

Doctor of International Real Estate and Construction (DIREC)

2023 / 2024
Programme Requirement Document

Programme Code : 32109

Details of the regulations set out above may not be up-to-date at the time of production of this document. Please refer to the Student Handbook of the relevant year for the latest details.

This Programme Requirement Document is subject to review and change, which the Department of Building and Real Estate (BRE) may decide to make from time to time. Students will be informed of the changes as and when appropriate.

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Part II Subject Description Forms

Subject Code

Subject Title

Compulsory Subjects

BRE 680	Advanced Research Methods for Real Estate and Construction
BRE 681	International Study Visit (Europe or North America)
BRE 682	International Study Visit (Asia Pacific)

Dissertation

BRE 691	Doctoral Thesis I
BRE 692	Doctoral Thesis II

Elective Subjects

BRE 683	Strategic Project Management
BRE 684	Digital Technologies for Construction Projects
BRE 685	Real Estate Finance and Appraisal
BRE 686	Urban and Regional Planning
BRE 687	Topical Issues in Construction
BRE 688	Topical Issues in Real Estate
BRE 689	Professional Workshop in Real Estate
BRE 690	Professional Workshop in Construction

Part I :
General Information

Part I : General Information

1 The Programme

The Doctor of International Real Estate and Construction programme (DIREC) (國際房地產及建築博士) is a wholly new programme, designed for senior executives with more than 8 years of experience in the construction and real estate industry who possess core knowledge and basic competence to fulfill their scope of duties. The programme is hosted by the Department of Building and Real Estate (BRE). Many of the students would have attained significant knowledge base. This programme is designed to help them build up new ideas, instill positive values and winning attitudes, upscale capabilities for self-fulfillment and career advancement. It aims to provide a genuinely innovative professional development experience to enrich executives' theoretical and technical knowledge, develop their management and leadership skills, and equip them with the right mindset for senior or top management in the modern construction and real estate finance market.

The Rationale

The programme is designed with an International dimension, Inter-disciplinary in nature, Integrating knowledge from various fields and sharpening understandings of the newest and most Innovative in relevant areas. The rationale for this programme also lies in the recognition that conventional approaches to 'teaching managers to manage' through the development of their functional skills and knowledge have significant limitations. These limitations are particularly marked when the participants in question are the most senior executives for whom functional skills are relatively unimportant. To be specific, conventional approaches pay little attention to the necessarily limited ability of every individual to approach problems from multiple alternative perspectives, and to the essentially 'human' nature of executive and managerial work.

Places of Delivery

This programme is to be offered in Hong Kong.

2 Programme Aims and Intended Learning Outcomes

The programme aims relating to personal and professional achievement are summarized as follows:

1. To enrich participants' theoretical and technical knowledge for top level advancement in the Construction and Real Estate industry;
2. To develop participants' management and leadership skills;
3. To equip participants with applicable, alternative perspectives to address competition in the modern construction and real estate market

Students will be provided with the most advanced knowledge to understand the operation of the construction and real estate markets including the study of construction project management, application of information technology in the construction and real estate industry, urban economic processes, urban and regional planning, price determination in land and real estate properties, environmental issues and other relevant professional knowledge. Due to the complex influences from public policy and global economic environment, this programme will support the students with comprehensive thinking and analysis methods.

Upon successful completion of this programme, students will be able to achieve the following proposed intended learning outcomes:

- a) possess an in-depth knowledge and understanding of relevant analytical and quantitative techniques in the construction and real estate market;
- b) provide or analyze professional advices regarding appropriate long-term and short-term funding for contractors, developers and investors;
- c) enhance management and leadership skills as a forward-looking and innovative executive in the complex economic environment;
- d) evaluate the development worth of a project and apply an appropriate development appraisal technique more efficiently and effectively;
- e) evaluate and ameliorate the constraints on innovative and meaningful behavior imposed upon them by their prior experiences, cultural setting and cognitive styles;
- f) invoke and make effective use of design thinking, methods and perspectives to generate innovative and meaningful solutions to issues which arise in the context of their organizations

3 Entrance Requirements

- A Master's degree, preferably in a Construction or Real Estate related area or relevant discipline plus substantial industry experience of a minimum of preferably 8 years at middle to senior management level.
- Exceptionally, a special admission of non-master's degree holders could be offered to experienced senior industry executives who possess preferably a minimum of 12 years industry experience in the management position.
- This allows flexibility to take in good candidates with good experience and/or professional qualifications. Those candidates will only be considered under special circumstances.

Please refer to the “Admission Requirements” section for taught Postgraduate Programme at Study@PolyU for details. Particularly, the English Language requirements for the place of delivery is as follows:

DIREC in Hong Kong

If the applicant is not a native speaker of English, and his/her Master's degree or equivalent qualification is awarded by institutions where the medium of instruction is not English, s/he is expected to fulfil the University's minimum English language requirement for admission purpose.

4 Programme Structure

The Programme is on a part-time mode of study which comprises a total of 51 credits. The normal duration of the Programme is three years comprising Semester 1, Semester 2, and a Summer Term in each year. Students who have successfully completed the Programme will be granted a Doctor of International Real Estate and Construction (DIREC) awarded by the Hong Kong Polytechnic University.

To be eligible for the DIREC award, students are required to complete 9 subjects (including three compulsory subjects, a total of 27 credits) and a Thesis (8 credits for Thesis I; 16 credits for Thesis II). Normally, students will study 2 to 3 subjects in each semester.

There is a possible exit award of Master of Science in International Real Estate and Construction Research Studies (MSc in IREC) for students who have completed 9 subjects, and passed the Thesis I (thesis proposal presentation) (a total of 35 credits).

Students who subsequently decide to graduate with a MSc in IREC must submit an Application for Graduation to the Department of Building and Real Estate (BRE) by using Form AR84c, which is accessible at <https://www.polyu.edu.hk/ar/web/en/for-polyu-students/application-forms/index.html>.

4.1 Compulsory and Elective Subjects (3 credits each)

Students are required to complete 9 subjects for a total of 27 credits. Of them, 3 are compulsory, and 6 elective. All these subjects are at an advanced level and students are expected to have prior knowledge and experience of each subject area.

Actual number of class meetings may vary in light of certain conditions in the offering semester, such as the arrangement of public holidays; or other pedagogical needs of subject lecturers.

4.2 Thesis (24 credits)

The Thesis comprises two parts: Thesis I and Thesis II. Students must have passed the compulsory subject “Advanced Research Methods for Real Estate and Construction”, plus at least 4 subjects before they are eligible to register for the Thesis.

(i) Thesis I (8 credits)

Students are required to work with their supervisors to prepare a detailed thesis proposal and present the thesis proposal. The thesis proposal will be assessed by a panel of academics.

(ii) Thesis II (16 credits)

After getting pass on the thesis proposal presentation, students will work with their thesis supervisors to work on theses.

4.3 Thesis Extension

Students are expected to complete Thesis I in two semesters and Thesis II in two semesters (excluding Summer Term). Students who are not able to complete the Thesis I and II within four semesters (excluding Summer Term) and need to work beyond the normal registration period are required to apply for extending the Thesis registration via the Thesis Co-ordinator and pay a 3-credit extension fee per semester.

If students have a genuine need to defer their study, such as illness, during their registration period or extension period of Thesis II, please refer to the Section ‘Deferment of Study’ later in this document.

4.4 DIREC Curriculum

Subject Type	Subject Title
Compulsory	Advanced Research Methods for Real Estate and Construction
	International Study Visit (Europe or North America)
	International Study Visit (Asia Pacific)
	Doctoral Thesis I
	Doctoral Thesis II
Elective (Any 6)	Strategic Project Management
	Digital Technologies for Construction Projects
	Real Estate Finance and Appraisal
	Urban and Regional Planning
	Topical issues in Construction
	Topical issues in Real Estate
	Professional Workshop in Real Estate
	Professional Workshop in Construction

Remarks : Not all subjects will be offered, subject to factors such as staff availability, student enrollment, programme sources and so on. The Department will determine which subjects are to be offered in a given year and its decision is final.

4.5 Subjects Offering Pattern

The subject offering pattern is updated from time to time. For the latest version, please refer to the DIREC website.

It must be noted that all subject details (e.g. subject description form, offering pattern, class timetable etc.) are subject to continuous review and changes. Not all subjects will be offered in a given year, subject to factors such as staff availability, student enrolment, programme resources and so on.

Year 1			
	Semester 1 (Sep-Dec)	Semester 2 (Jan-Apr)	Summer Term (May- Aug)
Compulsory		Advanced Research Methods for Real Estate and Construction	International Study Visit (Europe or North America)
Elective	Strategic Project Management	Urban and Regional Planning	
	Topical issues in Real Estate	Topical issues in Construction	
	6 credits	9 credits	3 credits
Year 2			
Compulsory	Doctoral Thesis I# (First Lecture)	Doctoral Thesis I	International Study Visit (Asia Pacific)
Elective	Digital Technologies for Construction Projects	Real Estate Finance and Appraisal	
	Professional Workshop in Real Estate	Professional Workshop in Construction	
	10 credits	10 credits	3 credits
Year 3			
Compulsory	Doctoral Thesis II@	Doctoral Thesis II	Thesis Defence (viva)
	8 credits	8 credits	

Remarks :

The pattern here in above is indicative only, subject to change and modifications. It is anticipated that the subjects and offering pattern might not be the same.

#Students are required to pay for all of the 8 credits the Thesis I carries in the first semester when they register the subject.

@Students are required to pay for all of the 16 credits the Thesis II carries in the first semester when they register the subject.

4.6 Medium of Instruction

DIREC (32109) (HK) : English

4.7 Curriculum Map

The **institutional learning outcomes** of the University are as follows:

- a. **Professional competence of specialists/leaders of a discipline/profession** - Graduates of PolyU Taught Postgraduate (TPg) programmes will possess in depth-knowledge and skills in their area of study and be able to apply their knowledge and contribute to professional leadership.
- b. **Strategic thinking** - Graduates of PolyU TPg programmes will be able to think holistically and analytically in dealing with complex problems and situations pertinent to their professional practice. They will be versatile problem solvers with good mastery of critical and creative thinking skills, who can generate practical and innovative solutions.
- c. **Lifelong learning capability** - Graduates of PolyU TPg programmes will have an enhanced capability for continual professional development through inquiry and reflection on professional practice.

These institutional learning outcomes are appropriately addressed by the totality of the programme learning outcomes of the Programme, as set out below:

DIREC - Mapping of Intended Programme Learning Outcomes to PolyU Institutional Learning Outcomes

Intended Programme Learning Outcomes (PLO)	Mapping	PolyU Institutional Learning Outcomes
(1) Possess an in-depth knowledge and understanding of relevant analytical and quantitative techniques in the construction and real estate market.	→	Lifelong learning capability
(2) Provide or analyze professional advices regarding appropriate long-term and short-term funding for contractors, developers and investors.	→	Strategic thinking
(3) Enhance management and leadership skills as a forward-looking and innovative executive in the complex economic environment.	→	Lifelong learning capability
(4) Evaluate the development worth of a project and apply an appropriate development appraisal technique more efficiently and effectively.	→	Professional competence of specialists/leaders of a discipline/profession
(5) Evaluate and ameliorate the constraints on innovative and meaningful behavior imposed upon them by their prior experiences, cultural setting and cognitive styles.	→	Professional competence of specialists/leaders of a discipline/profession
(6) Invoke and make effective use of design thinking, methods and perspectives to generate innovative and meaningful solutions to issues which arise in the context of their organizations.	→	Strategic thinking

DIREC - Curriculum Mapping of Intended Subject Learning Outcomes to Intended Programme Learning Outcomes

Subject Code	Subject Type	Subject Name	Intended Programme Learning Outcomes (PLOs)					
			PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6
BRE 680	Compulsory	Advanced Research Methods for Real Estate and Construction	R, A	R		R, A		R, A
BRE 681	Compulsory	International Study Visit (Europe or North America)	R, A	R, A	R, A	R, A	R, A	R, A
BRE 682	Compulsory	International Study Visit (Asia Pacific)	R, A	R, A	R, A	R, A	R, A	R, A
BRE 691		Doctoral Thesis I	R, A	R		I		I
BRE 692		Doctoral Thesis II	R, A	R, A	R, A	R, A	R, A	R, A
BRE 683	Elective	Strategic Project Management	R, A		R, A	R, A		R, A
BRE 684	Elective	Digital Technologies for Construction Projects	R, A		R	R, A		R, A
BRE 685	Elective	Real Estate Finance and Appraisal	R	R, A	R	R, A	R	R, A
BRE 686	Elective	Urban and Regional Planning	R	R, A	R	R, A	R	R, A
BRE 687	Elective	Topical Issues in Construction	R, A	R, A		R		R
BRE 688	Elective	Topical Issues in Real Estate	R, A	R, A		R		R
BRE 689	Elective	Professional Workshop in Real Estate	R, A	R, A	R, A	R, A	R, A	R, A
BRE 690	Elective	Professional Workshop in Construction	R, A	R, A	R, A	R, A	R, A	R, A

- I (Introduced) That the learning leading to the particular intended learning outcome is "introduced" in that subject.
- R (Reinforced) That the learning leading to the particular intended learning outcome is "reinforced" in that subject.
- A (Assessed) That the performance which demonstrates the particular intended learning outcome is "assessed" in that subject.

5 Programme Management and Operation

A Programme Committee is formed to exercise the overall academic and operational responsibility for the Programme and its development within policies, procedures and regulations defined by the University. Its composition comprises academics and student representatives.

Composition

Chairman	Programme Director
Ex-officio	<ul style="list-style-type: none">• Head of Department of Building and Real Estate, or his representative• Deputy Programme Director
Other Members*	<ol style="list-style-type: none">1. One representative from each main subject area, up to a maximum of three2. Up to two taught postgraduate students elected by and from among them <p><i>*The number of representation for categories (1) – (2) members could exceed the stipulated limit, subject to the approval of the Chairman.</i></p>
Secretary	Head of Department's nominee

For details, please refer to the Annex of Doctor of DIREC Programme Committee.

The Programme Director and/or Deputy Programme Director¹ are responsible for the day-to-day management and operation of the Programme, student admissions, teaching and learning matters, quality assurance (QA) and programme development. Their prime role is to ensure the Programme is delivered according to the established QA mechanism.

6 Communication with Students

While we work to communicate clearly and in a timely manner with students according to University regulations and procedures, it is the **responsibility of students** to help maintain the effectiveness of the communication process. **Students should ensure that their up-to-date personal and correspondence details are provided** to the University and the relevant departments (e.g. AR, BRE, Subject Offering Departments, etc.); and **check relevant correspondence channels regularly** to obtain the latest information regarding their studies and the status of any related applications lodged (e.g. late assessment, appeal of subject results, add/drop of subjects, deferment, etc.). Failure in doing so will not constitute any grounds for appeals / complaints against consequences / decisions of the relevant matters and applications.

¹ Programme Director PD (Deputy Programme Director DPD) can be interpreted as Programme Leader PL (Deputy Programme Leader DPL) or this delegate(s), as and where appropriate.

7 Subject Registration and Withdrawal

Students may normally ADD new subject(s) and DROP registered subject(s) during a two-week add/drop period for both Semesters One and Two (One week for Summer Term). Students officially dropping a subject during the add/drop period will be considered not to have registered for the subject. Students are not allowed to drop subjects after the add/drop period.

Students may apply for withdrawal of their registration on a subject after the add/drop period and before the commencement of the examination period if they have a genuine need to do so. The application should be made to the relevant Department and will require the approval of both the subject teacher and the host Department Programme Leader concerned (or an alternate academic staff authorised by the Department). Applications submitted after the commencement of the examination period will not be considered.

For approved applications of subject withdrawal, the tuition fee paid for the subject will be forfeited and the withdrawal status of the subject will be shown in the assessment result notification and transcript of studies, but will not be counted in the calculation of the GPA.

The pre-requisite requirements of a subject must have been fulfilled before a student registers for that subject. However, the subject offering Department has the discretion to waive the pre-requisite requirements of a subject, if deemed appropriate. If the pre-requisite subject concerned forms part of the requirements for award, the subject has to be passed in order to satisfy the graduation requirements for the programme concerned, despite the waiving of the pre-requisite during the subject registration process.

Subject to the maximum study load of 21 credits per semester and the availability of study places, students are allowed to take additional subjects on top of the prescribed credit requirement for award before they become eligible for graduation.

8 Subject Exemption and Credit Transfer

The University's subject exemption and credit transfer policy is applicable to this programme, unless otherwise stated.

Credit transfer will only be granted to subjects with grade B or above but without the grade being counted in the students' Grade Point Average (GPA). The credits transferred will count towards the credit requirement for the award. All credit transfers approved will take effect only in the semester for which they are approved. A student who applies for transfer of credits during the re-enrolment or add/drop period for a particular semester will only be eligible for graduation at the end of that semester, even if the granting of the credit transfer will immediately enable the student to satisfy the total credit requirement for the award.

The validity period of subjects earned is eight years from the year of attainment, i.e. the year in which the subject is completed, unless otherwise specified by the department responsible for the content of the subject. Credits earned from previous studies should remain valid at the time when the student applies for transfer of credits.

9 Retaking of Subjects

Students may only retake a subject which they have failed (i.e. Grade F or U). Retaking of subjects is with the condition that the maximum study load of 21 credits per semester is not exceeded. The number of retakes of a subject should be restricted to two, i.e. a maximum of three attempts for each subject is allowed.

Students need to submit a request to the Faculty/School Board for the second retake of a failed subject.

Students who have failed a compulsory subject after two retakes and have been de-registered can submit an appeal to the AAC for a third chance of retaking the subject.

In case AAC does not approve further retakes of a failed compulsory subject or the taking of an equivalent subject with special approval from the Faculty, the student concerned would be de-registered and the decision of the AAC would be final within the University.

10 Zero Subject Enrolment

Students are not allowed to take zero subject in any semester, including the mandatory summer term as required by some programmes, unless they have obtained prior approval from the programme offering Department; otherwise they will be classified as having unofficially withdrawn from their programme. Students who have been approved for zero subject enrolment (i.e. taking zero subject in a semester) are allowed to retain their student status and continue using campus facilities and library facilities. Any semester in which the students are allowed to take zero subject will nevertheless be counted towards the total period of registration (or maximum period of registration for students admitted in or before 2019/20)

If students have already registered BRE691 Doctoral Thesis I / BRE692 Doctoral Thesis II, students are not eligible to apply for Zero Subject Enrolment. If students have a genuine need, such as illness, to defer their study during their registration period or extension period of BRE691 Doctoral Thesis I / BRE692 Doctoral Thesis II, please refer to Section 11 'Deferment of Study' for application of deferment of study. If students cannot complete their BRE 692 Doctoral Thesis II in two semesters (excluding Summer Term) during the normal subject registration period, students need to apply for thesis extension.

11 Deferment of Study

Students may apply for deferment of study if they have a genuine need to do so such as illness or posting to work outside Hong Kong. Approval from the Department offering the programme is required. The deferment period will not be counted towards the total period of registration (or maximum period of registration for students admitted in or before 2019/20).

Where the period of deferment of study begins during a stage for which fees have been paid, no refund of such fees will be made.

Students who have been approved for deferment are not entitled to enjoy any campus facilities during the deferment period.

The aggregate period of deferment of study over the entire Programme is limited to a maximum of 4 regular semesters (i.e. Semesters 1 and 2), in which students are eligible to apply for and 'taking' only up to maximum of 2 regular semesters in total after students registered Thesis I. Students may refer the following examples and scenarios for their reference and better understanding:

- Scenario 1: If students have been approved to defer their study for only 1 regular semester before students have registered Doctoral Thesis I, students are eligible to apply for and 'taking' for deferment of study for 2 regular semesters thereafter despite students have not used up the maximum number of 4 regular semesters over the entire Programme.
- Scenario 2: If students have been approved to defer their study for 3 regular semesters before students have registered Doctoral Thesis I, students are only eligible to apply for and 'taking' for deferment of study for 1 regular semester thereafter since students have already used up deferment of study for 3 regular semesters before registering Doctoral Thesis I.
- Scenario 3: If students have been approved to defer their study for 4 regular semesters before students have registered Doctoral Thesis I, students are not eligible to apply for or 'taking' any deferment of study thereafter since students have already used up the maximum number of deferment of study before registering Thesis I.
- Scenario 4: If students did not apply for any deferment of study before students have registered Thesis I, students are eligible to apply for and 'taking' deferment of study for only 2 regular semesters thereafter.

Should students need any clarification and/or have any queries, students are highly encouraged to contact BRE and/or the Programme Director or Deputy Programme Director.

12 Withdrawal of Study

If students wish to discontinue their study at the University before completing the Programme, it is necessary for them to complete the withdrawal procedure via [eStudent](#). Fees paid for the semester which students are studying will not be refunded. Application for withdrawal of study for the current semester must be submitted before the commencement of PolyU's scheduled examination period. Application submitted after the commencement of the examination period will not be processed. For application of withdrawal of study for the following academic year/semester, application should be submitted before the commencement of that academic year/semester.

Upon confirmation of students' official withdrawal, they will be eligible for the refund of the caution money paid if they have no outstanding debts to the University. All fees paid are non-refundable.

If students discontinue the study at the University without completing proper withdrawal procedures, they will be regarded as having unofficially withdrawn and the caution money paid at first registration will be confiscated.

13 Assessment Methods

Students' performance in a subject is assessed by either of the following methods:

- (a) Coursework only: To pass a subject by this method of assessment, a student must attain a minimum Grade 'D' in coursework (tests, assignments, projects, laboratory work, field exercises, presentations and other forms of classroom participation).
- (b) Examination and Coursework (the weighting of each component is stated in the Subject Portfolio): To pass a subject by adopting this method of assessment a student must attain a minimum Grade 'D' in coursework and a minimum Grade 'D' in the examination.
- (c) Continuous Assessment: Project-based subjects are of this type of assessment where students are assessed through a period of time with stages of work and progress together with the final products of works.

14 Grading

At the end of each semester students will be informed of the grade achieved for each subject normally.

Assessment grades shall be awarded on a criterion-reference basis. A student's overall performance in a subject shall be graded as follows:-

Subject grade	Short description	Elaboration on subject grading description
A+ A A-	Excellent	Demonstrates excellent achievement of intended subject learning outcomes by being able to skillfully use concepts and solve complex problems. Shows evidence of innovative and critical thinking in unfamiliar situations, and is able to express the synthesis or application of ideas in a logical and comprehensive manner.
B+ B B-	Good	Demonstrates good achievement of intended subject learning outcomes by being able to use appropriate concepts and solve problems. Shows the ability to analyse issues critically and make well-grounded judgements in familiar or standard situations, and is able to express the synthesis or application of ideas in a logical and comprehensive manner.
C+ C C-	Satisfactory	Demonstrates satisfactory achievement of intended subject learning outcomes by being able to solve relatively simple problems. Shows some capacity for analysis and making judgements in a variety of familiar and standard situations, and is able to express the synthesis or application of ideas in a manner that is generally logical but fragmented.
D+ D	Pass	Demonstrates marginal achievement of intended subject learning outcomes by being able to solve relatively simple problems. Can make basic comparisons, connections and judgments and express the ideas learnt in the subject, though there are frequent breakdowns in logic and clarity.
F	Fail	Demonstrates inadequate achievement of intended subject learning outcomes through a lack of knowledge and/or understanding of the subject matter. Evidence of analysis is often irrelevant or incomplete.

Note:

- Marking rubrics aligned with these Grade Descriptors need not include all aspects of the grade descriptor.

- Marking rubrics aligned with these Grade Descriptors may include other aspects aligned with particular subject matter or field of study requirements but are not included in the grade descriptor.

'F' is a subject failure grade, whilst all others ('D' to 'A+') are subject passing grades. No credit will be earned if a subject is failed.

The grade points assigned to subject grades attained by students from 2020/21 are as follows:

Grade	Grade Point for grades attained from 2020/21
A+	4.3
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
F	0.0

At the end of each semester/term, a Grade Point Average (GPA) will be computed based on the grade point of the subject overall grade as follows:-

$$\text{GPA} = \frac{\sum_n \text{Subject Grade Point} \times \text{Subject Credit Value}}{\sum_n \text{Subject Credit Value}}$$

where n = number of all subjects (inclusive of failed subjects) taken by the student up to and including the latest semester/term, but for subjects which have been retaken, only the grade obtained in the final attempt will be included in the GPA calculation

In addition, the following subjects will be excluded from the GPA calculation:-

- (i) Exempted subjects
- (ii) Ungraded subjects
- (iii) Incomplete subjects

- (iv) Subjects for which credit transfer has been approved, but without any grade assigned²
- (v) Subjects from which a student has been allowed to withdraw (i.e. those with the code 'W')

Subject which has been given an "S" code, i.e. absent from all assessment components, will be included in the GPA calculation and will be counted as "zero" grade point. GPA is thus the unweighted cumulative average calculated for a student, for all relevant subjects taken from the start of the programme to a particular reference point of time. GPA is an indicator of overall performance, and ranges from 0.00 to 4.30 from 2020/21.

15 Assessment of Thesis

Students should refer to the DIREC Thesis Handbook which will be provided to them when they register for Doctoral Thesis I.

16 Progression / Academic Probation

Progression

A student will have 'progressing' status unless he falls within any one of the following categories which shall be regarded as grounds for de-registration from the programme:

- (i) the student has reached the final year of the normal period of registration for that programme, as specified in the Programme Requirement Document, unless approval has been given for extension; or
- (ii) the student has reached the maximum number of retakes allowed for a failed compulsory subject; or
- (iii) the student's GPA is lower than 1.70 for two consecutive semesters and his Semester GPA in the second semester is also lower than 1.70; or
- (iv) the student's GPA is lower than 1.70 for three consecutive semesters.

When a student falls within any of the categories as stipulated above, except for category (i) with approval for extension, the Board of Examiners shall de-register the student from the programme without exception.

A student may be de-registered from the programme enrolled before the time frame if the academic performance is poor to the extent that the Board of Examiners deems that his chance of attaining a GPA of 1.70 at the end of the programme is slim or impossible.

² Subjects taken in PolyU or elsewhere and with grades assigned, and for which credit transfer has been approved, will be included in the GPA calculation.

Academic Probation

When a student has a Grade Point Average (GPA) lower than 1.70, he will be put on academic probation in the following semester. If a student is able to pull his GPA up to 1.70 or above at the end of the semester, the status of “academic probation” will be lifted. The status of “academic probation” will be reflected in the assessment result notification but not in the transcript of students.

To improve the academic performance of students on academic probation, these students are required to seek academic advice on their study load and subjects to be taken. They should complete the Form “Study Load for Students on Academic Probation” (**Form AR150, downloadable at <https://www.polyu.edu.hk/ar/>**), indicating the proposed study plan and meet with the Programme Leader or Deputy Programme Leader to finalize the subjects and number of credits to be taken in the semester following academic probation within one week of assessment result announcement.

17 Eligibility for Award

A student would be eligible for a DIREC award if he/she satisfies all the conditions listed below:

- (i) accumulation of 51 credits as defined in this document;
- (ii) satisfying all the compulsory, electives, and Doctoral Thesis requirements as defined in this document; and
- (iii) having a **GPA of 3.0** or above at the end of the Programme.

A student is required to graduate as soon as he/she satisfies all the above conditions for award. Upon confirmation of eligibility to graduate or leaving the University, registration for subjects (including the follow-on term of consecutive subjects) in the following semester/Summer Term will be nullified and removed.

A letter will be given to students should his/her GPA is below 3.0 in any semester in order to provide a clear signal for the need to make improvement toward fulfilling the graduation requirements.

Exit award of Master of Science in International Real Estate and Construction applies to those who completed 9 subjects plus Doctoral Thesis I, an accumulation of 35 credits.

18 Award Classifications

The following award classifications apply to the Programme:

- (i) Pass
- (ii) Fail

19 Plagiarism and Misconduct

Plagiarism refers to the act of using the creative works of others (e.g. ideas, words, images or sound, etc.) in one's own work without proper acknowledgement of the source. According to the Webster's Ninth New Collegiate Dictionary (1987), to 'plagiarise' means

[To] steal and pass off (the ideas or words of another) as one's own: [to] use (a created production) without crediting the source: [to] commit literary theft: [to] present as new and original an idea or product derived from an existing source.

The University/Faculty views plagiarism, whether committed intentionally or because of ignorance or negligence, as a serious disciplinary offence. Excuses such as "not knowing what is required" or "not knowing how to do it" are not accepted. It is the student's responsibility to understand what plagiarism is, and take action steps to avoid plagiarism in their academic work. The golden rule is: "if in doubt, acknowledge".

Students are required to submit their original work and avoid any possible suggestion of plagiarism in the work they submit for grading or credit. Below are some suggestions on how students can avoid plagiarism in their own work:

- (i) **Use sources with care and respect**
 - Take careful notes so that students know where students found the information.
 - Keep track of all the sources students have used for each assignment.
 - Cite all their sources in their finished work, distinguishing carefully between their own ideas/work and those taken from others.
 - Include all their sources in their References or Bibliography section, normally included at the end of the paper.
- (ii) **Find out the expectations of their Department and their teacher**
 - Different disciplines or professions may have slightly different conventions for citation and referencing. Ask their Department or teacher for the specific citing and reference system or conventions used in their chosen profession/discipline.
 - Ask their teacher what type of collaboration and help is permitted for the specific assignment.
- (iii) **Develop their academic skills**

- Plan their academic work carefully and start early so that students have time to do their own work.
- Make a work schedule for their work and try to keep to it.
- Study resource materials and attend courses or workshops provided by the University to continually improve their skills in referencing and academic writing.

(iv) **Be honest, and always do their own work**

To know more about plagiarism and how to cite sources properly in their work, please refer to the booklet “About Plagiarism and How to Avoid It” developed by the University at http://www.polyu.edu.hk/ogur/academic_integrity/Plagiarism_Booklet.pdf

The University may take disciplinary actions against any student who commits any misconduct, violates the laws of Hong Kong or any of the University’s regulations and rules (including but not limited to those listed in the University Calendar (<https://www.polyu.edu.hk/as/UCAL/>)). Cases may be referred to the Student Discipline Committee (SDC) for investigation and decision.

Appropriate disciplinary actions, depending on the seriousness of the case, will be taken against a student (including graduand who has satisfied all the academic requirements for the award but who has not been presented at the Congregation) who is found guilty of the alleged offence. Penalties include:

- community services;
- disqualification of results;
- reprimand;
- fine;
- suspension from use of any of the University facilities for a specified period;
- suspension of studies for a specified period of time;
- expulsion for a specified period or indefinitely; and
- any other penalties as considered appropriate.

Students (including granduands) found guilty of offences related to academic integrity such as cheating in assessment work, tests or examinations; plagiarism; aiding academic dishonesty; violating rules governing the conduct of examinations that are related to possible cheating (including the possession of unauthorized materials at the examination, use of unauthorized electronic devices during examination, etc.) will be subject to the penalty of having their subject result disqualified and being given a failure grade with an appropriate remark denoting that it is due to academic dishonesty. The remark will be appropriately shown on the students’ record and on documents such as assessment result notification and transcript of studies until their leaving the university. These students will also be subject to the penalty of the lowering of their award classification by one level upon graduation.

Students who are found guilty of the alleged offences (academic or non-academic) will be put on “disciplinary probation”. The status of “disciplinary probation” will be shown on the students’ record and on documents such as

assessment result notification, transcript of studies and testimonial during the probation period. This status will be removed upon their leaving the University. The disciplinary probation will normally be one year unless otherwise decided by SDC.

Students who have been put on “disciplinary probation” will be deprived of certain privileges. They shall not receive honour from the University or engage in activities such as eligibility for scholarships/awards/prizes, selection of outstanding students/Student Ambassadors, taking up leadership roles within the University and joining the PreGlobal Student Challenge and Entrepreneurship Scheme. They may also be given lower priority in Student Hall residency, funding and subsidies for student projects, courses/activities, overseas academic exchange, internship jobs, mentorship programmes, overseas WIE.

Students who are subject to disciplinary action can approach Centre STARS for advice and assistance. Students attending hearings of SDC can ask a staff member of the University or a University student of their own choice to accompany them. Students will not be legally represented at the meeting nor be assisted by someone who is a practising lawyer. The person accompanying the student will be an observer at the meeting of the SDC and will not take part in the discussion.

Students who are expelled from the University for disciplinary reasons will not be eligible for refund of the caution money paid.

20 Prevention of Bribery Ordinance

PolyU staff members may in no circumstances solicit or accept an advantage. For relevant details, please refer to the Prevention of Bribery Ordinance (Chapter 201) of the Laws of Hong Kong at <https://www.elegislation.gov.hk/>.

21 Consent for Receiving Promotional Information

Use of Personal Data in Direct Marketing

PolyU would like to advise student from time to time the activities and services which may enrich their study and life but they are not compulsory as part of their study. When the student leave PolyU, they would also like to maintain contact with PolyU to update on the latest developments of PolyU and benefits, activities and services. In doing so, PolyU may use student’s name, address, telephone number, fax number and email address for the purposes of offering or providing them the availability of the following activities, services and facilities (collectively, “the marketing subjects”):

- Co-curricular activities, student exchange programmes, placement opportunities, invitation for research participation and competitions, programmes, courses, seminars, workshops, conferences and events organized by PolyU alone, jointly with other parties or by other parties;

- Scholarships, grants, loans and financial assistance scheme;
- Privileges, discounts and offers for services, goods and other facilities provided by PolyU alone, jointly with other parties or by other parties;
- Services offered by PolyU (e.g. University Health Services, Optometry Clinic, etc.);
- Charitable, educational, social and other activities that solicit contributions, donations or participation.

PolyU cannot use students personal data for sending information on the above marketing unless department has received students consent or indication of no objection. Student can indicate their agreement, or otherwise, for PolyU to use their personal data to send the information on the above marketing subjects anytime via the eStudent. Students may also make subsequent changes on their choice of receiving further information on the marketing subjects anytime via the same online platform on eStudent.

Part II :
Subject Description Forms

Subject Code	BRE 680
Subject Title	Advanced Research Methods for Real Estate and Construction
Credit Value	3
Level	6
Pre-requisite/Co-requisite/Exclusion	Nil
Objectives	<p>The objectives of the subject are to:</p> <ol style="list-style-type: none"> 1. Provide students with in-depth understanding of the major research methods and techniques in conducting academic research. 2. Provide students with an understanding on the strengths and limitations of different types of research methods. 3. Develop the students' ability to identify and select the most appropriate research methods in different research topics, applying strategic management theories and techniques in practice in the area of construction and real estate. 4. Develop the students' ability in formulating research proposals for their doctoral thesis.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Understand the research methods and techniques commonly adopted for academic research. b. Describe the principle features of the scientific method and to apply them to problems in construction and real estate. c. Know where and how to search for literature/information for research and consultancy work. d. Assess the usefulness of research methods for construction and real estate problems using as criteria for the hallmarks of good research. e. Formulate questions in a way which renders them amenable to rigorous investigation. f. Describe broadly the strengths and limitations of basic approaches to qualitative and quantitative research.

Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • Introduction to research methodologies • Formulation of a research problem • Quantitative and qualitative methods • Library session on information management • Guest speakers on research strategies and tactics • Sampling and social survey • Hypothesis and hypothesis testing • Preparation of research proposal and research paper • Thesis writing 																																						
Teaching/Learning Methodology	<p>Lectures, tutorials and seminars sharing knowledge and experience among students and with the subject lecturers. Prominent guest speakers will also be invited to provide guest lectures in the field of research and consultancy methods and strategies.</p>																																						
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" data-bbox="527 1150 1469 1522"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th>f</th> </tr> </thead> <tbody> <tr> <td>1. Project Assignment</td> <td>50%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>2. Presentation</td> <td>50%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Students are required to make an individual presentation in class on an assignments assigned by the subject lecturer. In addition, students are required to submit a final report for assessment. The assignments are to assess the students' understanding on the most up-to-date research techniques and methodologies commonly used for research in field of construction and real estate. Students need to demonstrate in their presentations and reports that they have an in-depth understanding on the strengths and limitations of these research methods.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e	f	1. Project Assignment	50%	√	√	√	√	√	√	2. Presentation	50%	√	√	√	√	√	√	Total	100 %						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																			
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1. Project Assignment	50%	√	√	√	√	√	√																																
2. Presentation	50%	√	√	√	√	√	√																																
Total	100 %																																						

Student Study Effort Expected	Class contact:	
	▪ lectures	15 Hrs.
	▪ seminars/tutorials	15 Hrs.
	Other student study effort:	
	▪ Self-study and readings	60 Hrs.
	▪ Project Assignments	30 Hrs.
	Total student study effort	120 Hrs.
Reading List and References	<p><u>Recommended readings</u></p> <p>Bell, J. and Waters, S. (2014). <i>Doing your Research Project</i>. Buckingham, Open University Press, 6th Edition.</p> <p>Bella, D. (2012). <i>Digital Qualitative Research Methods</i>. SAGE Publications.</p> <p>Berenson, M.L., Levine, D.M. and Szabat, K.A. (2015). <i>Basic Business Statistics – Concepts and Applications</i>. 13th Edition, Pearson Education, Boston, USA.</p> <p>Devore, J.L. (2016). <i>Probability and Statistics for Engineering and the Sciences</i>, 9th Edition, Cengage Learning, Boston, USA.</p> <p>Fellows, R. and Liu, A. (2015). <i>Research Methods for Construction</i>. Wiley Blackwell, 4th Edition.</p> <p>Knight, A. and Ruddock, L. (Ed.) (2008). <i>Advanced Research Methods in the Built Environment</i>. Chichester: Wiley-Blackwell.</p> <p>Mendenhall, W., Beaver, R.J. and Beaver, B.M. (2013). <i>Introduction to Probability and Statistics</i>. 14th Edition, Pacific Grove, California, USA.</p> <p>Naoum, S.G. (2013). <i>Dissertation Research and Writing for Construction Students</i>. 3rd edition, London: Routledge.</p> <p>Rowntree, D. (2000). <i>Statistics Without Tears: An Introduction for Non-Mathematicians</i>. Penguin Science.</p> <p>Tan, W. (2018). <i>Research Methods: A Practical Guide for Students and Researchers</i>. World Scientific, Singapore.</p>	

Subject Code	BRE 681
Subject Title	International Study Visit (Europe or North America)
Credit Value	3
Level	6
Pre-requisite/ Co-requisite/Exclusion	Nil
Objectives	<p>This objectives of the subject is to :</p> <ol style="list-style-type: none"> 1. Understand the market structure of the construction and real estate industry in selected overseas countries in Europe or North America. 2. Examine the difference in investment strategies between Hong Kong, Chinese Mainland and cities in Europe or North America. 3. Enable students to understand the interactions between various government policies and real estate development and international construction projects.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Identify sources of information concerning the major features of construction and real estate in Europe or North America; b. Undertake critical appraisal based on comparison of the institutions associated with the construction and property markets, investment practice and development procedures in Europe or North America c. Apply this understanding to the requirements of developers and investors outside Europe or North America. d. Identify areas for further research in the international aspects of real estate and construction.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • Construction and Real Estate Markets in Europe or North America. • Construction technology in Europe or North America. • Legal systems of property rights, tenure, land registration; • European investment and property markets including systems of regulation and taxation; • Economic planning, land-use planning and development control; • Environmental valuation, planning and control

Teaching/Learning Methodology	<p>The subject will comprise a one-week study visit to one or more overseas cities in Europe or North America. The selected cities to be visited in Europe or North America will be announced by the subject leader one semester in advance before the study visit. Students are guided to visit relevant cases in construction and real estate. Visits to academic institutions, government departments and companies will be arranged to allow students to have opportunities in direct exchange of ideas with the local experts. A round up presentation and sharing session will be conducted after the study visit. Students will be divided into groups and present their findings and experiences of the international study visit.</p>																																																															
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" data-bbox="527 598 1469 966"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Presentations</td> <td>50%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> <td></td> </tr> <tr> <td>2. Reports</td> <td>50%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Assignments will be distributed to the students before the study visit. Students are required to present their findings in class after they return from the study visit. During the presentations, the students need to address to questions raised by the subject lecturer and fellow classmates. Students need to demonstrate that they have a comprehensive understanding of one of the selected study areas in construction and real estate of the visited countries/cities. Students are also required to submit written reports after the presentation and incorporate comments made by classmates and lecturers in their report.</p>								Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d			1. Presentations	50%	√	√	√	√			2. Reports	50%	√	√	√	√			Total	100 %																								
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Reading List and References

Most of the readings for this subject will come from academic journals, government reports and reports produced by relevant professional institutes of the construction and real estate industry. Relevant readings will be produced as part of the briefing information for this subject by the subject leader prior to the study visit. Students are recommended to go study relevant papers in the following journals:

- *Construction Management and Economics*
- *Construction Law Journal*
- *Cities*
- *Habitat International*
- *Journal of Real Estate Literature*
- *Journal of Property Research*
- *Journal of Real Estate Finance and Economics*
- *Journal of Real Estate Research*
- *Journal of Urban and Regional Research*
- *Urban Studies*

Subject Code	BRE 682
Subject Title	International Study Visit (Asia Pacific)
Credit Value	3
Level	6
Pre-requisite/ Co-requisite/Exclusion	Nil
Objectives	<p>This objectives of the subject is to :</p> <ol style="list-style-type: none"> 1. Understand the market structure of the construction and real estate industry in selected overseas countries in Asian Pacific Region. 2. Examine the difference in investment strategies between Hong Kong, Chinese Mainland and cities in Asian Pacific Region. 3. Enable students to understand the interactions between various government policies and real estate development and international construction projects
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Identify sources of information concerning the major features of construction and real estate in Asian Pacific region; b. Undertake critical appraisal based on comparison of the institutions associated with the construction and property markets, investment practice and development procedures in Asian Pacific region. c. Apply this understanding to the requirements of developers and investors outside Asian Pacific region. d. Identify areas for further research in the international aspect of real estate and construction.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • Construction and Real Estate markets in the Asian Pacific Region • Construction technology in Asian Pacific Region • Legal systems of property rights, tenure, land registration; Investment and property markets including systems of regulation and taxation in the selected Asian Pacific countries; • Economic planning, land-use planning and development control in the selected Asian Pacific countries; • Environmental valuation, planning and control in the selected Asian Pacific countries

Teaching/Learning Methodology

The subject will comprise a study visit to one or more cities in the Asian Pacific Region. Students are guided to visit relevant cases and projects in construction and real estate. Visits to academic institutions, government departments and companies will be arranged to allow students to have opportunities in direct exchange of ideas with the local experts. A round up presentation and sharing session will be conducted after the study visit. Students will be divided into groups and present their findings and experiences of the international study visit.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
		a	b	c	d		
1. Presentations	50%	√	√	√	√		
2. Reports	50%	√	√	√	√		
Total	100 %						

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Assignments will be distributed to the students before the study visit. Students are required to present their findings in class after they return from the study visit. During the presentations, the students need to address to questions raised by the subject lecturer and fellow classmates. Students need to demonstrate that they have a comprehensive understanding of one of the selected study areas in construction and real estate of the visited countries/cities. Students are also required to submit a written reports after the presentation and incorporate comments made by classmates and lecturers in their report.

Student Study Effort Expected

Class contact:	
▪ Study Visit/Guided Study	24 Hrs.
▪ Student Presentations	6 Hrs.
Other student study effort:	
▪ Self-study	60 Hrs.
▪ Coursework Assignments	30 Hrs.
Total student study effort	120 Hrs.

Reading List and References

Most of the readings for this subject will come from academic journals, government reports and reports produced by relevant professional institutes of the construction and real estate industry. Relevant readings will be produced as part of the briefing information for this subject by the subject leader prior to the study visit. Students are recommended to go study relevant papers in the following journals:

- *Construction Management and Economics*
- *Construction Law Journal*
- *Cities*
- *Habitat International*
- *Journal of Real Estate Literature*
- *Journal of Property Research*
- *Journal of Real Estate Finance and Economics*
- *Journal of Real Estate Research*
- *Journal of Urban and Regional Research*
- *Urban Studies*

Subject Code	BRE 683
Subject Title	Strategic Project Management
Credit Value	3
Level	6
Pre-requisite/ Co-requisite/Exclusion	Nil
Objectives	<p>The objectives of the subject are to:</p> <ol style="list-style-type: none"> 1. Provide students with in-depth understanding of the key topics relating to strategic project management. 2. Develop the students' ability in applying strategic management theories and techniques in practice in the area of construction and real estate. 3. Develop the students' ability in applying the theory and practice of strategic project management methodology to obtain best value for money for their construction and real estate projects.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Understand the basic principles of strategic project management; b. Possess knowledge in strategic management techniques throughout the life cycle process of development projects; c. Apply theories and techniques in practice in the area of strategic project management; and d. Implement the strategic project management methodology and techniques in real-life projects.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • Strategy and strategic project management • Systems approach to strategic project management • Sustainable development, sustainability principles, environmental impact, environmental performance assessment and protection, sustainability assessment of buildings • Challenges of megaproject programme management • Strategic management in construction, project management: strategic time management, cost control and financial management, and risk management • Managing Modular Integrated Construction (MiC) building projects and case study implementation • Cross-cultural Management for Belt-and-Road Projects

	<ul style="list-style-type: none"> Partnering and New Engineering Contract (NEC), and Public-private partnership (PPP) 																																						
Teaching/Learning Methodology	<p>Lectures, tutorials and seminars sharing knowledge and experience among students and with the subject lecturers. Prominent guest speakers will also be invited to provide guest lectures in the field of strategic project management for further illustration.</p>																																						
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" data-bbox="527 556 1469 1029"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Coursework (individual term paper + group verbal presentation)</td> <td>60%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>2. Examination</td> <td>40%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Both examination and coursework will be adopted as assessment methods for the subject. Examination will be open book mainly to assess students' understanding on the various strategic management throughout the construction process, rather than forcing students to memorizing facts and data. The coursework assignment will assess students' ability to conduct study on a related topics assigned by the subject lecturers and present their findings in class.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d			1. Coursework (individual term paper + group verbal presentation)	60%	✓	✓	✓	✓			2. Examination	40%	✓	✓	✓	✓			Total	100 %						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																			
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**Reading List and
References**

Recommended readings

Chan, A.P.C. and Chan, D.W.M. (2004). Developing a benchmark model for project construction time performance in Hong Kong. *Building and Environment*, 39(3), 339-349.

Chan, A.P.C. and Cheung, E. (2014). *Public Private Partnerships in International Construction: Learning from Case Studies*, Routledge, Taylor & Francis, United Kingdom, ISBN 978-0-415-52975-4.

Chan, A.P.C., Lam, P.T.I., Chan, D.W.M., Cheung, E. and Ke Yongjian. (2010). Critical success factors for PPPs in infrastructure developments: Chinese perspective. *Journal of Construction Engineering and Management*, ASCE, 136(5), 484-494. Chan, D.W.M. and Chan, A.P.C. (2002). Public housing construction in Hong Kong: A review of its design and construction innovations. *Architectural Science Review*, 45(4), 349-359.

Chan, J.H.L., Chan, D.W.M. and Clifford, Bryan (2014). New Engineering Contracts (NECs) in practice - Empirical evidence from a pilot case study in Hong Kong. *Construction Law Journal*, 30(4), 217-235.

Development Bureau (2017). *Practice Notes for New Engineering Contract (NEC) - Engineering and Construction Contract (ECC) for Public Works Projects in Hong Kong*, Development Bureau, HKSAR Government, March.

Evans, V. (2014). *Strategy Tools*, FT Publishing, Pearson.

Galbraith, J. (2014). *Designing Organizations*, Jossey-bass, Wiley.

Harvard Business Review HBR's Must-Reads on Strategy (Article Collection: Product 12601).

Langford, D. and Male, S. (2001). *Strategic Management in Construction*, Blackwell Science, Oxford.

Olawumi, T.O., Chan, D.W.M., Chan, A.P.C. and Wong, J.K.W. (2020). Development of a Building Sustainability Assessment Method (BSAM) for developing countries in Sub-Saharan Africa. *Journal of Cleaner Production*, Volume 263, Article Number 121514, 17 Pages. DOI: <https://doi.org/10.1016/j.jclepro.2020.121514>

Olawumi, T.O. and Chan, D.W.M. (2020). Application of Generalized Choquet Fuzzy Integral method in the sustainability rating of green buildings based on the BSAM scheme. *Sustainable Cities and Society*, Volume 61, Article Number 102147, 18 Pages. DOI: <https://doi.org/10.1016/j.scs.2020.102147>

Olawumi, T.O. and Chan, D.W.M. (2021). Green-Building Information Modelling (Green-BIM) assessment framework for evaluating sustainability performance of building projects: A case of Nigeria. *Architectural Engineering and Design Management*, 17(5-6), 458-477. DOI: <https://doi.org/10.1080/17452007.2020.1852910>

Olawumi, T.O. and Chan, D.W.M. (2022). Cloud-based Sustainability Assessment (CSA) system for automating the sustainability decision-making process of built assets. *Expert Systems with Applications*, Volume 188, Article Number 116020, 16 Pages. DOI: <https://doi.org/10.1016/j.eswa.2021.116020>

Project Management Institute (2017). *A Guide to the Project Management Body of Knowledge (PMBOK Guide 2017)*. 6th edition. USA, Newtown Square, Pennsylvania: Project Management Institute.

Shen, G.Q.P. and Liu, G.W. (2003). Critical success factors for value management studies in construction. *Journal of Construction Engineering and Management*, ASCE, 129(5), 485-491.

Shen, G.Q.P. and Liu, G.W. (2004). Applications of value management in the construction industry in China. *Engineering, Construction and Architectural Management*, 11(1), 9-19.

Shen, G.Q.P. and Yu, A.T.W. (2012). Value management: Recent developments and way forward. *Construction Innovation: Information, Process, Management*, 12(3), 264-271.

Sun, Tze. *The Art of War 孫子兵法* (Chinese and/or English Translations).

Turner, J.R. (2007). *Gower Handbook of Project Management*, 4th edition. Aldershot, England; Burlington: Gower Publishing Company.

Xu, Yelin, Yeung, J.F.Y., Chan, A.P.C., Chan, D.W.M., Wang, Shouqing and Ke, Yongjian (2010). Developing a risk assessment model for PPP projects in China - A fuzzy synthetic evaluation approach. *Automation in Construction*, 19(7), 929-943.

Yeung, J.F.Y., Chan, A.P.C., Chan, D.W.M. and Li, Leong-kwan. (2007). Development of a Partnering Performance Index (PPI) for construction projects in Hong Kong: A Delphi study. *Construction Management and Economics*, 25(12), 1219-1237.

Yeung, J.F.Y., Chan, A.P.C. and Chan, D.W.M. (2009). A computerized model for measuring and benchmarking the partnering performance of construction projects. *Automation in Construction*, 18(8), 1099-1113.

Yuan, Z., Shen, G.Q.P., Chung, J.K.H., Ramly, Z., Yu, A.T.W. and Wang, H. (2015). Experimental study on virtual value management workshop in Hong Kong. *Journal of Management in Engineering*, ASCE, 32(2), DOI 10.1061/(ASCE)ME.1943-5479.0000392.

Selected journal and conference papers

CIOB (2014). *Strategy in Code of Practice for Project Management for Construction and Development*, 5th edition, 85-110, John Wiley & Sons.

Flanagan, R., Lu, W.S., Shen, L.Y. and Jewell, C. (2007). Competitiveness in construction: A critical review of research. *Construction Management and Economics*, 25(9), 989-1000.

Shen, L.Y. (1999). "Risk Management" in *Building in Value: Pre-design Issues*, (Editors: Best & De Valence), Arnold Publishers, ISBN 0340741600, 248-267.

Subject Code	BRE 684
Subject Title	Digital Technologies for Construction Projects
Credit Value	3
Level	6
Pre-requisite/ Co-requisite/Exclusion	Nil
Objectives	The objective of the subject is to provide students with an in-depth understanding of the application of digital information technology (IT) and building information modelling (BIM) technology for construction projects with an emphasis on construction project management, construction information modelling and information technology service management.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> Understand the ways of construction management workflow and dataflow analyses for the implementation of integrated construction management systems; Understand the state-of-the-art digital information technologies and their applications in the life cycle process of construction projects; and Appreciate the importance of disruptive technologies and information technology service management.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> Construction Integrated Management System - Site Management Construction Integrated Management System - Web-based Project Management (WPM) and Web-based Project Information Systems (WPIS) BIM concepts and applications BIM and construction virtual prototyping technology Case studies of using BIM and construction virtual prototyping technology Internet technology and its applications in the life cycle process of construction projects (i.e., from project design, cost planning, through tender preparation, programme planning, site supervision, to property and facility management) Database applications, information technology service management
Teaching/Learning Methodology	Lectures, tutorials and seminars sharing knowledge and experience among students and with the subject lecturers. Prominent guest speakers will also be invited to provide guest lectures on the hands-on practical applications of digital IT and BIM technology for various types of construction projects.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks		% weighting		Intended subject learning outcomes to be assessed (Please tick as appropriate)						
					a	b	c				
	1. Oral Presentation		50%		√	√	√				
	2. Essay Assignments		50%		√	√	√				
	Total		100 %								
<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>The oral presentation assesses students' ability to collect information and review literatures on digital construction and present their findings in class.</p> <p>The essay assignments assess students' understanding on the concepts of digital construction, personal insights, and interpretations and applications of digital information on technologies in construction project management.</p>											
Student Study Effort Expected	Class contact:										
	▪ Lectures										15 Hrs.
	▪ Seminars/tutorials										15 Hrs.
	Other student study effort:										
	▪ Self-study										60 Hrs.
	▪ Coursework assignments										30 Hrs.
	Total student study effort										120 Hrs.
Reading List and References	<p><u>Recommended readings</u></p> <p>Abid, N., Wong, A.K.D., Wong, F.K.W. (2015). Bill of quantities with 3D views using building information modeling. <i>Arabian Journal for Science and Engineering</i>, 40(9), September, 2465-2477, DOI: https://doi.org/10.1007/s13369-015-1657-2.</p> <p>Bryde, D., Broquetas, M. and Volm, J.M. (2013). The project benefits of Building Information Modelling (BIM). <i>International Journal of Project Management</i>, 31(7), 971-980.</p> <p>Construction Industry Council (2014). Roadmap for Building Information Modelling in Hong Kong's Construction Industry.</p> <p>Construction Industry Council (2015). Building Information Modelling Standards (Phase One), September 2015.</p>										

Eastman, C., Eastman, C.M., Teicholz, P., Sacks, R. and Liston, K. (2011). *BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors*, John Wiley & Sons.

Wong, A.K.D. (2003). Construction integrated management system for contractors. *Journal of Building and Construction Management*, 8(1), 12-18, ISSN 102419540.

Wong, A.K.D. (2006). Use of smart card for enhancing construction site human resources management. *Journal of Building and Construction Management*, 10(1), June, 63-68, ISSN 1024-9540.

Wong, K.D. (2008). HKSAR Government roadmap in construction IT and BIM research. *Proceedings of the Construction Information Management Forum 2008*, 19 November 2008, Guangzhou, China, 10-24.

Wong, A.K.D., Wong, F.K.W. and Abid, N. (2010). Attributes of building information modelling implementation in various countries. *Architectural Engineering and Design Management - Special Issue on Integrated Design and Delivery Solutions*, 6(4), November, 288-302.

Wong, A.K.D. and Zhang, R. (2013). Implementation of web-based construction project management system in China projects by Hong Kong developers. *Construction Innovation: Information, Process, Management*, 13(1), January, 26-49, DOI: <https://doi.org/10.1108/14714171311296048>.

Wong, K.D. and Fan, Q. (2013). Building Information Modelling (BIM) for sustainable building design. *Facilities*, 31(3/4), April, 138-157, DOI: <https://doi.org/10.1108/02632771311299412>.

Recommended journals

Advanced Engineering Informatics (<https://www.journals.elsevier.com/advanced-engineering-informatics>)

Automation in Construction: An International Research Journal (<https://www.journals.elsevier.com/automation-in-construction>)

Construction Innovation: Information, Process, Management (<https://www.emeraldgrouppublishing.com/products/journals/journals.htm?id=ci>)

Engineering, Construction and Architectural Management (<https://www.emeraldgrouppublishing.com/products/journals/journals.htm?id=ecam>)

Journal of Computing in Civil Engineering, ASCE (<https://ascelibrary.org/journal/jccee5>)

Journal of Information Technology in Construction (<http://www.itcon.org>)

Subject Code	BRE 685
Subject Title	Real Estate Finance and Appraisal
Credit Value	3
Level	6
Pre-requisite/ Co-requisite/Exclusion	Nil
Objectives	<p>This subject is intended to:</p> <ol style="list-style-type: none"> 1. introduce the concept and practice of real estate financing in an international context for executives working in the financial, insurance and real estate (FIRE) sectors; 2. introduce basic valuation concepts of real estate; and 3. develop knowledge and understanding of international approaches to and standards of appraisal.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Be familiar with the fundamental concepts of real estate finance and appraisal b. Construct an optimal capital structure to finance real estate development at both corporate and project levels. c. Identify sources of international standards in all forms of real estate appraisal. d. Undertake comparative analysis on a country-by-country basis of local practice against internationally recognized standards and approaches e. Adopt financial engineering to create innovative instruments and special purpose vehicles to raise capital.
Subject Synopsis/ Indicative Syllabus	<p>Topics of investing, funds management, real estate appraisal, asset and debt financing, mortgage-backed securities, innovative financing tools, public and private financing, etc. will be covered through the following:</p> <ul style="list-style-type: none"> • Corporate and real estate project finance: a re-cap of time value of money, extended net present value, cost and structure of capital, leverage, the Modigliani-Miller model, financial institutions, markets & instruments, direct versus indirect property investment, and taxation & property tax. • Real estate appraisal methods, international real estate valuation standards and conventions. • Costs and sources of debt financing including bank lending, syndicated loans, corporate bonds, mortgage-backed securities (MBS) and secondary mortgage markets. The Asian financial turmoil and the US subprime mortgage crisis. The role of banking on real estate financing

	<p>and investment performance particularly in the Mainland and Hong Kong.</p> <ul style="list-style-type: none"> Costs and sources of equity and derivatives financing including securities, initial public offerings (IPOs), private equity funds, hedge funds, open and closed-end funds and real estate options and other derivatives. Assessment and estimation of risk premiums. <p>Real estate investment trusts (REITs): local experience, and experience from the US, the Europe, Australia and other Asian countries. Structure and performance of REITs.</p>																																						
<p>Teaching/Learning Methodology</p>	<p>Lectures, tutorials and seminars sharing knowledge and experience among participants and with the tutor. Guest speakers will also be invited to give lectures in the urban and regional planning field.</p>																																						
<p>Assessment Methods in Alignment with Intended Learning Outcomes</p>	<table border="1" data-bbox="527 835 1469 1243"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Oral Presentation</td> <td>50%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>2. Essay Assignments</td> <td>50%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Both oral presentation and essay assignments will be adopted as assessment methods for the subject. Essay assignments will mainly assess students' understanding on the various investment theories and appraisal techniques. The oral presentation assesses students' ability to conduct study on a related topics assigned by the subject lecturer and present their findings in class.</p>	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e		1. Oral Presentation	50%	√	√	√	√	√		2. Essay Assignments	50%	√	√	√	√			Total	100 %						
Specific assessment methods/tasks	% weighting			Intended subject learning outcomes to be assessed (Please tick as appropriate)																																			
		a	b	c	d	e																																	
1. Oral Presentation	50%	√	√	√	√	√																																	
2. Essay Assignments	50%	√	√	√	√																																		
Total	100 %																																						
<p>Student Study Effort Expected</p>	<table border="1" data-bbox="527 1612 1469 1873"> <tr> <td>Class contact:</td> <td></td> </tr> <tr> <td>▪ lectures</td> <td>15 Hrs.</td> </tr> <tr> <td>▪ seminars/tutorials</td> <td>15 Hrs.</td> </tr> <tr> <td>Other student study effort:</td> <td></td> </tr> </table>	Class contact:		▪ lectures	15 Hrs.	▪ seminars/tutorials	15 Hrs.	Other student study effort:																															
Class contact:																																							
▪ lectures	15 Hrs.																																						
▪ seminars/tutorials	15 Hrs.																																						
Other student study effort:																																							

	<ul style="list-style-type: none"> ▪ self-study 	60 Hrs.
	<ul style="list-style-type: none"> ▪ project assignments 	30 Hrs.
	Total student study effort	120 Hrs.
Reading List and References	<p>Baum, A. (2009). Commercial Real Estate Investment: A Strategic Approach, 2nd edition. London: EG Books.</p> <p>Brealey, R A and Myers, S C, (2013). Principles of Corporate Finance, 11th Edition. Boston: McGraw Hill.</p> <p>Brueggeman, W. and Fisher, J. (2010). Real Estate Finance and Investments, 14th Edition. Boston: McGraw-Hill International.</p> <p>Chan, S.H., Erickson, J. and Wang, K. (2003). Real Estate Investment Trusts: Structure, Performance, and Investment Opportunities. Oxford University Press.</p> <p>Dixit, A.K. and Pindyck, R.S. (1994). Investment under Uncertainty. Princeton University Press.</p> <p>Finnerty, J.D. (2013). Project Financing: Asset-Based Financial Engineering, 3rd Edition. Wiley Finance.</p> <p>Geltner, D., Miller, N., Clayton, J. and Eichholtz, P. (2006). Commercial Real Estate Analysis and Investments, 2nd Edition, Mason OH: Thompson-South-Western.</p> <p>Hull, J.C. (2011) Options, Futures and Other Derivatives, 8th Edition. Prentice Hall.</p> <p>James, P. (2003). Option Theory. John Wiley and Sons.</p> <p>Lizieri, C. (2009). Towers of Capital. Oxford: Wiley-Blackwell.</p> <p><u>Key journals:</u></p> <p>Journal of Property Research</p> <p>Journal of Real Estate Finance and Economics</p> <p>Journal of Real Estate Research</p> <p>Real Estate Economics</p>	

Subject Code	BRE 686
Subject Title	Urban and Regional Planning
Credit Value	3
Level	6
Pre-requisite/ Co-requisite/Exclusion	Nil
Objectives	<p>This objectives of the subject is to :</p> <ol style="list-style-type: none"> 1. Understand theories of urban and regional planning. 2. Examine the concept of city-region with particular reference to the Guangdong Greater Bay Area. 3. Enable students to understand the interactions between urban planning and real estate development
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. To be familiar with the fundamental concepts of urban and regional planning b. Understand the advantages and problems associated with the development of city-regions. c. Apply the concepts of city-regions to the analysis of city-regions development in China. d. Have an in-depth understanding on the development strategy of the Guangdong Greater Bay Area.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • Nature of urban and regional planning; the physical, social, economic and political perspectives on urban and regional planning. • Topical issues on urban and regional planning: urban renewal and heritage preservation; compact city and Transit Oriented Development; Smart City. • The development of the concept of city-regions and discussions the role of urban planning policies in promoting economic cooperation among cities within a region. • Implications of regional integration on real estate markets of individual cities.
Teaching/Learning Methodology	Lectures, tutorials and seminars sharing knowledge and experience among participants and with the tutor. Guest speakers will also be invited to give lectures in the urban and regional planning field.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				
			a	b	c	d	
	1. Coursework	50%	√	√	√	√	
	2. Examination	50%	√	√	√	√	
	Total	100 %					
	<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Both examination and coursework will be adopted as assessment methods for the subject. Examination will be open book mainly to assess students' understanding on the various urban and regional planning theories and the debates on its strengths and limitations, rather than forcing students to memorizing facts and data. The coursework assignment assess students' ability to conduct study on a related topics assigned by the subject lecturer and present their findings in class.</p>						
Student Study Effort Expected	Class contact:						
	▪ Lectures		15 Hrs.				
	▪ Seminars/Tutorials		15 Hrs.				
	Other student study effort:						
	▪ Self-study		60 Hrs.				
	▪ Coursework Assignments		30 Hrs.				
	Total student study effort		120 Hrs.				
Reading List and References	<p>Birch, Eugenie Ladner (2009) <i>The Urban and Regional Planning Reader</i>, Routledge.</p> <p>Chao Ye, Jiajia Zhu, Simeng Li, Shan Yang, Mingxing Chen (2019) <i>Assessment and analysis of regional economic collaborative development within an urban agglomeration: Yangtze River Delta as a case study</i>, Habitat International Volume 83, January 2019 Pages 20-29</p> <p>Development Bureau, Hong Kong SAR Government (2011) <i>Urban Renewal Strategy</i>, Hong Kong SAR Government Publication</p>						

Eddie C.M. Hui, Xun Li, Tingting Chen, Wei Lang (2018) *Deciphering the spatial structure of China's megacity region: A new bay area-The Guangdong-Hong Kong-Macao Greater Bay Area in the making*, Cities 10/2018

Fainstein, Susan and DeFilippis, James (2016) *Readings in Planning Theory*, Chichester: Wiley-Blackwell 2016 4th ed

Kyle A. Jaros (2019) *China's urban champions: the politics of spatial development* Princeton University Press

LeGates and Stout (2011) *The City Reader*, Routledge.

Levy, John M. (2011) *Contemporary Urban Planning*, Pearson/Prentice Hall.

Lu, Chen ; Wu, Yuzhe ; Shen, Qiping ; Wang, Hao (2013) *Driving force of urban growth and regional planning: A case study of China's Guangdong Province.(Case study)*, Habitat International, Oct, 2013, Vol.40, p.35(7)

Song, Yan and Ding, Chengri (2009) *Smart Urban Growth for China*, Lincoln Institute of Land Policy.

Tang, B.S. (2014) *Study of the Integrated Rail-Property Development Model in Hong Kong*, The Hong Kong Polytechnic University

Wu, Fulong (2015) *Planning for Growth: Urban and Regional Planning in China*, New York; London: Routledge/Taylor & Francis Group

Subject Code	BRE 687
Subject Title	Topical Issues in Construction
Credit Value	3
Level	6
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	<p>The objectives of the subject are to:</p> <ol style="list-style-type: none"> 1. Provide students with in-depth understanding of selected current topical issues in the construction industry of Hong Kong and China. 2. Develop the students' ability in applying theories in the analysis of the selected topical issues in construction. 3. Develop the students' ability in presenting their analysis and views on the selected topical issues in construction and incorporating others' comments in writing up their final reports.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Have an in-depth understanding of the selected topical issues in construction; b. Apply theories and techniques in practice in the analysis of the selected topical issues in construction; and c. Possess the skills in presenting their analysis and conclusions, and addressing questions raised by subject lecturers, classmates and experts from the industry invited to attend their presentations as independent advisers.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • Application of 3D printing in construction • Sustainable development in construction • Management of mega-sized infrastructure construction projects • Application of Public-Private Partnership (PPP) in construction • Modular Integrated Construction (MiC) and Design for Manufacture and Assembly (DfMA)
Teaching/Learning Methodology	<p>Lectures, tutorials and seminars sharing knowledge and experience among students and with the subject lecturers. Prominent guest speakers will also be invited to provide guest lectures in the field of strategic project management for further illustration.</p>

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks		% weighting		Intended subject learning outcomes to be assessed (Please tick as appropriate)					
					a	b	c			
	1. Presentation		50%		√	√	√			
	2. Report		50%		√	√	√			
	Total		100 %							
<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>The assessment is 100% by coursework without written examination. Students need to demonstrate that they have a comprehensive and in-depth understanding of the selected topical issues in construction and are able to address questions raised by the subject lecturer and the fellow classmates. The students then submit the written reports by the last teaching week for assessment. The reports should incorporate the comments made by the subject lecturer and the classmates during the presentation sessions.</p>										
Student Study Effort Expected	Class contact:									
	▪ Seminars/workshops								15 Hrs.	
	▪ Student Presentations (Individual and Group)								15 Hrs.	
	Other student study effort:									
	▪ Self-Study								60 Hrs.	
	▪ Project Reports (Individual and Group)								30 Hrs.	
	Total student study effort								120 Hrs.	
Reading List and References	<p>The subject lecturer will determine the selected topical issues and will suggest appropriate relevant reference readings for the students. In particular, students are encouraged to find relevant references but not limited to the following recommended journals based on their assigned topical issues for further study.</p> <ul style="list-style-type: none"> • <i>Automation in Construction</i> • <i>Building and Environment</i> • <i>Building Research and Information</i> • <i>Buildings</i> • <i>Built Environment Project and Asset Management</i> • <i>Construction Innovation: Information, Process, Management</i> • <i>Construction Law Journal</i> • <i>Construction Management and Economics</i> • <i>Energy and Buildings</i> 									

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|--|---|
| | <ul style="list-style-type: none">• <i>Engineering, Construction and Architectural Management</i>• <i>Facilities</i>• <i>Habitat International</i>• <i>International Journal of Construction Management</i>• <i>International Journal of Project Management</i>• <i>Journal of Building Engineering</i>• <i>Journal of Cleaner Production</i>• <i>Journal of Construction Engineering and Management, ASCE</i>• <i>Journal of Management in Engineering, ASCE</i>• <i>Journal of Safety Research</i>• <i>Safety Science</i>• <i>Sustainability</i>• <i>Sustainable Cities and Society</i> |
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Subject Code	BRE 688
Subject Title	Topical Issues in Real Estate
Credit Value	3
Level	6
Pre-requisite/ Co-requisite/Exclusion	Nil
Objectives	<p>This subject is intended to:</p> <ol style="list-style-type: none"> 1. Provide students with in-depth understanding of selected current topical issues in real estate industry in Hong Kong and China. 2. Develop the students' ability in applying theories in the analysis of the selected topical issues in real estate. 3. Develop the students' ability presenting their analysis and views on the selected topical issues in real estate and incorporating others' comments in writing up their final report.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Have an in-depth understanding of the selected topical issues in real estate; b. Apply theories and techniques in practice in the analysis of the selected topical issues in real estate; and c. Possess the skills in presenting their analysis and conclusion and address questions raised by subject lecturers, classmates and experts from the industry invited to attend their presentation as independent advisers.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none"> • Real estate markets in the Guangdong Grater Bay Area; • Private sector led strategy in urban redevelopment • Real Estate Investment Trust – an international perspective • Application of Public-Private Partnership in real estate development
Teaching/Learning Methodology	<p>Lectures, tutorials and seminars sharing knowledge and experience among students and with the subject lecturers. Prominent guest speakers will also be invited to provide guest lectures in the field of strategic project management for further illustration.</p>

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
			a	b	c			
	1. Presentation (Individual/Group)	50%	√	√	√			
	2. Report (Individual/Group)	50%	√	√	√			
	Total	100 %						
<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>The assessment is 100% by coursework without written examination. Students need to demonstrate that they have a comprehensive and in-depth understanding of the selected topical issues in real estate and able to address questions raised by the subject lecturer and the fellow classmates. The students then submit the written reports by the last teaching week for assessment. The reports should incorporate the comments made by the lecturers and the classmates during the presentation sessions.</p>								
Student Study Effort Expected	Class contact:							
	▪ Seminars/Workshops		15 Hrs.					
	▪ Student Presentations (Individual/Group)		15 Hrs.					
	Other student study effort:							
	▪ Self-Study		60 Hrs.					
	▪ Project Reports (Individual/Group)		30 Hrs.					
	Total student study effort			120 Hrs.				

**Reading List and
References**

The subject lecturer will determine the selected topical issues and will suggest appropriate relevant reference readings for the students. Students are encouraged to find relevant readings in the following journals:

- *Cities*
- *Construction Law Journal*
- *Construction Management and Economics*
- *Engineering, Construction and Architectural Management*
- *Facilities*
- *Habitat International*
- *Journal of Contemporary China*
- *Journal of International Urban and Regional Research*
- *Property Management*
- *Review of Urban and Regional Development Studies*
- *Sustainable Cities and Society*

Subject Code	BRE 689
Subject Title	Professional Workshop in Real Estate
Credit Value	3
Level	6
Pre-requisite/ Co-requisite/Exclusion	Nil
Objectives	<p>This objectives of the subject is to:</p> <ol style="list-style-type: none"> 1. Promote students' ability to conduct independent study under the guidance of the subject lecturer. 2. Enhance students to develop their interest and understanding of a selected real estate or urban planning project and develop a relevant approach to the analysis of the project. 3. Develop students' ability to write up a good report and develop it into a paper from their research works.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Have an in-depth understanding of a specific real estate or urban planning project; b. Gain experience on conducting independent research under the guidance of a supervisor (the subject lecturer or an academic staff appointed by the program leader). c. Able to write up a paper summarizing his/her independent research topic. d. Learn the skills of writing up a professional report and present the project in a professional manner.
Subject Synopsis/ Indicative Syllabus	<p>The subject promotes students' ability in independent professional study. The principle educational aims of the subject are to promote students' ability of:</p> <ul style="list-style-type: none"> - identification of a suitable project for in-depth study - independent self-learning - formulation of research method and study plan - critical evaluation of the project - presenting the findings in the professional workshops
Teaching/Learning Methodology	<p>Under the guidance of the subject leader, students will select a project in real estate and urban planning that he or she is interested to conduct for in-depth study. The proposed projects need to be approved by the subject leader. Students will present their proposal in class and exchange their ideas with their classmates. The</p>

	subject lecturer will provide guidance to the students to write up the professional reports.							
Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
			a	b	c	d		
	1. Study Proposal	20%	√	√	√	√		
	2. Presentation	30%	√	√	√	√		
	3. Professional Report	50%	√	√	√	√		
	Total	100 %						
<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>The assessment is by means of coursework only without written examination. The intended learning outcomes and assessment criteria will be explained to the students in the first workshop. The core assessment method of the subject is the presentation during which students are required to demonstrate that they have a comprehensive and in-depth understanding of the projects that they selected as their assignments. Students are required to address questions raised by the subject lecturer and classmates. Experts in the industry might be invited to attend the students' presentation workshops and serve as independent assessors.</p>								
Student Study Effort Expected	Class contact:							
	▪ Workshops							15 Hrs.
	▪ Student Presentations							15 Hrs.
	Other student study effort:							
	▪ Self-study							60 Hrs.
	▪ Report preparation and writing							30 Hrs.
	Total student study effort							120 Hrs.

**Reading List and
References**

Most of the readings for this subject will come from academic journals, government reports and reports produced by relevant professional institutes of the construction and real estate industry. Relevant readings will be produced as part of the briefing information for this subject by the subject leader prior to the study visit. Students are recommended to go study relevant papers in the following journals:

- *Cities*
- *Habitat International*
- *International Journal of Urban and Regional Research*
- *Journal of Real Estate Literature*
- *Journal of Property Research*
- *Journal of Real Estate Finance and Economics*
- *Journal of Real Estate Research*
- *Journal of Urban and Regional Research*
- *Urban Studies*

Subject Code	BRE 690
Subject Title	Professional Workshop in Construction
Credit Value	3
Level	6
Pre-requisite/ Co-requisite/Exclusion	Nil
Objectives	<p>The objectives of the subject are to:</p> <ol style="list-style-type: none"> 1. Promote students' ability to conduct independent study under the guidance of the subject lecturer. 2. Enhance students to develop their interests and understanding of a selected construction project and develop a relevant approach to the analysis of the project. 3. Develop students' ability to write up a good report and develop it into a paper from their research works.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Have an in-depth understanding of a specific construction project. b. Gain experience in conducting independent research under the guidance of a supervisor (the subject lecturer or an academic staff appointed by the programme leader). c. Able to write up a paper summarizing his/her independent research topic. d. Learn the skills of writing up a professional report and present the project in a professional manner.
Subject Synopsis/ Indicative Syllabus	<p>The subject promotes students' ability in independent professional study. The principal educational aims of the subject are to promote students' ability of:</p> <ul style="list-style-type: none"> - identification of a suitable project for in-depth study. - independent self-learning. - formulation of research methods and study plans. - critical evaluation of the project. - presenting the findings in the professional workshops.
Teaching/Learning Methodology	<p>Under the guidance of the subject leader, students will select a project in construction that he or she is interested to conduct for in-depth study. The proposed projects need to be approved by the subject leader. Students will present their proposals in class and exchange their ideas with their classmates. The subject lecturer will provide guidance to the students to write up the professional reports.</p>

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				
			a	b	c	d	
	1. Study Proposal	20%	√	√	√	√	
	2. Presentation	30%	√	√	√	√	
	3. Professional Report	50%	√	√	√	√	
Total	100 %						
	<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>The assessment is by means of coursework only without written examination. The intended learning outcomes and assessment criteria will be explained to the students in the first workshop. The core assessment method of the subject is the presentation during which students are required to demonstrate that they have a comprehensive and in-depth understanding of the projects that they selected as their assignments. Students are required to address questions raised by the subject lecturer and classmates. Experts in the industry might be invited to attend the students' presentation workshops and serve as independent assessors.</p>						
Student Study Effort Expected	Class contact:						
	▪ Workshops		15 Hrs.				
	▪ Student Presentations (Individual)		15 Hrs.				
	Other student study effort:						
	▪ Self-study		60 Hrs.				
	▪ Report Preparation and Writing (Individual)		30 Hrs.				
	Total student study effort		120 Hrs.				
Reading List and References	Bell, J. and Waters, S. (2014). <i>Doing your Research Project</i> . Buckingham, Open University Press, 6th Edition.						
	Bella, D. (2012). <i>Digital Qualitative Research Methods</i> . SAGE Publications.						
	Berenson, M.L., Levine, D.M. and Szabat, K.A. (2015). <i>Basic Business Statistics – Concepts and Applications</i> . 13th Edition, Pearson Education, Boston, USA.						

Devore, J.L. (2016). *Probability and Statistics for Engineering and the Sciences*, 9th Edition, Cengage Learning, Boston, USA.

Dunleavy, Patrick. 2003. *Authoring a Ph.D.* p.227-251. Palgrave.

Fellows, R. and Liu, A. (2015). *Research Methods for Construction*. Wiley Blackwell, 4th Edition.

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Rowntree, D. (2000). *Statistics Without Tears: An Introduction for Non-Mathematicians*. Penguin Science.

Tan, W. (2018). *Research Methods: A Practical Guide for Students and Researchers*. World Scientific, Singapore.

Students are encouraged to find relevant references but not limited to the following journals based on their chosen research topics for further study.

- *Automation in Construction*
- *Building and Environment*
- *Building Research and Information*
- *Buildings*
- *Built Environment Project and Asset Management*
- *Construction Innovation: Information, Process, Management*
- *Construction Law Journal*
- *Construction Management and Economics*
- *Energy and Buildings*
- *Engineering, Construction and Architectural Management*
- *Facilities*
- *International Journal of Construction Management*
- *International Journal of Project Management*
- *Journal of Building Engineering*
- *Journal of Cleaner Production*
- *Journal of Construction Engineering and Management, ASCE*
- *Journal of Management in Engineering, ASCE*
- *Journal of Safety Research*
- *Safety Science*
- *Sustainability*
- *Sustainable Cities and Society*

Subject Code	BRE 691
Subject Title	Doctoral Thesis I
Credit Value	8
Level	6
Pre-requisite/ Co-requisite/Exclusion	Completion of 5 taught subjects including the subject “Advanced Research Methods for Real Estate and Construction”
Objectives	The objective of the subject is to strengthen students’ ability of formulating a workable research proposal for a research topic in construction and real estate. The students will be guided to select research topics with both academic and practical significance.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. identify research-based topics of both local and international interests in the field of construction and real estate. b. formulate workable research proposals for the Doctoral Thesis. c. adopt appropriate research methodologies and study plans for the selected research topics. d. define research aims and objectives for the selected research topics. e. review and understand relevant literature in the field of the selected research topics.
Subject Synopsis/ Indicative Syllabus	<p>Students are expected to work independently and individually, reflecting on the experience of the work in progress and feedback from their supervisors. The principal educational aims of this subject are to promote the following abilities and disciplines:</p> <ul style="list-style-type: none"> • Awareness of needs for research in the field of construction and real estate. • Application of knowledge learned in the “research methods” subject to formulate research proposals. • Demonstration of an in-depth understanding of the background of selected research topics. • Critical review and evaluation of the literature in the selected research topics. • Formulation and research of complex problems.

Teaching/Learning Methodology	<p>The subject will be commenced with an introductory workshop. The subject lecturer will brief students on the requirement of the research proposals for the Doctoral Thesis. In the second and third workshops, students are required to suggest research topics of their own interests and exchange their ideas with classmates and received verbal feedbacks from the subject lecturer. After the confirmation of the research topics, students will continue to work independently on literature reviews and selecting appropriate research methods for their research studies.</p> <p>Students are required to meet regularly with their supervisors to report progress of their research and obtain advices from their supervisors. For assessment purpose, students need to present their doctoral thesis proposals in front of an independent assessment panel comprising the subject lecturer and a moderator normally an academic staff of the host department. Experts in the industry might be invited to serve as the moderators.</p>																																							
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" data-bbox="527 793 1469 1171"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th></th> </tr> </thead> <tbody> <tr> <td>1. Presentation</td> <td>50%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>2. Thesis Proposal</td> <td>50%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>Total</td> <td>100 %</td> <td colspan="6"></td> </tr> </tbody> </table> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>The subject is assessed by continuous assessment through presentations and written thesis proposals. Students are required to demonstrate their ability in identifying meaning thesis topics with both academic and practical significance.</p>		Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e		1. Presentation	50%	√	√	√	√	√		2. Thesis Proposal	50%	√	√	√	√	√		Total	100 %						
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Total	100 %																																							
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**Reading List and
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Berenson, M.L., Levine, D.M. and Szabat, K.A. (2015). *Basic Business Statistics – Concepts and Applications*. 13th Edition, Pearson Education, Boston, USA.

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Tan, W. (2018). *Research Methods: A Practical Guide for Students and Researchers*. World Scientific, Singapore.

Relevant reading materials will be recommended by the subject lecturer. Students are encouraged to find readings relevant to their thesis topics in the following journals:

- *ASCE Journal of Construction Engineering and Management*
- *ASCE Journal of Management in Engineering*
- *Automation in Construction*
- *Building Research and Information*
- *Construction Management and Economics*
- *Construction Law Journal*
- *ASCE Journal of Urban Planning and Development*
- *Habitat International*
- *Urban and Regional Research*
- *Housing Studies*
- *Journal of Real Estate Finance and Economics*
- *Property Management*

Subject Code	BRE 692
Subject Title	Doctoral Thesis II
Credit Value	16
Level	6
Pre-requisite	Advanced Research Methods for Real Estate and Construction Doctoral Thesis I
Objectives	The objective of the subject is to strengthen participants' capability for independent, analytical study in the area of international construction and real estate in a professional context. In conjunction with the taught subjects and international study visits, it forms an integrated and most important component of the doctoral programme. It is also used as a demonstration of the students' ability to conduct independent research with critical thinking and innovative ideas.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> a. Conduct independent research with critical and innovative ideas; b. Apply knowledge learned from the taught subjects to develop the doctoral thesis; c. Undertake critical analysis of construction and real estate issues; and d. Identify area(s) for further research in construction and real estate.
Subject Synopsis/ Indicative Syllabus	Students are expected to work independently and individually, reflecting on the experience of the work in progress and feedback from their supervisors. The principal educational aims of this subject are to promote the following abilities and disciplines: <ul style="list-style-type: none"> • Self-learning and independent research ability • Independence of thought • Critical evaluation • Formulation and research of complex problems • Communication of complex ideas and conclusions • Ability to defend criticisms by external examiners during the oral examinations
Teaching/Learning Methodology	Each student will be assigned a supervisor according to his/her proposed doctoral thesis topic. Students should follow the research plans of the research proposals formulated in the subject "Doctoral Thesis I". They should work independently and keep regularly contacts with their supervisors reporting their progress and any difficulties encountered. Supervisors will monitor the students' research

progress and provide them with guidance and supervision. At the final stage, students will complete and submit their thesis for oral examination subjected to the approval of their supervisors. Students are required to satisfy the Board of Examiners during the oral examination that their research work and thesis submitted are up to the doctoral level. Similar to the oral examination for candidates of Doctor of Philosophy (PhD), the Board of Examiners for the Doctoral Thesis will comprise the supervisor and external examiners. An academic staff member of the department will be appointed as the Chairman of the BoE.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
			a	b	c	d		
	1. Progress Report	20%	√	√	√	√		
	2. Oral Examination	30%	√	√	√	√		
	3. Thesis	50%	√	√	√	√		
	Total	100 %						

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

The core assessment method of the subject is the oral examination and the final draft of the doctoral thesis submitted by the students (plus a progress report). During the oral examination, students will be required to demonstrate their in-depth understanding of their thesis topics and that the research works are conducted originally by themselves. In addition, the final thesis should be well structured and contribute to a better understanding on the selected field of study.

Student Study Effort Expected	Class contact:	
	▪ Supervision and Oral Examination	30 Hrs.
	Other student study effort:	
	▪ Self-Study	690 Hrs.
	Total student study effort	720 Hrs.

Reading List and References

Bell, J. and Waters, S. (2014). *Doing your Research Project*. Buckingham, Open University Press, 6th Edition.

Bella, D. (2012). *Digital Qualitative Research Methods*. SAGE Publications.

Berenson, M.L., Levine, D.M. and Szabat, K.A. (2015). *Basic Business Statistics – Concepts and Applications*. 13th Edition, Pearson Education, Boston, USA.

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Relevant reading materials will be recommended by the subject lecturer. Students are encouraged to find readings relevant to their thesis topics in the following journals:

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- *ASCE Journal of Management in Engineering*
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