

## **REGULATIONS FOR THE DEGREE OF MASTER OF SCIENCE IN CONSTRUCTION PROJECT MANAGEMENT (MSc[ConstProjectMan])**

*(See also General Regulations)*

Any publication based on work approved for a higher degree should contain a reference to the effect that the work was submitted to the University of Hong Kong for the award of the degree.

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### **Admission requirements**

**Ar201** To be eligible for admission to the curriculum for the degree of Master of Science in Construction Project Management a candidate

- (a) shall comply with the General Regulations;
  - (b) shall hold
    - (i) a degree or other qualification of equivalent standard awarded by this University or by another university or comparable institution accepted for this purpose; or
    - (ii) a professional qualification and membership of an appropriate professional body accepted for this purpose; and
  - (c) shall satisfy the examiners in a qualifying examination if required.
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### **Qualifying examination**

**Ar202**

- (a) A qualifying examination may be set to test a candidate's formal academic ability or his ability to follow the courses of study prescribed: such an examination shall consist of one or more written papers or their equivalent and may include a project report.
  - (b) A candidate who is required to satisfy the examiners in a qualifying examination shall not be permitted to register until he has satisfied the examiners in the examination.
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### **Award of Master degree**

**Ar203** To be eligible for the award of the degree of Master of Science in Construction Project Management a candidate

- (a) shall comply with the General Regulations; and
  - (b) shall complete the curriculum and satisfy the examiners in accordance with the regulations set out below.
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### **Length of Curriculum**

**Ar204**

- (a) The curriculum of the Master of Science in Construction Project Management shall extend over not less than one academic year of full-time study or two academic

years of part-time study and shall include all examinations administered in accordance with the regulations and syllabuses set out below. The maximum period of study is five years.

- (b) To complete the curriculum a candidate
  - (i) shall follow courses of instruction and complete satisfactorily all prescribed written work and practical work where appropriate;
  - (ii) shall satisfy the examiners in all prescribed modules in any prescribed form of examination;
  - (iii) shall satisfy the examiners in the manner specified in these regulations and syllabuses in either
    - (1) 72 credits including prescribed and elective modules; or
    - (2) 72 credits including prescribed and elective modules plus 18 credits of specialist modules for majors that carry professional accreditation where required.

The examiners may at their discretion prescribe an oral examination in any module or on the dissertation.

Selection of modules shall be subject to the approval of the Committee for Postgraduate Modular Programmes.

## **Dissertation**

**Ar205** The title of the dissertation shall be submitted for approval not later than one month before the start of the final academic semester of study for full time students or four months before the start of the final academic semester of study for part-time students, and the dissertation shall be presented not later than twelve months after the start of the final academic semester of study. The candidate shall submit a statement that the dissertation represents his own work undertaken after registration as a candidate for the degree.

## **Examinations**

### **Ar206**

- (a) A candidate shall be recommended for discontinuation of studies under the provisions of General Regulation G12 if he / she has:
  - (i) failed to satisfy the examiners in three modules or more in any semester or
  - (ii) failed to satisfy examiners of any one module at the third attempt during the period of his / her studies or
  - (iii) failed to complete the curriculum by the end of the maximum period of studies.
- (b) A candidate who has failed to satisfy the examiners in less than three modules in any semester:
  - (i) must repeat the module if it is a prescribed module; and
  - (ii) may either repeat the elective modules of failure or take other elective modules to satisfy the examiners in accordance with the regulations.
  - (iii) may be permitted to present himself for re-examination subject to the approval of the programme director.

**Ar207** A candidate who has presented an unsatisfactory dissertation, but has satisfied the examiners at the written examination or re-examination, shall be permitted to revise the dissertation and to re-present it within a specified period to be determined by the Board of Examiners; and should he/she fail to satisfy the examiners at the re-examination, he/she shall be recommended for discontinuation of studies under the provisions of General Regulation G12.

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### **Examination results**

**Ar208** At the conclusion of the examination, a pass list shall be published. Candidates who have shown exceptional merit at the whole examination may be awarded a mark of distinction or credit, and this mark shall be recorded in the candidates' degree diploma.

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### **Advanced Standing**

**Ar209** A candidate may be given advanced standing for up to 3 modules or 18 credits on the ground that equivalent modules or courses or subjects have been passed at another university or comparable institution accepted by the faculty for this purpose: provided that no candidate shall be eligible for the award of the degree set out in these regulations without having completed at least 54 credits in this programme.

## SYLLABUSES FOR THE MODULAR MASTERS DEGREES PROGRAMMES IN CONSTRUCTION PROJECT MANAGEMENT AND REAL ESTATE

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### **Programme Structure**

The aim of the Modular Programmes, on a faculty-wide basis, is to provide advanced tuition in all aspects of the project and land development processes, allowing students maximum flexibility in module selection within their chosen disciplines. Where appropriate the programmes will be related to developments not only in Hong Kong but also the Peoples' Republic of China and the Southeast Asian region. Some of the modules listed below may not be offered every year.

To receive the award of Master of Science in Construction Project Management or Master of Science in Real Estate, a candidate must complete either

- (1) 72 credits including prescribed modules and elective modules; or
- (2) 72 credits including prescribed modules and elective modules plus 18 credits of specialist modules for majors that carry professional accreditation where required.

The prescribed modules for Master of Science in Construction Project Management are:

RECO6003 Economics for professionals;  
RECO6005 Contract strategies and project management techniques;  
RECO6006 Management theory and construction projects;  
RECO6042 Law for the real estate and construction industry;  
RECO6047 Research methods; and  
RECO6058 Project workshop (CPM).

Selection of elective modules shall be subject to the approval of the Committee for Postgraduate Modular Programmes.

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### **RECO6001. Urban planning: theory and practice (6 credits)**

This module examines the evolution of Urban Planning and Urban Planning Theory both in developed regions including Hong Kong and in developing parts of the world. It looks at contemporary planning issues and the challenges faced at the local as well as the strategic planning levels.

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### **RECO6003. Economics for professionals (6 credits)**

This module examines the nature of economic inquiry, a demand and supply model for real estate markets, monopoly of durable goods, pricing under demand uncertainty, search theory, asymmetric information on quality, agency theory, property rights, theory of price control, external effects, public goods, and Coasian critique of Neo-classical firm.

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### **RECO6004. Construction economics (6 credits)**

This module examines the following aspects in construction economics: Building cost control, life cycle costing, design economics, introduction to modelling, cost modelling - techniques,

problems and recent developments, the Hong Kong construction industry, cost, price, value and competition.

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**RECO6005. Contract strategies and project management techniques (6 credits)**

This module examines risk management, contract strategies, organization form, relational contracting, planning techniques, value management, quality management, operations research, sustainable construction.

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**RECO6006. Management theory and construction projects (6 credits)**

This module examines the fundamental knowledge in management theory and its application in construction procurement: the project organization, management, schools of thought, the project life cycle, organization structure, team roles, case studies of projects, project management tools.

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**RECO6007. Real estate and construction management practice (6 credits)**

This module provides a framework for analyzing management practice in the real estate and construction industry: people in organizations, organizational culture & climate, leadership, motivation, commitment, cooperation & collaboration, decision aiding technologies, decision making, negotiation, meetings, presentation techniques, conflict management.

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**RECO6014. Real estate management (6 credits)**

This module approaches real estate management from a total asset management viewpoint. It covers the real estate asset management environment, strategic decision-making in real estate, property asset management, and real estate portfolio management from corporate and institutional perspectives. It also deals with real estate agency and marketing principles.

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**RECO6015. Real estate investment and the capital markets (6 credits)**

This module provides a framework for analyzing real estate investment within a capital markets theoretical framework. It deals with real estate investment and modern portfolio theory, the capital asset pricing model and portfolio performance measurement, and real estate market efficiency. The module highlights comparative problems in the application of modern investment theory to real estate investments and real estate markets.

Pre-requisites: RECO6069. Real estate investment

RECO6070. Real estate finance

Co-requisite: RECO6017 Project Finance

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**RECO6016. Land economics (6 credits)**

This module covers the fundamental determinants of location of economic activities: the concept of rent, marginal productivity and land rent, bid rent analysis and the formation of a

land market, economic regions and retail locations, industrial locations, land use control, property rights and zoning, social cost and pollution problems, development timing and problems of urban redevelopment.

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**RECO6017. Project finance** (6 credits)

This module deals with project finance from an international financial markets perspective, and includes real estate project financing. It covers international project finance and principles of financial risk management. The module contains a substantial self-study component, and candidates are required to present a detailed case study as part of module requirements.

Pre-requisites: RECO6069. Real estate investment  
RECO6070. Real estate finance

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**RECO6018. Modern developments in the law of construction contracts** (6 credits)

This module examines the modern development in the laws of contract and torts: interpretation, comparison and application of various standard forms of building and civil engineering contracts and sub-contracts: programmes, interim certification, set-off of payments, pay when paid clause, variation and architect's instruction, delay and extension of time, liquidated damages; preparation, evaluation and presentation of claims; contractual, non-contractual and ex-gratia claims; global claims; advanced claims techniques; contractual and common law remedies; bankruptcy and insurance in the context of the construction industry.

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**RECO6020. Dissertation** (12 credits)

This module requires candidates to conduct a research and present the findings as a dissertation. The dissertation shall be on an approved topic relevant to the curriculum.

Pre-requisite: RECO6047. Research methods

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**RECO6027. Business process engineering** (6 credits)

This module covers the concepts of business process engineering and reengineering. It introduces the principles of business models, business processes analysis and design, workflow management, techniques and supporting tools.

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**RECO6028. Procurement systems** (6 credits)

This module examines the strategic and emergent issues in construction procurement: a definition of procurement systems; organising the project procurement process; organisational design; organisational learning as a vehicle for improved building procurement; culture; conventionally orientated to developmentally orientated procurement systems; use of world wide web technologies and procurement process implications; applying multiple project procurement methods to a portfolio of infrastructure projects; multiple performance criteria for evaluating construction contractors; applying partnering in the supply chain; selection criteria.

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**RECO6029. Information management in construction** (6 credits)

This module covers the concepts of information management, business information systems and computerization in the construction industry. It introduces the principles and applications of systems analysis and design. It also focuses on special IT applications in construction including computer-aided design and multimedia systems.

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**RECO6030. Knowledge management in construction** (6 credits)

This module covers the concepts and development of knowledge management in the construction industry: strategic information systems, object technology, coordinated project information exchange, principles and applications of knowledge-based systems.

Co-requisite: RECO6029. Information management in construction

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**RECO6031. Alternative dispute resolution** (6 credits)

This module examines the theory and practice of dispute resolution: negotiation; mediation; litigation; arbitration and adjudication; practice and procedure; application in the real estate and construction industry

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**RECO6032. Law and practice of arbitration** (6 credits)

This module examines the process of arbitration in Hong Kong and China: common law and statute; procedure and proof; the role of expert witnesses; domestic and international arbitrations; arbitration institutions; application in the real estate and construction industry

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**RECO6033. Facility management practice** (6 credits)

This module explores topical issues in facilities management, such as strategic corporate facility planning, benchmarking, post-occupancy evaluation, outsourcing, space planning and management, office safety and security, contingency planning.

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**RECO6034. Facility maintenance management** (6 credits)

This module examines the principles and types of maintenance, the building life cycle and obsolescence: Maintenance policies, strategies and statutory requirements. Planned maintenance, preventive maintenance, contracts and standards for maintenance work. Building refurbishment, alterations and conservation.

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**RECO6035. Advanced facility technology** (6 credits)

This module examines the options and installation of state-of-the-art services for communication, power and data transmission technology, virtual office/workplace, data center, advanced monitoring and automation for CAFM and BMS.

Pre-requisite: Pre-course – Construction Technology  
Pre-requisite: RECO6033. Facility management practice

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**RECO6036. Land administration systems (6 credits)**

This module examines comparative land administration systems: freehold and leasehold tenure; socialist land systems; communal land systems; their characteristics and impact on government revenue, urban & rural development and resource conservation; land adjustments and reforms; urban renewal.

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**RECO6037. Hong Kong land administration (6 credits)**

This module examines the Hong Kong land administration system: its history and functions; how it operates under administrative law; land exchanges and lease modifications; lease interpretation and salient features of land administration in the New Territories.

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**RECO6038. Administrative law in land development in Hong Kong (6 credits)**

This module covers the following aspects: the Basic Law; the HKSAR Government; judicial reviews with the focus on lease control, planning, building and environmental protection; remedies; interpretation of lease and town plans; lease enforcement; planning enforcement and building control with the focus on development potential and liabilities of owners and occupiers.

Pre-requisite: RECO6039 Planning and building development

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**RECO6039. Planning and building development (6 credits)**

This module deals with building development by examining the nature and procedures of plan preparation, planning application and building applications; inter-relationship between lease, planning and building control; planning appeals and building appeals.

Co-requisite: RECO6001. Urban planning: theory and practice

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**RECO6040. Construction safety management (6 credits)**

This module covers introduction to construction site organisation; Occupational Safety and Health regulations; Workers compensation and civil claims; Accident reporting systems; Safety management systems; Site safety audits; Site safety initiatives; occupational health on site; Ergonomics and manual handling; dangerous substances on site; Codes of practice and standards; Design and construction considerations; Temporary works; Plant, tools and machinery; Personal protective Equipment; Unions and subcontractors; Workers and dangerous trades

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**RECO6041. Development projects (6 credits)**

This module examines actual problem associated with planning and development projects in Hong Kong and selectively, other cities around the region. It is case-based, highly interactive and encourages students to explore different ways of finding solutions inherent to the land conversion process.

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**RECO6042. Law for the real estate and construction industry (6 credits)**

This module provides a study of the law relating to the real estate development and construction processes: Acquisition, ownership, management and disposal of land and real estate; town planning; finance of development; building contracts (standard forms, comparative studies); revenue law and the real estate market; agency law; alternative dispute resolution movement.

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**RECO6043. Construction business management (6 credits)**

This module examines the management of construction business which covers Hong Kong's

economy, case studies, strategic management, marketing, financial performance, recruitment and human resources management, safety management systems, environmental management systems, ethics.

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**RECO6044. Planning and markets (6 credits)**

This module examines alternative institutional means of coordinating specialized land uses from a transaction cost perspective. The approaches of Pigou, Coase and Hayek are compared. The idea of planning by contract is contrasted to that by edict and command.

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**RECO6045. Sustainable development and property rights (6 credits)**

This module examines the idea of sustainable development from a Coasian and Schumpeterian perspective and explores alternative systems of institutional arrangements that promote the idea. Topics covered include theorization on the tragedy of the commons; rent dissipation; Coase Theorem and theories of innovation.

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**RECO6046. Research seminar (6 credits)**

This module aims to familiarize students with the rigors of producing a research proposal. Main issues include the development of aims and objectives of the proposed research, determination and justification of a suitable methodology to test hypotheses (if any), and deciding on a practical programme for the execution of the research project. Students are required to give research seminar presentations of their work as they progress.

Co-requisite: RECO6047 Research methods

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**RECO6047. Research methods (6 credits)**

This module aims to develop the student's abilities in the formulation of an appropriate research framework. Main issues include: literature search, qualitative and quantitative research approaches, experiment design, model building, data analysis and dissemination of results.

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**RECO6048. An introduction to sustainability and its relevance to the construction sector (6 credits)**

This module is designed to give students a broad introduction to the theoretical concepts of sustainability as well as the practical implications that it has for the construction industry in HK and China and especially to the building design team. The module covers the following aspects : Introduction to the concept of sustainability - historical context; Sustainable development; Environmental impacts; The construction industry in Hong Kong and its response to sustainable development; The construction industry in Chongqing and its response to sustainable development; Life Cycle Assessment and its significance; and The measurement of social impacts - the final Life Cycle Assessment frontier.

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**RECO6051. Land management in China (6 credits)**

History of land management in China; transitional reforms in land markets; urban land reform in China; rural land and urban villages in china; housing reform in China. Study trip to Real Estate College at the Beijing Normal University, Zhu Hai campus. Bureaucratic and organizational structure in land management in China; current legislations in land management in China; urban and rural land management practice in China.

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**RECO6052. Financial services regulations for real estate professionals (6 credits)**

Introduction to the HKSAR's legal system relating to banking, finance and real estate; Legal methods; HKSAR's corporate legislation; shareholders' rights and duties; The governance of listed companies and the roles of real estate professionals; Financial markets – stock exchanges and stakeholders; Securities and capital structure; Real estate professionals and market misconducts. Banking law of the HKSAR; Structure of banking and deposit-taking institutions; financial requirements and real estate lending; Supervision of banking institutions; Policy rationale of international trade; the WTO Agreements - Financial Services Agreement.

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**RECO6053. Real options analysis in real estate and infrastructure development (6 credits)**

This module extends conventional capital budgeting methodology and introduces the principles and practice of Real Options Analysis and its role in the modern Extended Net Present Value model. The value of managerial flexibility is considered within the context of the built environment, including real estate and infrastructure projects and assets. Pricing models to value particular managerial choices including the option to delay or defer projects, abandon projects, create flexible project capacity, and switch project inputs are covered.

Pre-requisites: RECO6069. Real estate investment  
RECO6070. Real estate finance

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**RECO6054. Real estate derivatives (6 credits)**

This module introduces new developments in real estate finance, and concentrates on real estate derivatives. The nature of derivatives, pricing basics and indexes are introduced, concentrating on real estate applications. The nature of financial risk in real estate investment and development is considered, together with the use of real estate derivatives as risk management instruments.

Pre-requisites: RECO6069. Real estate investment  
RECO6070. Real estate finance

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**RECO6055. Business valuation – theory (6 credits)**

This module introduces and develops the principles of valuing business enterprises. It introduces and develops the framework of the enterprise valuation model based on standard discounted cash flow analysis using company data. It further covers the nature of industry and extended rivalry analysis and the enterprise's economic environment and the importance of

strategic managerial actions for the value of a business, following the concept of incorporating a business's real options and growth opportunities into business valuation.

Pre-requisites: RECO6069. Real estate investment  
RECO6070. Real estate finance

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### **RECO6056. Business valuation – practice (6 credits)**

The module covers the practice of business valuation through case studies in Hong Kong and other place. Practical considerations includes professional ethics and legal liability, relevant codes of practices, accounting practices, valuation standards, data reliability and availability, relevant rules and regulations and analysis of soft information and macro trends. The module further includes a critical review of the limitations of current practices.

Pre-requisites: RECO6069. Real estate investment  
RECO6070. Real estate finance  
Co-requisite: RECO6055. Business valuation – theory

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### **RECO6057. Theory and practice of valuation of fixed assets (6 credits)**

This module introduces valuation of fixed assets for different purposes; relevant rules & regulations, code of practices and valuation standards; site inspection of other legal documents; qualitative assessment; data reliability and availability and analysis of soft information and macro trends; advanced valuation techniques. The module further includes a critical review of the advantages and disadvantages of different valuation techniques.

Pre-requisites: RECO6069. Real estate investment  
RECO6070. Real estate finance

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### **RECO6058. Project workshop (CPM) (6 credits)**

This module is comprised of project workshop designed for construction project management. The project workshop reflects the inter-disciplinary nature of the curriculum and aims to synthesize and apply the theory taught in the lecture courses to a problem which in practice would engage the combined skills of a number of the professions which constitute the property and construction industries. Through this students will experience the demands and importance of teamwork under the exigencies of actual commerce, and will appreciate the significance of their role and that of others in the context of the environment, planning, the property and construction industry and accountancy.

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### **RECO6059. Project workshop (RE) (6 credits)**

This module is comprised of project workshop designed for real estate. The project workshop reflects the inter-disciplinary nature of the curriculum and aims to synthesize and apply the theory taught in the lecture courses to a problem which in practice would engage the combined skills of a number of the professions which constitute the property and construction industries.

Through this students will experience the demands and importance of teamwork under the exigencies of actual commerce, and will appreciate the significance of their role and that of others in the context of the environment, planning, the property and construction industry and accountancy.

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**RECO6060. Development case studies (QS) (6 credits)**

This module is comprised of development case studies designed for the professional discipline of Quantity Surveying. It examines in detail the interaction of the various components within the development process. It utilizes a series of case studies of actual projects of varying scale and complexity which will allow for an analysis of the essential inputs to the process and the effects these may have on outputs and the final product.

Co-requisites: RECO6062. Workshop report (QS)  
RECO6064. Professional report (QS)

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**RECO6061. Development case studies (GPS) (6 credits)**

This module is comprised of development case studies designed for the professional discipline of General Practice Surveying. It examines in detail the interaction of the various components within the development process. It utilizes a series of case studies of actual projects of varying scale and complexity which will allow for an analysis of the essential inputs to the process and the effects these may have on outputs and the final product.

Co-requisites: RECO6063. Workshop report (GPS)  
RECO6065. Professional report (GPS)

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**RECO6062. Workshop report (QS) (6 credits)**

The Workshop report comprises a number of task specific exercises relevant to the Quantity Surveying discipline which can be independently developed and tested. There will be emphasis on professional/practice skill through practice based case histories and/or assignments.

Co-requisites: RECO6060. Development case studies (QS)  
RECO6064. Professional report (QS)

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**RECO6063. Workshop report (GPS) (6 credits)**

The Workshop report comprises a number of task specific exercises relevant to the General Practice Surveying discipline which can be independently developed and tested. There will be emphasis on professional/practice skill through practice based case histories and/or assignments.

Co-requisites: RECO6061. Development case studies (GPS)  
RECO6065. Professional report (GPS)

**RECO6064. Professional report (QS) (6 credits)**

The Professional report represents an individual piece of work that emphasizes one of the specialist elements within the professional discipline of Quantity Surveying.

Co-requisites: RECO6060. Development case studies (QS)  
RECO6062. Workshop report (QS)

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**RECO6065. Professional report (GPS) (6 credits)**

The Professional report represents an individual piece of work that emphasizes one of the specialist elements within the professional discipline of General Practice Surveying.

Co-requisites: RECO6061. Development case studies (GPS)  
RECO6063. Workshop report (GPS)

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**RECO6066. Real estate development and land policies (6 credits)**

This module deals with the economics and structure of the real estate industry with special reference to Hong Kong. It introduces the real estate sector as consisting of three interrelated subsectors, namely the market for real estate services, the market for real estate assets, and the real estate development market. The module also introduces principles of real estate market analysis and real estate project evaluation.

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**RECO6067. Public Sector Project Evaluation (6 credits)**

This module approaches public sector project evaluation from a modern public sector management perspective. It introduces public sector finance and the economics and finance frameworks within which public sector projects are proposed, evaluated and chosen. It includes practical instruction in the principal decision-making methodology, cost-benefit analysis, and developments in the field of public sector cost of capital. It also introduces the influence of sustainability concerns and public sector project evaluation.

Pre-requisites: RECO6069. Real estate investment  
RECO6070. Real estate finance

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**RECO6068. Construction practice in Mainland China (6 credits)**

This module examines the practical knowledge for conducting construction and building business in Mainland China. It covers Analysis of China's construction market, Administrative and institutional structure of the industry, Construction procedure including urban planning, feasibility, project financing, architecture design, bidding and tendering, construction, and its major players. It will also deliver knowledge about cultural dimensions, building and real estate practices, and internationalization of the industry.

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**RECO6069. Real estate investment (6 credits)**

This module introduces real estate investments as part of the universe of investment opportunities. It introduces real estate investment analysis and decision-making, and modern capital market theory and its application to real estate as an investment class.

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**RECO6070. Real estate finance (6 credits)**

This module introduces corporate finance principles and their application within the context of the real estate industry. It deals with standard corporate capital budgeting techniques and its application to the real estate industry and projects. It further deals with cost of capital theory, and the principal sources of real estate finance.

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**MHMP8003. Practices of housing management and maintenance (6 credits)**

This module aims to introduce and consolidate student's understanding of major concepts and practices of housing management in Hong Kong, including the management of building maintenance. Its objectives are to discuss the contexts and concepts of housing management; to canvass the tasks and skills in the management of residential properties and related community and commercial facilities; to introduce students to major building structures, building fabrics and building materials and their maintenance problems and maintenance policies and their implementation; and to identify the role of housing managers in the maintenance of residential properties.

This module also includes a non-examinable experiential learning workshop on communication skills to enable students to handle negotiation, mediation, residents and concerned groups, holding of meetings and interviews, and dealing with crisis situations.

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**URBP6904. Housing, planning and sustainability (6 credits)**

This module aims to provide an integrative and in-depth understanding of Hong Kong's housing system and its relationships with urban planning and the concepts of sustainable development. It discusses the theoretical and practical aspects of housing, making special reference to their relationships with urban planning and sustainable development. Major topics include the housing system concepts, the political economy of housing policies, land use planning and housing affordability, principals of residential planning, housing policy analyses, housing market analyses, and the application of the sustainable development perspective to housing analyses.

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