

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

*These regulations and syllabuses apply to students admitted in the 2014-15 academic year and thereafter.*

*(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/her 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 / she 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 assessments administered in accordance with the regulations and syllabuses set out below. The maximum period of study is two years for full-time and three years for part-time study.

- (b) To complete the curriculum a candidate
  - (i) shall follow course of instruction and complete satisfactorily all prescribed written work and practical work where appropriate;
  - (ii) shall satisfy the examiners in all prescribed courses in any prescribed form of assessment; and
  - (iii) shall satisfy the examiners in the manner specified in these regulations and syllabuses in completing 72 credits including prescribed courses and elective courses.

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

Selection of courses shall be subject to the approval of the Taught Postgraduate Committee.

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### **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 the curriculum for full time students or four months before the start of the final academic semester of the curriculum for part-time students, and the dissertation shall be presented not later than twelve months after the start of the final academic semester of the curriculum. The candidate shall submit a statement that the dissertation represents his/her own work undertaken after registration as a candidate for the degree.

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### **Assessment**

#### **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 courses or more in any semester or
  - (ii) failed to satisfy the examiners of any one course at the third attempt or
  - (iii) failed to complete the curriculum by the end of the maximum period of registration.
- (b) A candidate who has failed to satisfy the examiners in fewer than three courses in any semester:
  - (i) must repeat the course(s) if it is a prescribed course(s); and
  - (ii) may either repeat the elective course(s) of failure or take other elective course(s) in lieu to satisfy the examiners in accordance with the regulations.
  - (iii) may be permitted to present himself for re-assessment subject to the approval of the programme director.

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### **Discontinuation of studies**

**Ar207** A candidate who has presented an unsatisfactory dissertation, but has satisfied the examiners at the written assessment or re-assessment, 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-assessment, he / she shall be recommended for discontinuation of studies under the provisions of General Regulation G12.

### **Assessment results**

**Ar208** At the conclusion of the assessment, a pass list shall be published. Candidates who have shown exceptional merit at the whole assessment 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 courses or 18 credits on the ground that equivalent 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 curriculum.

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

*These syllabuses apply to students admitted in the 2014-15 academic year and thereafter.*

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## **Curriculum Structure**

The aim of the curriculum design, 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 course selection within their chosen disciplines. Where appropriate the curriculums will be related to developments not only in Hong Kong but also the People's Republic of China and the Southeast Asian region. Some of the courses listed below may not be offered every year.

To receive the award of Master of Science in Construction Project Management, a candidate must complete 72 credits including 36 credits of prescribed courses and 36 credits of elective courses.

The prescribed 6-credit courses for Master of Science in Construction Project Management are:

RECO6003 Economics for professionals;  
RECO6028 Procurement systems;  
RECO6042 Law for the real estate and construction industry;  
RECO6047 Research methods;  
RECO6058 Project workshop (CPM); and  
RECO7074 Management theory and projects.

Selection of elective courses from the syllabus shall be subject to the approval of the Taught Postgraduate Committee. Not all courses from the syllabus will be offered every year. Students are required to take elective courses from a pool of designated electives to be announced by the Programme Director at the beginning of the year.

All courses will be assessed by examination (60% - 80%) and continuous coursework assessment (20% - 40%), unless otherwise specified.

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

This course 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.

Assessment: 100% coursework

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

This course 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.

Assessment: 100% coursework

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**RECO6004 Construction economics (6 credits)**

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

Assessment: 40% coursework and 60% examination

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

This course 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.

Assessment: 100% coursework

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

This course 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 course 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 course highlights comparative problems in the application of modern investment theory to real estate investments and real estate markets.

Assessment: 100% coursework

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**RECO6016 Land economics (6 credits)**

This course 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 course 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 course contains a substantial self-study component, and candidates are required to present a detailed case study as part of course requirements.

Pre-requisites: RECO6070 Real estate finance

Assessment: 100% coursework

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

This course 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 course 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

Assessment: 100% coursework

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

This course 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; innovation and innovation management, technology management and product development, Building Information Modeling.

Assessment: 100% coursework

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**RECO6028 Procurement systems (6 credits)**

This course examines the strategic and emergent issues in construction procurement: a definition of procurement systems; organising the project procurement process; contract strategy; international comparisons of procurement systems; applying multiple project procurement methods to a portfolio of projects; performance criteria for evaluating construction project; applying relational contracting in the supply chain; selection criteria.

Assessment: 100% coursework

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

This course 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.

Assessment: 100% coursework

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

This course 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.

Assessment: 100% coursework

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

This course 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 course 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 course 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 course 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 course 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.

Assessment: 100% coursework

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

This course 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 course 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 course 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 course 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.

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

This course 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.

Assessment: 100% coursework

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**RECO6041 Development projects (6 credits)**

This course 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.

Assessment: 100% coursework

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

This course 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 course examines the management of construction businesses which covers construction markets, case studies, strategic management, marketing, international contracting, recruitment and human resources management, ethics, transparency.

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

This course 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 course 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.

Assessment: 100% coursework

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**RECO6046 Research seminar (6 credits)**

This course 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.

Assessment: 100% coursework

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**RECO6047 Research methods (6 credits)**

This course 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.

Assessment: 100% coursework

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

This course 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 course 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.

Assessment: 20% coursework and 80% examination

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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.

Assessment: 100% coursework

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

This course 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

Assessment: 20% coursework and 80% examination

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

This course 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

Assessment: 20% coursework and 80% examination

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

This course 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

Assessment: 20% coursework and 80% examination

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

This course 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.

Assessment: 100% coursework

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**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.

Assessment: 100% coursework

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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.

Assessment: 100% coursework

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

The purpose of this course is to examine various aspects of urban land policies, such as economic and social, with particular reference to the real estate development. In addition, socio-economic issues evolving around land market, land use policies as well as the land management system also form the core substance in this course. Impacts of the built environment on various aspects of our community will also be examined with reference to urban land policies.

Assessment: 40% coursework and 60% examination

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**RECO6067 Public sector project evaluation (6 credits)**

This course 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 course 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, 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 internationalization of the industry.

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

This course 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.

Assessment: 100% examination

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

This course 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.

Assessment: 100% examination

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**RECO7074 Management theory and projects (6 credits)**

This course 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, change management, case studies of projects.

Assessment: 40% coursework and 60% examination

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**RECO7075 Management practice and projects (6 credits)**

This course 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 making, negotiation, meetings, presentation techniques, conflict management, case studies of management issues.

Assessment: 100% coursework

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**RECO7076 Property valuation – principles and practices (6 credits)**

This course covers the principles and practices of property valuation, land assembly and development controls, market analysis, project evaluation, marketability analysis, development appraisal, tenant portfolio planning and lease negotiation.

Assessment: 100% coursework

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**RECO7071 Marketing strategies and management in real estate (6 credits)**

This course deals with the basic principles of marketing strategies and management in general, and their application in the real estate market in particular. It introduces the concepts of marketing strategies and management, marketing research techniques, media management, marketing budgeting, consumer behaviour and analysis in the real estate market. It also examines the issues of ethics in marketing and the legal constraints in the application of different marketing techniques under different cultural and socio-economic backgrounds.

Assessment: 40% coursework and 60% examination

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**RECO7072      Cities and Real Estate Development (6 credits)**

This course deals with the real estate development, market and business in various cities with a particular emphasis on institutional framework and market economy aspects such as real estate regulation, investment practices and development procedures. It also examines and compares key factors affecting real estate development in different cities.

Assessment: 100% coursework

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**RECO7073      Design Management (6 credits)**

This course introduces the management of various aspects of business strategy delivered through design including managing the design team, value management, briefing, roles and working of conceptual, schematic and detail design phases, process protocol, process mapping techniques, design economics.

Assessment: 40% coursework and 60% examination

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**RECO7077      Construction business case studies (6 credits)**

This course is comprised of 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.

Assessment: 100% coursework

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**RECO7078      Real estate business case studies (6 credits)**

This course is comprised of 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.

Assessment: 100% coursework

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

This course 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 course 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 course 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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