fields of memory reminds us that humanity often seeks to control and manipulate how our built environment works, and it is precisely the realms of imaging and the imaginary that are most susceptible to such exploitation. This course aims to survey and position each of these discourses towards the way we design, conserve and reconstruct architecture and the city.

Assessment: 100% continuous assessment

**ARCH7163 Architectural Histories (6 credits)**

This reading seminar offers an introduction to the historiography of architectural history and its predominant methodologies. Over the course of the semester, and proceeding in a roughly chronological manner, we will examine some of the key texts in architectural history, their authors, and their respective foci upon fundamental questions of structure, style, materials, and the historical origins of architecture itself.

The course's main objective is to teach students how to think critically about how different histories of architecture have been constructed over time in a variety of particular political, social, as well as cultural contexts. Through these texts, students will also learn about the architects, buildings, and ideas that comprise them. More generally, this course provides students with a variety of theoretical and analytical tools necessary to develop a critical and comparative perspective with respect to the reading and writing of architectural history and theory today.

Assessment: 100% continuous assessment

**ARCH7164 ReBuilding Utopia: Visions of Architecture in the Post-war World (6 credits)**

This course examines the occurrences of the utopian tendency within the production of architecture in the aftermath of World War II – an event of global magnitude that triggered a series of political, social, economic and cultural consequences in its wake. The bipolar struggle that characterized most of the latter half of the 20<sup>th</sup> century implicated architecture in many ways and at many levels. Amidst postwar reconstruction in Europe and Japan, the continuation of war via the Cold War, widespread decolonization and the territorial divisions of the globe into First, Second and Third Worlds, the rise of America as the dominant superpower, and the internationalization of American popular culture, visions of the future were conceived. Within these post-war contexts and post-colonial realities, the promise of utopia was not simply proclaimed by the avant-gardes. Under the rubric of democracy and modernization, the United Nations, governments of nations, non-governmental organizations, academic institutions and multi-disciplinary groups, took on the task of vision building. At the same time, there emerged those who conceived of counter-utopias and dystopias as responses to the experiences of global homogenization and upheavals occurring at local and regional levels. How was architecture instrumental in forwarding the objectives of the visionaries? How did technologies, methodologies and mindsets find their way into architecture and their corresponding discourses? In what ways did the multiple trajectories of utopia and utopian building inform the history of the discipline as it is understood today? Class discussions are based on assigned readings and individual presentations. Readings are primarily architectural texts but also include definitive texts from other disciplines including cultural studies, geography, sociology, and philosophy that are important in framing pertinent issues or events.

Assessment: 100% continuous assessment

**ARCH7165 Modern Architecture and the Visual Realm (6 credits)**

The objective of this seminar is to investigate the relationship of modern architectural work and the visual realm. The development of architectural theory, publication and/or detailing which simultaneously accept and deny the perception on modern architecture as a retinal art form will be the subject of discussion and investigation. In-depth analysis conducted on selected modern buildings form the basis of argument for students to develop their own critical thinking towards architectural theory and building appreciations.

Assessment: 100% continuous assessment

**ARCH7166 Research Seminar in Visual Cultures (6 credits)**

This course is a visual research seminar with a serious interest in self-directed investigation into urgent spatial, social, cultural, political and economic issues in the world of visual culture today. The aim of this seminar course is to provide a theoretical knowledge, independent visual research issues of cultural difference, performativity, visual display, aurality, encounters with audiences and the production of subjectivities. The seminar with collaborate art institution develop activism towards issues of visual cultures, emphasis will be put on visual research and its production.

Assessment: 100% continuous assessment

**ARCH7167 Topics in Modernism (6 credits)**

This seminar investigates the multitude of theories and practices made manifest in architectural and urban form over the course of the late 19<sup>th</sup> and 20<sup>th</sup> centuries. Building upon the fundamental question of what constitutes modernity, modernization, and modernism, we will situate architecture, urbanism, and the architect within a series of broader epistemologies and theoretical concepts, including the diaspora, cross-cultural interaction, globalization, memory, nationalism, Orientalism, the nature of dissent, regionalism, technology, and the problem of translation. Through intensive reading, in-class discussion, and students' individual research projects, the course will also provide a forum for students to discuss these issues with each other and explore new lines of critical inquiry as they pertain to the nature of design research.

Assessment: 100% continuous assessment

**ARCH7168 The Genealogy of Contemporary Paradigms (6 credits)**

This seminar module aims to map the historical and theoretical background, as well as a possible future, to contemporary design discourses and concepts associated to the prevalent methodologies inherent in today's design and production technologies, while confronting the imminent intellectual challenge facing our generation of architects: To discover the theoretical, cultural and social implications of our new computational practices. Through a survey of paradigms, their historical lineages, trajectories and seminal shifts, this seminar explores new and emerging theoretical knowledge emanating from critical and social theory, philosophy, the nascent arena of computational theory, mathematics, biology and the complexity and natural sciences. The primary references for this seminar will be a series of historical and contemporary texts, with links to spatial, material, architectural and urban examples. Students will

engage in presentations, debates, writing short texts, and the making of a book as the shared outcome of the seminar.

Assessment: 100% continuous assessment

**ARCH7169 Topics in Architectural History and Theory I (6 credits)**

This course gives students the opportunity to further explore specific issues and topics in architectural history and theory. Topics change from year to year based on course contents.

Assessment: 100% continuous assessment

**ARCH7170 Topics in Architectural History and Theory II (6 credits)**

This course gives students the opportunity to further explore specific issues and topics in architectural history and theory. Topics change from year to year based on course contents.

Assessment: 100% continuous assessment

**ARCH7174 History and Theory Field Workshop (6 credits)**

This course is an intensive workshop involving in depth field research in the topic of history and theory.

Assessment: 100% continuous assessment

**ARCH7175 Architectural Studies Field Workshop (6 credits)**

This course is an intensive workshop involving in depth field research in the topic of architectural studies.

Assessment: 100% continuous assessment

**ARCH7177 Critical Readings in Modernism (6 credits)**

The course takes Walter Benjamin's The Arcades Project as a model for reading urban experience. Through an assemblage of fragmentary notes — from philosophy, journalism, publicity and poetry — Benjamin left behind a record of 19th century Paris and a template for the material history of cities. Students will look closely at The Arcades Project (including sources such as Baudelaire, Bergson, Proust, Corbusier and Giedion), while at the same time compiling a collective reading of contemporary Hong Kong.

Assessment: 100% continuous assessment

**ARCH7178 Buddhist Architecture (6 credits)**

This course provides students the overview of Buddhist Architecture including the historical origin, meaning and cultural background of different building typologies of Buddhism in various regions including India, Sri Lanka, Han China, Japan and Tibet etc. This is also an introduction to the understanding of Oriental culture where Buddhism is an important basis. The course will cover the basic forms and symbolic meaning of Buddhist Architecture in the Theravada, Mahayana, Vajrayana and Zen schools of Buddhism with reference to the architectural examples in the appropriate

regions. The architecture of Buddhism will cover monasteries, rock-hewn caves, stupas, temples as well as the Asoka pillar. Important architectural icons will be the four holiest sites in India, Samye monastery in Tibet, Ryoanji Temple, Horyuji and Keninji Temples in Japan, Famen Temple in China, Borobudur in Indonesia, Cave temples of Dambulla in Sri Lanka etc... Finally, the influence of Buddhist philosophy on some Modern Architecture will also be explained.

Assessment: 100% continuous assessment

## Category II: Urbanism and Habitation

### **ARCH7260 Housing in Urban Development (6 credits)**

The course investigates the production of housing within the social, political and spatial conditions in urban development. Topics include social and economic determinants of housing location, standards and quality of design; impact on urban development; analysis of housing production including site and infrastructure, provisions; constraints and innovations in the housing industry; and case studies by field trip.

Assessment: 100% continuous assessment

### **ARCH7261 The Design of Chinese Cities (6 credits)**

The course looks into the basic physical organization and development of traditional, colonial and contemporary Chinese cities. It aims to introduce methods in understanding how built forms, particularly urban public spaces and city fabric, express certain aspirations of a culture, and how culture itself conditions their physical shape. It also addresses the issue of urban transformation: how cities took the shape they did? What and why have they changed from their past forms to the present shape?

Field trips form an integral part of the course.

Assessment: 100% continuous assessment

### **ARCH7262 Topics in Urban Studies I (6 credits)**

This course gives students the opportunity to further explore specific issues and topics in urban design and planning. Topics change from year to year based on course contents.

Assessment: 100% continuous assessment

### **ARCH7263 Topics in Urban Studies II (6 credits)**

This course gives students the opportunity to further explore specific issues and topics in urban design and planning. Topics change from year to year based on course contents.

Assessment: 100% continuous assessment

### **ARCH7264 Contemporary Urbanism (6 credits)**

This course integrates urban analysis research and architectural design methodologies to examine relationships between architecture and urbanism through the development of a working understanding of urban and architectural form in the context of the Contemporary City. The course examines the contemporary urban condition through

readings of critical theories, analysis of developmental models, as well as empirical investigation of urban sites. In conjunction with physical, historical, social and economic research, alternative design strategies are explored to challenge existing presumptions and models of the contemporary urbanism.

Assessment: 100% continuous assessment

### **ARCH7265 Inter Cities (6 credits)**

Inter Cities will explore transitional areas that are about to undergo significant urban transformation either in terms of massive growth or shrinkage. Usually occupying peripheral territories on the edge of cities these areas display unique characteristics – they are anomalies, estranged and contradictory to normative planning methods. Their condition is patchy and often incoherent mixing landscapes, industrial wastelands, and pockets of residential enclaves. Their governance and control is often contested involving overlapping political and individual desires. As they are emergent they display conditions of urbanism that are un-tested and somehow prototypical providing clues to how the future of our cities may evolve. To this extent Inter Cities are at the forefront of contemporary urbanism. The course will examine the conflicting forces that shape these unique urban landscapes including economy, politics, globalisation, industry, environmental conditions and shifting cultural values. Classes will discuss theoretical texts, examine case study examples, debate key issues and introduce methodological research tools.

Assessment: 100% continuous assessment

### **ARCH7266 Globalization and Resistance in Architecture (6 credits)**

This course aims to examine how the condition of globalization reveals itself in architecture and the urban environment. With an improved understanding of the various forces at play, students are encouraged to think of ways to support a citizenry participation and critique in the making of our buildings and cities in the era of globalization. Paul Ricoeur described a condition of “universal civilization” that encapsulates a scientific spirit and a consumer culture. Today, we are perhaps operating universally under the effects of globalization, aided in no small part by the advent of the information age as well as a more liberal flow of capital and labor. This course will seek architecture as a barometer that measures these effects – appraising specifically the qualities and identities of buildings and districts built or transformed as a result of globalization. Through ten specific readings and building types, the course will examine the co-operative and resistant practices and forms at play.

Assessment: 100% continuous assessment

### **ARCH7267 Case Studies of Urban Development in Hong Kong (6 credits)**

Although Hong Kong has a relative short history of development as compare to other major cities in the world, but due to political, geographical, cultural and environmental factors, it has become the unique model of a high density metropolis. This course aims to allow students to examine and research on real cases of urban development which have led to its present phenomenon.

Aspects of studies include:- government policies, laws in development controls, housing, urban renewal, heritage preservation, sustainability issues, infrastructure supports, harbour front enhancement etc. will be discussed. Students are expected to analysis and participate with assignments of particular topics of their choice in relation to the course.

Assessment: 100% continuous assessment

### **ARCH7268 Urbanism Field Workshop (6 credits)**

This course is an intensive workshop involving in depth field research in the topic of urbanism.

Assessment: 100% continuous assessment

### Category III: Technology and Sustainability

### **ARCH7360 Building Structures and Systems (6 credits)**

The course is designed to close the gap between structural theory and design. The subject is divided into two parts. The first part highlights the more important aspects of the structural planning process from architects' point of view. The second, analytical part, develops candidates' skills through case studies of actual projects leading to a deeper understanding of the complexities of the structural problem. Topics such as building failures, structural alteration and additions, building regulations, geotechnics, foundations on difficult grounds and computer-aided structural design/analysis will be discussed.

The course provides an understanding of the realities of designing and manufacturing components of buildings within aesthetic, economic and time frameworks. Design construction communication is studied through production and technical drawings, manufacturer's shop drawings with special emphasis on the use of materials and manufacturing technology. Direct studies of manufacturing techniques both traditional and new are undertaken by field trips to factories and construction sites. Construction systems including the systems approach, standardized buildings, contractual strategies and their impact on the evolution of building production are investigated.

Field trips to construction sites and design offices form an integral part of the course.

Assessment: 100% continuous assessment

### **ARCH7361 Sustainable Building Systems (6 credits)**

Advanced studies in innovative technologies are undertaken. Energy efficient and intelligent buildings are analyzed and advances in parallel industries such as aerospace, shipbuilding and the transportation industries are studied for applicability in the building industry. Computer modelling is used extensively in this option. Total energy systems are investigated as are low environmental impact techniques.

Assessment: 100% continuous assessment

### **ARCH7362 Design Research on Architectural Sustainability (6 credits)**

This course focuses on new and more precise understandings of the way in which architects design and work with principles of sustainability. It foregrounds design research and looks at the “architectural” use of various energy-related building technologies. Students will be introduced to critical and noteworthy texts underpinning the more general relationships between architectural design and technology. Case studies, model making and prototypical modes of research will be used as a vehicle to discern specific disciplinary design techniques and strategies.

Assessment: 100% continuous assessment

**ARCH7363 Materials, Services and Structure (6 credits)**

This course concentrates on understanding and applying the principles of building structures, building materials and construction technology, environmental controls and building services, in an advanced level of integrated architectural design, geared to the local context. For building materials and construction technology, the emphasis is on the performance criteria and applications of building materials, components and systems of construction. For building structures, the emphasis is on structural schemes systems relating to local building regulations and codes. For environmental controls and building services, the emphasis is on local regulations and codes, and coordination of services for heating, ventilation, air-conditioning, fire safety, plumbing and drainage, electrical, lift and escalators, etc.

Assessment: 100% continuous assessment

**ARCH7364 Nonspace: Materials, Processes, and Constructions (6 credits)**

While space is the most distinguished objective of architecture, the boundaries and character of space are defined by elements of non-space: materials, processes, and constructions. This is the paradox of architecture. This course explores a conceptual framework for the environmentally responsive design of building assemblies, based upon a clear understanding of materials and their inherent processes and construction technologies. Building materials will be analyzed and carefully drawn with emphasis on their physical and architectural properties, functions, and behavior in manufactured and installed constructions. The design of building assemblies made from concrete, masonry, timber, steel, and glass will be examined in relation to the forces that shape their composition and performance.

Assessment: 100% continuous assessment

**ARCH7365 Design Research on Architecture and the Environment (6 credits)**

This course focuses on case studies and design experiments related to architecture and the environment. It foregrounds an understanding of the effects of architecture on its immediate environment, literally the environments that buildings create. This course will be conducted as a research seminar, the predominate mode of thinking, intellectual development and idea formation for the course is physical modeling and diagramming. Each week students will be required to do a series of readings and will work in teams to analyze two precedents through sectional models, drawings and diagrams. Students will study two precedents over the course of the entire semester devoting approximately a half a semester to each. Students will be asked to cull out specific design ideas from readings and associate them with sectional models and drawings for



in class discussions and pin ups. Case studies, model making and prototypical modes of research will be used as a vehicle to discern specific disciplinary design techniques and strategies.

Assessment: 100% continuous assessment

**ARCH7366 Topological Structures (6 credits)**

This intensive workshop focuses on two main objectives. The first one concentrates on a practical investigation on topological surfaces and their spatial properties to expand the language of architecture. The second one addresses the issue of parts to whole and the question of constructability. Where in the first part students will learn how to draw and construct intricate surfaces digitally using software packages like Maya and Rhino, the second part focuses on the parametric discretization of these morphologies and later how to digitally manufacture them.

Assessment: 100% continuous assessment

**ARCH7367 Topics in Architectural Technologies I (6 credits)**

This course gives students the opportunity to further explore specific issues and topics in architectural technologies. Topics change from year to year based on course contents.

Assessment: 100% continuous assessment

**ARCH7368 Topics in Architectural Technologies II (6 credits)**

This course gives students the opportunity to further explore specific issues and topics in architectural technologies. Topics change from year to year based on course contents.

Assessment: 100% continuous assessment

**ARCH7369 Building Technology and Prospects (6 credits)**

The intention of this course is three-fold. First, for students to learn about existing building technology beyond conventional building systems such as mechanical, electrical, plumbing, fire services, etc., and how such technological advancement has been changing the design and construction industry, the environment, as well as users' experience. Second, to inspire and encourage students to develop a vision of the future of technology, its application to/integration with architecture, and its interface with users and environment. Third, for students to explore how technology is going to bring innovation to sustainability design, and how individuals or companies can use building technology to make a positive impact to architecture and the environment.

Assessment: 100% continuous assessment

**ARCH7370 Sustainable Design Methods (6 credits)**

This course gives students the opportunity to further explore specific issues and topics in sustainable building technology. The course will present precedent projects and case studies and ask students to undertake projects that deal with strategies for sustainable building design.

Assessment: 100% continuous assessment

**ARCH7371 Topics in Advanced Structures (6 credits)**

This course gives students the opportunity to further explore specific issues and topics in advanced structural systems for architecture. The course will present precedent projects, case studies and strategies for integrating structural principles into the design process. Course topics may include, but are not limited to the study of established and exploratory structural systems, construction materials, and fabrication techniques.

Assessment: 100% continuous assessment

**ARCH7372 Sustainability Field Workshop (6 credits)**

This course is an intensive workshop involving in depth field research in the topic of sustainability.

Assessment: 100% continuous assessment

**ARCH7373 Technology Field Workshop (6 credits)**

This course is an intensive workshop involving in depth field research in the topic of technology.

Assessment: 100% continuous assessment

**ARCH7374 Performative Membranes (6 credits)**

This course explores the history of membrane use in forms and architecture with a focus on the most recent developments being explored by architects, manufacturers, and scientists. While building on the canon of work that has been done with membranes in the past, students will explore the membrane as a medium, formwork, and environmental interface. Emphasis will be placed on the performative characteristics of membrane technology and architectural layering of various membrane technologies with respect to structural design methods. Membrane materials, PTFE, ETFE, plastics, foils, meshes, printing, laminating, and vacuum forming technologies will be explored relative to new potentials for spatial, structural, and environmental performance. Each student will design a membrane structure and build a prototype of a detail of their membrane.

Assessment: 100% continuous assessment

Category IV: Digital Media and Design Computation

**ARCH7460 Computer Graphics for Architects (6 credits)**

Through a series of exercises, presentations, and discussions, the course will investigate the evolving relationship between architecture and its means of representation, as well as broader issues of technology, information, and culture. While the course will explore the impact of computing technology on the representation of architecture, it will also provide a firm understanding of some of the software required to do so.

Assessment: 100% continuous assessment

**ARCH7461 The Computer in Architecture (6 credits)**

This course will focus on methods for advanced multi-media modeling. It incorporates a range of both analogue and digital methods. Students with an interest in making models and using models as tools to explore architectural design are well suited to the seminar which will range from looking at fast, low tech hands on techniques to more involved digital techniques.

Using simply designed and constrained “primitive” models as physical prototypes, students will become acquainted with different forms of digital modeling as related to various material outputs ranging from (but not limited to) 3d printing, laser cutting and cnc milling. Models will be developed to integrate material qualities, lighting, landscape and other “media” through the introduction of various finishing techniques such as airbrushing and dry brushing. Basic photographic documentation techniques will be introduced and advanced photographic techniques elucidated for student interest.

Assessment: 100% continuous assessment

**ARCH7462 Computer-aided Architectural Design Methods (CAAD Methods) (6 credits)**

A study of current computer techniques and technologies which can be used by architects to develop design methods that fully exploit contemporary computers as design aids.

Assessment: 100% continuous assessment

**ARCH7463 Topics in Advanced Technology I (6 credits)**

In Site of Erasure students will create short films in order to specifically persuade an audience of a precise architectural position. Through a series of lectures, discussions, presentations, and filmic exercises, the course will investigate the relationship between architecture and film, as well as broader issues that arise when information and socio-political concerns intertwine.

Topics change from year to year based on course contents.

Assessment: 100% continuous assessment

**ARCH7464 Topics in Advanced Technology II (6 credits)**

In Site of Erasure students will create short films in order to specifically persuade an audience of a precise architectural position. Through a series of lectures, discussions, presentations, and filmic exercises, the course will investigate the relationship between architecture and film, as well as broader issues that arise when information and socio-political concerns intertwine.

Topics change from year to year based on course contents.

Assessment: 100% continuous assessment

**ARCH7465 Digital Media and Methods (6 credits)**

This course provides a comprehensive introduction for students to three-dimensional digital media and methods for architects. The focus of the course is on the application of relevant software packages towards design, analysis, fabrication, and documentation, emphasising topics as the controlled modeling of complex form and the rationalization non-planar geometries. The goal of the class is to bring students with basic skills in the use of software for architects quickly up to speed with essential tools and processes.

Assessment: 100% continuous assessment

**ARCH7466 Parametric Structures (6 credits)**

This research seminar will examine the concept of parametric systems and their applications in and implication on architecture. Through a series of lectures and guided design exercises students will be introduced to the theoretical background and logic of parametric systems and the generation of them in the digital environment. Historical building precedents of specific architectural typologies will be examined to open up a critical dialogue between existing physical constraints and the digital realm. Different design techniques will be studied and deployed in order to generate several parametrically driven prototypes that have the capacity to form innovative architectural structures.

Assessment: 100% continuous assessment

**ARCH7467 Making Ways and Ways of Making (6 credits)**

One to one design is not an issue of how large a physical output becomes but rather how the properties of real materials are vigorously experimented with at any particular scale. The seminar will strive to bring forward inventive means of making that engage material behaviours in response to external forces at work while remaining receptive to its investigated scale. Making ways for such prototypes will address the necessity to construct intermediary frameworks which will become an integral part of the making process. This workshop based seminar, supported by a series of lectures, will encourage students to explore procedural logics of making that expand on and revisit initial design premises from a series of physical explorations at incrementing scales. Each scale of investigation will have its own design focus and will inform the overall conception of a collective design-built project realized by the students near the end of the course. The core ideology is to influence the process of architectural design in reverse; that is by synthesizing an architectural proposal from the findings emerging out of a succession of well crafted experiments.

Assessment: 100% continuous assessment

**ARCH7468 Paradigms and Prototypes (6 credits)**

This one term graduate seminar module develops knowledge and skills related to the design of prototypical models of architecture and urbanism, by means of students' analysis and evaluation of recent, innovative, seminal design projects, and their related techniques, strategies, discourses, and effects. The aim of this seminar course is to provide a thorough background to the theoretical knowledge related to work pursued in contemporary avant-garde design studios emphasising computational design and

fabrication techniques. The seminar creates an important opportunity for students to reflect upon and evaluate their own ongoing design objectives and interests, in relation to recent design projects, and their affiliated techniques, concepts and discourses.

Assessment: 100% continuous assessment

**ARCH7469 Explorative Architecture Techniques (6 credits)**

The profound embedding of advanced digital and information-based tools in all aspects of explorative architectural practices has caused a radical revolution in contemporary design techniques. By combining case studies of today's leading architects with tutorials on advanced 3D modeling, parametric and algorithmic design methods (scripting), this course investigates the use of digital design techniques in the translation of geometries into built form. The aim is to gain an understanding of the geometric challenges, material possibilities and limitations faced with when working within this new paradigm.

Assessment: 100% continuous assessment

**ARCH7470 Architecture by Nature (6 credits)**

Architecture by nature evolves autonomously from its users and engages with the dynamic complicity between built projects and processes in nature. It is less concerned with environmental compliance and more with the productive collision between architecture and nature: landward, seaward and skyward. We will study intentions from ideal and elementary architectural precedents throughout history. These case studies are grafted in and wrought by extreme environments and will offer a platform from which students will develop their own project. Time based procedures will be introduced as a mean to register physical transformations in the natural environment. We will seek to create specific architectural prototypes that without dependence on nature would simply become generic; instruments taking on the active and physical role of measuring spatially the changing nature of environmental force, otherwise intangible. The essential question for the seminar is: "How does the architect project adaptively and in complicity with such evolving physical and spatial environments?"

Assessment: 100% continuous assessment

**ARCH7471 Fabrication Field Workshop (6 credits)**

This course is an intensive workshop involving in depth field research in the topic of fabrication.

Assessment: 100% continuous assessment

Category V: Practice and Management

**ARCH7560 Aspects of Contract Management (6 credits)**

Detail analysis and studies of standard contracts and sub-contracts for public and private works in Hong Kong. Practical problems in contract administration and project management, the cooperation and partnering of the architect, project manager and the contractor will be examined. Claims, counter-claims, mediation and arbitration will be considered.

Assessment: 100% continuous assessment

**ARCH7561 Principles and Practices of Building Codes (6 credits)**

The course covers the area of Building Control in detail. The principles, practices and applications of the Building Codes, including the Buildings Ordinance, Building Regulations, Codes of Practices, and Practice Notes for Authorized Persons, will be extensively discussed and explained. Lectures will be supplemented with case studies involving projects in local architectural practices.

Assessment: 40-60% continuous assessment and 40-60% written examination

**ARCH7562 Synthetic Information Modeling for Architectural Practice (6 credits)**

The development of information modeling has changed contemporary architectural practice profoundly, from design concepts to project management and construction. Rather than using information modeling techniques as execution of design ideas, this course aims to teach students how to create, produce, manage and communicate design information effectively and efficiently in the context of architectural practice. The information modeling platform for the course is Digital Project Gehry Technologies, one of the most sophisticated digital software currently available in architectural industry. The essential objective is to equip students with the knowledge and skills to apply information modeling (from fundamental to advanced level) to architectural design for synthetic production information and construction documentation. We will emphasize the underlying thinking and systematic process during the various activities, e.g. software demonstrations, case studies, office visit, hands-on exercises and design charrette. Students are encouraged to use the tools in their own ways as per individual design challenges after following the standard demonstrations. At the end of the course, students are expected to use Digital Project to deliver a small assembly of timber architecture in both digital and physical formats.

Assessment: 100% continuous assessment

**ARCH7563 Community Building Workshop (6 credits)**

The course intends to investigate issues in design and construction through hand-on experiences and involvements in an actual building process. By participating in the design and construction of various types of community projects including temporary or permanent installations, shelters or buildings, students are to explore the nature of materials and structure, methods in construction, as well as modes of fabrication and design media. The process also provides opportunities for students to interact and exchange knowledge with different stakeholders involving in the building process: users, contractors, managers and sponsors. The focus of task for each year may vary pending on the nature of project and resources available, but a commitment to the community and a team work spirit, as well as the appreciation of the tactile and tectonic quality in design will always be essential part for the course.

Assessment: 100% continuous assessment

**ARCH7564 Building Information Modeling in Architectural Practice (6 credits)**

BIM technology is more and more often adopted in architectural practices throughout the world as the main tool for design, managing and documenting projects. Successful implementation of BIM for day to day work in an office and taking most advantage of the technology requires proper configurations, methodologies and standards. Without such structured approach and without applying best practices developed by the industry, BIM may easily become more of a problem than a solution. BIM technology allows integration within one project database of Architecture, Structure, MEP (Mechanical, Electrical, Plumbing) and others to create a complete virtual model of a future building. Such a model is like a living entity, constantly updated throughout the design process and later during the building lifetime. In various stages of this lifetime a BIM model can be used for many purposes from scheduling and calculating areas, curtain wall costing, outputting documentation, performing thermal analysis to managing tenants and security issues in the field of building maintenance. Achieving those goals requires understanding of capabilities and limitations of the technology in very practical aspects, but also orientation in prospects and future opportunities for BIM.

Assessment: 100% continuous assessment

### **ARCH7565 Introduction to Building Information Modeling and Management (6 credits)**

BIM technology is changing and will continue to change the face of architectural profession. It influences all stages of design and project management and aims to integrate within one database Architecture, Structural Design, MEP (Mechanical, Electrical, Plumbing) and others. This database, which contains a 3D model of a building, formal project documentation and other information is a dynamic object, constantly updated throughout the whole design process and building lifetime. In any stage of the project it may be a source of invaluable, up-to-date information about building parameters and physical performance, which would be difficult or expensive to obtain using traditional methods. Such data can help the architect to make more informed decisions at earlier stages of design, which greatly reduces costly changes and errors. The objective of this course is to familiarize students with basic ideas and applications of BIM technology using the most widely adopted BIM software package, Revit Architecture. Examples used for this purpose during the course will be based on real projects and case studies, which count themselves among the most complex and innovative in terms of design, modeling approach and project management.

Assessment: 100% continuous assessment

### **ARCH7566 Topics in Practice and Management I (6 credits)**

*Architects & Money* takes on an often controversial and frequently shunned topic in the architectural profession – money – and all the messy baggage that accompanies it. Purposefully positioned to bridge the divide between architecture and development, this course will offer practical knowledge on how the world of real estate investment and development really works, and simultaneously question the definition of the value of design. The course will also look deeper into the role of the architect in today's global cities and why understanding the financial risks of development – indeed being able to manipulate and mitigate such risks – positions the architect to play a more determinate role in the game and at long last, *grab a piece of the action*. Sessions are

envisioned to alternate between seminar-style presentations and more interactive workshops/case studies. A working knowledge of Excel is a course requirement.

Topics change from year to year based on course contents.

Assessment: 100% continuous assessment

**ARCH7567 Topics in Practice and Management II (6 credits)**

*Architects & Money* takes on an often controversial and frequently shunned topic in the architectural profession – money – and all the messy baggage that accompanies it. Purposefully positioned to bridge the divide between architecture and development, this course will offer practical knowledge on how the world of real estate investment and development really works, and simultaneously question the definition of the value of design. The course will also look deeper into the role of the architect in today's global cities and why understanding the financial risks of development – indeed being able to manipulate and mitigate such risks – positions the architect to play a more determinate role in the game and at long last, *grab a piece of the action*. Sessions are envisioned to alternate between seminar-style presentations and more interactive workshops/case studies. A working knowledge of Excel is a course requirement.

Topics change from year to year based on course contents.

Assessment: 100% continuous assessment

**ARCH7568 Design Practice Field Workshop (6 credits)**

This course is an intensive workshop involving in depth field research in the topic of design practice.

Assessment: 100% continuous assessment