

DIPLOMA IN HOTEL & LEISURE FACILITIES MANAGEMENT (HLFM) 3-YEAR COURSE

PROPERTY CLUSTER



NP students at Universal Studios Singapore

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New hotel and leisure facilities such as the Resorts World Sentosa, Marina Bay Sands, ION Orchard and Orchard Central are not only unique in their design; they are also sophisticated in their operations with the extensive use of new technology. A new breed of Facility Managers is needed to keep up with the complexities of these modern facilities and bring them to a higher level of management.

These Facility Managers will need to be dynamic, tech-savvy and able to understand the human psyche to deliver both the highest possible satisfaction to consumers and value to the owners.

With the **Diploma in Hotel & Leisure Facilities Management (HLFM)**, students will gain the experience they need to do just this. In fact, this practice-oriented course offers not one, but two internship opportunities for students. Students will go on internships with organisations including Resorts World Sentosa, Swissotel The Stamford, Frasers Hospitality, Reuters, AsiaMalls Management and CapitaMall Trust to gain valuable real-world experience.

Students will also learn how to operate and manage modern 'green' hotels that use green building technology, building automation and performance simulation.

HLFM graduates will also be awarded a Fire Safety Manager Certificate that allows them to be registered as Qualified Fire Safety Managers.

ENTRY REQUIREMENTS

To be eligible for consideration, candidates must have the following GCE 'O' Level examination (or equivalent) results and fulfil the aggregate computation requirements:

Subject	'O' Level Grade
English Language*	1-7
Mathematics (Elementary/Additional)	1-6
Science (with Physics, Chemistry or Biology component) or Computer Studies or Design & Technology or Fundamentals of Electronics	1-6

The aggregate computation for selection is based on grades obtained for English, Mathematics, Science or Design & Technology or Food & Nutrition (Grade 1-9) or a relevant OSIE / Applied Subject and two other subjects.

* Candidates with English as a second language must have attained a minimum grade of 6.

Candidates with hearing deficiency or severe vision deficiency should not apply for the course. Those with colour appreciation deficiency may be considered, subject to an in-house test.

CAREER PROSPECTS

With the construction of many luxurious hotels and mega-sized leisure facilities in Singapore, there will be many job opportunities for well-trained Facility Managers.

HLFM graduates can also work as a project manager, environmental consultant, property and workplace planner, or business development executive. With your training in both front-of-house and back-end operations, you will have an added advantage in gaining employment in the many different hotel positions.

In addition to being a Facility Manager, graduates will be able to work as a Front Office Manager, Hotel Operations Management Executives and also as a Fire Safety Manager in the hotel and leisure industry. With the Fire Safety Manager certification, graduates can get an additional allowance of about \$300 per month.

ACCREDITATION FOR FURTHER STUDIES

HLFM graduates can continue their education in facilities management with the National University of Singapore (NUS) by taking the degree course in Project & Facilities Management. Various overseas universities in Australia, United Kingdom and the United States also offer advanced standing to our graduates for entry into their bachelor's degree courses related to Facilities Management. In addition, our graduates may also apply to various overseas universities for further studies in the hospitality industry.

COURSE CURRICULUM

Module Name	Credit Units
YEAR 1	
Level 1.1 (25 hours per week)	
Hotel Operations & Management	4
Front Office Management	4
Customer Relationship Management	4
Building Systems 1	5
Principles of Accounting	4
Idea Jumpstart [^]	2
Sports & Wellness [^]	2
Level 1.2 (25 hours per week)	
Food & Beverage	4
Executive Housekeeping	4
Event & Project Management	5
Business & Contract Law	4
Security Management & Business Continuity	4
Communication & Contemporary Issues [^]	4
YEAR 2	
Level 2.1 (28 hours per week)	
Shopping Mall Management	5
Psychology & Consumer Behaviour	4
Structure & Fabric	5
Building Systems 2	5
Two-month internship#	5
Idea Blueprint [^]	2
Interdisciplinary Studies (IS) module [^]	2
Level 2.2 (24 hours per week)	
Spa & Amenities Management	4
Principles of Management	4
Building Maintenance & Refurbishment	4
Environmental Health Management	4
Computer Aided Design	4
Idea Launchpad [^]	2
Interdisciplinary Studies (IS) module [^]	2
YEAR 3 (SIX-MONTH INTERNSHIP)	
Level 3.1 (26 hours per week)	
Reservation & Revenue Management	4
Marketing & Public Relations	5
Green Building Technologies	3
Fire Safety Management	6
Intelligent Systems & Energy Management	4
World Issues: A Singapore Perspective [^]	2
Interdisciplinary Studies (IS) module [^]	2

Module Name	Credit Units
Level 3.2 (25 hours per week)	
Four-month Internship	16
YEAR 3 (TWO-MONTH INTERNSHIP)	
Level 3.1 (21 hours per week)	
Reservation & Revenue Management	4
Economics	4
Facilities Maintenance Management	4
Property Management	5
World Issues: A Singapore Perspective [^]	2
Interdisciplinary Studies (IS) module [^]	2
Level 3.2 (21 hours per week)	
Marketing & Public Relations	5
Green Building Technologies	3
Space & Asset Management	3
Fire Safety Management	6
Intelligent Systems & Energy Management	4

Notes:

The Two-Month Internship is conducted during the vacation.

[^] For more details on Interdisciplinary Studies (IS) modules, please log on to www.np.edu.sg/is/.

Students are required to own notebook computers.

IS Modules

The School of Interdisciplinary Studies (IS) delivers a broad-based curriculum, which nurtures a new generation of professionals with multidisciplinary skills and an innovative and entrepreneurial spirit to meet the challenges of a knowledge economy. IS offers both prescribed modules and electives to challenge boundaries. Prescribed modules develop students' competencies in core areas such as Communication, Innovation and Enterprise, Culture and Communication, and Personal Mastery and Development, while elective modules provide insights into Arts and Humanities, Business, Design and Science and Technology.

COURSE MODULES

LEVEL 1.1

Hotel Operations & Management

Hotel Operations & Management implies the organisation of a current business control over several key functions of a hotel like food production and hygiene, food and beverage service, housekeeping and front office operations. In this module, besides understanding the overall view of the key functions and departments in a hotel, students will learn the art and science of running a hotel, hotel organisation structure, conceptual framework of the hotel general manager's job, engineering and security, financial control and information management and human resource - driving hospitality into the future.

Front Office Management

The Front Office department is a subtle department of the rooms department. Its primary responsibility is to provide the best service possible to hotel guests. Students will be introduced to the guest cycle of pre-arrival, arrival, stay-in and departure. Besides customer relations, the front office is also responsible for controlling cost vital to the survival of any hospitality establishment and its revenue management. Topics covered in this module include services of front office, roles and functions of front office manager as well as the service quality and pre-requisites of front office staff.

Customer Relationship Management

This module will cover the principles and concepts of customer relationship management and includes the definition of customer/client service, understanding customer needs, solutions to facilities management challenges and customer relationship management (CRM) implementation.

Building Systems 1

Students are given an overview of the mechanical services in a modern high-rise structure. Topics include water supply, sanitary and drainage systems, gas supply, mechanical ventilation & air-conditioning systems, with an emphasis on real-life application in the operation and maintenance of these facilities in buildings.

Principles of Accounting

This module provides students with the knowledge to understand basic accounting theories, concepts and conventions. It will equip them with the skills to prepare simple financial statements and to appreciate the importance of understanding and analysing financial statements. Such domain knowledge plays a critical role in maintaining integrity, professionalism and ethics at work in the future.

LEVEL 1.2

Food & Beverage

Food & beverage (F&B) services play an important role in the product and service mix of hotels. It helps a hotel to capture additional revenue, prestige and competitive advantage. In this module, students will learn the fundamental processes in a typical F&B outlet such as the table service, pre-opening activities and service sequence. They will also acquire knowledge on types of food & wine menu, information technology used in F&B, sanitation & food safety as well as the facility layout.

Executive Housekeeping

Housekeeping is essential to an efficient and effective hospitality management. Students will learn that the function of a housekeeping department is a service unit for every department in a hotel and the housekeeping staff must 'think customer'. They will be introduced to the basic roles and functions of the Housekeeping Department, pre-requisites of good housekeeper, employees and clients' safety, common accidents and accident prevention, quality customer service and the purchase functions.

Event & Project Management

Event management requires multi-disciplinary skills in strategic planning, risk analysis, marketing, budgeting, cash flow planning, logistic planning and human resource management. This module introduces students to the basics of project management, budgeting and cash flow planning. It also covers event venue analysis, understanding event regulatory requirements and event staging. Other critical factors

for a successful event such as on-site services, security and safety, and event protocol will also be discussed.

Business & Contract Law

Students will study legal obligations relating to the management, use and operation of a built environment. The Legal System introduces the nature and administration of law. The Law of Contract and Commercial Law involve a study of self-imposed obligation by individuals. The Law of Torts involves a study of state-imposed obligation on individuals for civil wrongs. Students will learn the concepts and principles of law through critical analysis, logical reasoning, and problem solving and management skills.

Security Management & Business Continuity

This module covers the features and operation of security systems in modern buildings and the process of disaster recovery. Topics covered include the features of modern security systems, security system operations, disaster planning and data recovery, evacuation planning, and risk management. The knowledge gained in this module will enable students to address the increasing need for security and disaster recovery in modern facilities.

LEVEL 2.1

Shopping Mall Management

This module aims to expose students to the importance of meeting tourists, shoppers, tenants and landlords' needs and requirement towards building a vibrant retail sector as an attraction for Singapore's economy. Students will study the evolution of shopping centres, its product life cycle, branding and positioning, retail space planning, and tenant mix, success factors of a shopping mall, lease management, loss prevention and security management, and the future challenges for the retail scene in Singapore.

COURSE MODULES

Psychology & Consumer Behaviour

Consumer psychology provides a useful background for consumer analysis. This is particularly important for both the hospitality and facility management industries which are service-oriented. It is necessary to develop an integrated view of consumer analysis to develop good marketing strategies. Students will be introduced to the three elements of consumer psychology and behaviour, namely cognition, behaviour and environment, as well as the analysis of marketing strategies affected by these elements. Students will gain a better understanding of consumers and thus devise better marketing strategies to meet organisational objectives.

Structure & Fabric

In this module, students will study the various building elements of substructure, superstructure, floors, walls, roofs and building finishes. They will also be taught the principles and methods of simple building construction including the discussion of relevant case studies. Practical works include laboratory-based assignments and hands-on construction of building models.

Building Systems 2

This module covers the different electrical facilities found in high-rise buildings. Topics covered include the electrical supply system, lifts and escalators, communication systems and building automation system. Emphasis will be placed on real-life applications in the operation and maintenance of these facilities in buildings.

Two-month Internship

In this module, students will be attached to organisations for a period of eight weeks to gain practical experience related to their course of study in the hospitality industry. This allows students to adapt themselves to the work environment in preparation for future employment. During their internship, they will be assigned to the various departments of a hospitality business to experience the daily operations and learn on the job.

LEVEL 2.2

Spa & Amenities Management

The importance of proper management and upkeep of leisure amenities such as spas and wellness centres, aquatic centres, multi-purpose arenas as well as their

facilities to ensure their continued use and patronage will be taught in this module. Students will also learn about the importance of cost-effectiveness in the management of such amenities and the creation of a positive ambience to the users.

Principles of Management

The Principles of Management is an art of Planning, Organising, Directing and Controlling of the various resources, including people, within an organisation. Students will be introduced to the basic concepts and philosophy of management, and the various motivational theories such as the Maslow's hierarchy of needs and Herzberg's theory of needs. Organisational behaviour and culture will also be introduced as a focus towards human resource management within an organisation to achieve business objectives and the effective development of management and decision making strategies.

Building Maintenance & Refurbishment

This module covers the causes of building defects and their corresponding rectification methods. Topics covered include defects relating to foundations, concrete structures, roofs, floor and wall finishes. In addition, students will learn how to investigate building problems and handle maintenance repair works related to the building fabric. It also covers the options available to the owner of a building that suffers from obsolescence. Possibilities of refurbishing the building will be explored.

Environmental Health Management

This module covers the general aspects of environmental health including the study of epidemiology, vector control and food hygiene. Students will learn to apply these concepts and principles to health management, and workplace health and safety. Students will also be given an overview of indoor air pollution sources, types of pollutants and the corresponding health impacts. Current methods of treating and controlling poor indoor air quality and local guidelines on indoor air quality will also be introduced.

Computer Aided Design

This module provides students with the principles and techniques of preparing computer-aided design (CAD) drawings in Architectural, Engineering and Construction (AEC) projects. Students will also be

trained to interpret and extract information from CAD drawings and prepare CAD drawings according to CP 83. Emphasis will be placed on preparing CAD drawings accurately so that information can be used electronically. AutoCAD is used in this module as it is widely adopted in the AEC industry.

LEVELS 3.1 & 3.2

Reservation & Revenue Management

In this module, students will learn how revenue and rooms are being forecasted and how rates are being determined. Topics covered include the critical factors that affect revenue forecast, tracking of revenue and setting up of different revenue channels. Students will also learn about the operation of the typical revenue channels such as central reservation office, local hotel's reservation, the Internet, and the global distribution system.

Economics

This module equips students with basic knowledge of economic theory on individual decision-making (micro-economics) and social policy formulation (macro-economics). It will cover basic economics concepts such as the market system, government controls, demand and supply, market structure and economies of scale. There will also be discussions on pricing and product development for hospitality services, as well as the economic trends and the macroeconomic fluctuations that affect the hospitality industry.

Facilities Maintenance Management

This module covers the skills and knowledge required for entry-level jobs in facilities maintenance, and trains graduates to handle maintenance work as facilities owners, both by means of in-house staff and out-sourced to management agents. Topics include maintenance works for different facilities, indoor air quality, selecting and managing contractors, maintenance contract specification, performance-based contract, and facilities condition assessment.

COURSE MODULES

Property Management

In this module, students will learn the industry practices and laws governing the management and maintenance of public and private properties. Students will acquire the conceptual level of residential property management including legislations, leasing, finance, operation and maintenance. Essentially, the module covers budgeting & financial management, contracts and lease administration, resident relations and practical operation of mechanical and electrical systems and amenities. Bringing technical, managerial and interpersonal skills together will be the basis of residential property management.

Marketing & Public Relations

This is a two-part module. Students will be introduced to the primary task of marketing - to provide real value to targeted customers, motivate purchase and fulfil customer needs. Students will also learn the concepts of marketing - the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy consumers and organisational objectives of creating and maintaining satisfied and profitable customers. This module introduces the students to the different media management theories and their applications, Public Relations ethics, and the roles and responsibilities of a Public Relations practitioner with specific focus on one working within the leisure business industry. Case studies and real life scenarios will be discussed for comprehensive learning.

Green Building Technologies

Students will learn about the government and industry initiatives to introduce green building technologies such as using recycled aggregates for structural and non- structural uses, precast and modular construction. Students will learn in detail the different types of precast elements and how they are fabricated in the factory and assembled on site. They will also learn about the Green Mark Listing Scheme as well as the operating and sustainability issues of green technologies when applied in buildings.

Space & Asset Management

This module covers the management of space in facilities as an asset. Topics covered include space definition and planning, tagging and tracking of space usage, forecasting and allocation of space, management of furniture and equipment, life cycle costing and benchmarking. Students will also be introduced to computer-aided facilities management (CAFM) products as a planning and management tool.

Fire Safety Management

This module covers the Fire Safety Managers' scope of work and prepares students to be fire safety managers. Topics covered include a study of the requirements contained in the Fire Safety Act, fire command centre operations, evacuation procedures, fire safety planning and fire investigation. It also covers the active and passive fire protection systems in buildings such as fire extinguishers, wet and dry rising mains, fire sprinkler systems, fire alarm systems, smoke control systems and the protection of means of escape. Case studies will be used to illustrate the importance of fire protection systems.

Intelligent Systems & Energy Management

This module covers intelligent systems of modern leisure buildings such as building automation, structural cables, broadband networks and energy audit. In addition to their functions and applications, it also focuses on how these advanced features improve the productivity of occupants and add value to the business. An overall view of the underlying technologies, services and schemes that provide comprehensive energy management in helping businesses reduce operation costs, will be covered.

Four-month Internship

In this module, students will be attached to organisations for a period of four months. This is to prepare them for future employment in their particular discipline of study. During their internship, they will undertake projects and tasks assigned by the organisations. This allows them the opportunity

to take initiatives as well as to develop their self-confidence, interpersonal and adaptation skills.

DIPLOMA PLUS PROGRAMME

The Diploma Plus Programme (DPP) is designed to provide students with adequate proficiency in a selected domain area, either to broaden or deepen a student's knowledge/skills in his/her main discipline of study, or to equip a student with additional professional knowledge that would better prepare him/her for further study or increase their employability. DPP is optional and it will not affect the graduating requirement for the award of a diploma.

Students can choose the DPP cluster listed below. The offer of a DPP cluster is subject to the condition that the minimum class size is met and based on available vacancies.

Cluster

- Leisure & Retail Management

Other Available Diploma Plus Certificates

- Business
- Innovation Management
- Languages (Japanese)

For detailed module descriptions under each cluster, please refer to page 176.

DIPLOMA IN REAL ESTATE BUSINESS (REB) 3-YEAR COURSE

PROPERTY CLUSTER



Singapore may have a shortage of land, but its billion-dollar property market is buzzing with many exciting real estate activities. The upcoming developments at the new downtown at Marina Bay and the rejuvenation of the Central Business District at Raffles Place will see many office developments sprouting. The make-over of the Orchard Road Shopping Belt will create a shopping haven on earth. The development of Punggol 21 waterfront housing will create endearing homes for all to live in.

What's more, the Jurong Lake District will be the next great place to work, live, learn and play – all in one! And the Tanjong Pagar Railway Station locality will be a drawing board for planning exciting land uses and property developments for the next generation!

The **Diploma in Real Estate Business (REB)** is the only course in Singapore that prepares students for a rosy future in this burgeoning industry. Covering the business and management of real estate, REB provides a comprehensive and up-to-date curriculum.

From planning and developing to managing, valuing and marketing real estate projects plus financing and investing, students will pick up the knowledge and skills required to create, market and manage shopping centres, office developments, integrated resorts and theme parks. They will learn to conduct valuation and investment analysis of condominiums, offices and retail properties.

Besides the discipline-specific core modules, students have a good spread of elective modules to choose from, and can graduate with additional Diploma Plus Certificates and/or Enhancement Certificates. These electives are carefully selected to cater to the students' diverse interests and the changing trends in the industry.

Overseas training opportunities are available in the major cities of China, India and Australia, as well as with prominent local companies.

Graduates will be competent in helping property owners, investors and tenants maximise the use of their properties to achieve the highest financial returns.

They will also be able to lend a hand in the strategic marketing and management of shopping centres, integrated resorts and theme parks, as well as the valuation of luxury condominiums, office and retail properties.

ENTRY REQUIREMENTS

To be eligible for consideration, candidates must have the following GCE 'O' Level examination (or equivalent) results and fulfil the aggregate computation requirements:

Subject	'O' Level Grade
English Language*	1-7
Mathematics (Elementary/Additional)	1-6
Science (with Physics, Chemistry or Biology component) or Computer Studies or Design & Technology or Fundamentals of Electronics	1-6

The aggregate computation for selection is based on grades obtained for English, Mathematics, Science or Design & Technology or Food & Nutrition (Grade 1-9) or a relevant OSIE / Applied Subject and two other subjects.

* Candidates with English as a second language must have attained a minimum grade of 6.

CAREER PROSPECTS

With this diploma, graduates will be able to find jobs in all sectors of the real estate market and building industry. They can also find jobs in organisations searching for premises to operate their business.

REB graduates can work as an executive overseeing property investment, real estate marketing, planning and development of land, real estate financing and housing loans, property valuation, property management and many more. Alternatively, they could become project supervisor, contract administrators or quantity surveyors.

Potential employers include government departments, regulatory authorities and statutory boards, banks, property development and investment companies, real estate consultancies,

town councils, construction companies and chartered surveying practices. With a few years' experience, REB graduates can apply for a House Agent's Licence issued by the Council for Estate Agencies.

ACCREDITATION FOR FURTHER STUDIES

Local and overseas universities accept REB graduates into related bachelor's degree programmes with appropriate exemptions and advanced standing:

- National University of Singapore
Modules exemption equivalent to one year for the Real Estate and Project & Facilities Management course
- University of Reading (UK)
Up to one year exemption for real estate courses
- Heriot-Watt University (UK)
Up to two years exemption for real estate courses
- University of Queensland (Australia)
Up to one year exemption for business degrees with specialisation in International Business, Real Estate & Development, Marketing and Business Economics

The Diploma in Real Estate Business is recognised by the Council for Estate Agencies and the Inland Revenue Authority of Singapore. Graduates with some years of working experience can apply for a House Agent's Licence issued by the Council for Estate Agencies.

COURSE CURRICULUM

Module Name	Credit Units
YEAR 1	
Level 1.1 (24 hours per week)	
Theory of Economics	5
Mechanical Systems	5
Principles of Accounting	4
Computer-Aided Design	3
Interior Design	3
Idea Jumpstart ^	2
Sports & Wellness^	2
Level 1.2 (25 hours per week)	
Electrical Systems	5
Principles of Law	5
Building Technology	5
Real Estate Market Research	4
Introduction to Real Estate Business	2
Communication & Contemporary Issues^	4
YEAR 2	
Level 2.1 (26 hours per week)	
Project Management	4
Property Management	5
Real Estate Marketing	5
Real Estate Finance	5
Environmental Health Management	3
Idea Blueprint^	2
Interdisciplinary Studies (IS) module^	2
Level 2.2 (28 hours per week)	
Property Valuation	5
Real Estate Law	5
Advanced Building Technology	5
Urban Planning & Economics	4
Two-month Internship#	5
Idea Launchpad^	2
Interdisciplinary Studies (IS) module^	2
YEAR 3 (INTERNSHIP)	
Level 3.1 (24 hours per week)	
Building Maintenance & Diagnostics	4
Building Refurbishment	3
Client Relationship Management	4
Real Estate Investment	5
Building Quantities & Costing	4
World Issues: A Singapore Perspective^	2
Interdisciplinary Studies (IS) module^	2

Module Name	Credit Units
Level 3.2 (25 hours per week)	
Six-month Internship	25
YEAR 3 (NON-INTERNSHIP)	
Level 3.1 (20 hours per week)	
Building Maintenance & Diagnostics	4
Building Refurbishment	3
Hospitality Management	3
Project Design & Development 1	6
World Issues: A Singapore Perspective^	2
Interdisciplinary Studies (IS) module^	2
Level 3.2 (24 hours per week)	
Client Relationship Management	4
Real Estate Investment	5
Building Quantities & Costing	4
International Business	2
Project Design & Development 2	9

Notes:

For Non-Internship Path only.

^ For more details on Interdisciplinary Studies (IS) modules, please log on to www.np.edu.sg/is/. Students are required to own Notebook Computers.

IS Modules

The School of Interdisciplinary Studies (IS) delivers a broad-based curriculum, which nurtures a new generation of professionals with multidisciplinary skills and an innovative and entrepreneurial spirit to meet the challenges of a knowledge economy. IS offers both prescribed modules and electives to challenge boundaries. Prescribed modules develop students' competencies in core areas such as Communication, Innovation and Enterprise, Culture and Communication, and Personal Mastery and Development, while elective modules provide insights into Arts and Humanities, Business, Design and Science and Technology.

COURSE MODULES

LEVEL 1.1

Theory of Economics

This module equips students with basic knowledge of economic theory on individual decision-making (microeconomics) and social policy formulation (macroeconomics). Microeconomics examines how individuals, households and firms make economic decisions, how they interact to determine the quantity and price of goods and factors of production, and the allocation of resources. Macroeconomics explores the determination of real income, employment, price level and inflation in an economy, and the conduct of macro-economic policy.

Mechanical Systems

Students will be given an overview of the mechanical services found in modern high-rise buildings. Topics covered include water supply, sanitary systems, drainage systems, gas supply and air-conditioning systems. This module places emphasis on real-life applications in the operation and maintenance of these facilities in buildings.

Principles of Accounting

This module provides students with the knowledge to understand basic accounting theories, concepts and conventions. It will help to equip them with the skills to prepare simple financial statements of trading organisations. Most importantly, students would be trained to appreciate the importance of understanding and analysing financial statements. Such domain knowledge plays a critical role in maintaining integrity, professionalism and ethics at work in the future.

Computer-Aided Design

This module provides students with the principles and techniques of preparing computer-aided design (CAD) drawings in Architectural, Engineering and Construction (AEC) projects. Students will also be trained to interpret and extract information from CAD drawings and prepare CAD drawings according to CP 83. Emphasis will be placed on preparing CAD drawings accurately so that information can be used electronically. AutoCAD is used in this module as it is widely adopted in the AEC industry.

Interior Design

This module introduces drafting and illustration techniques of developing and presenting design. Students will learn the various principles of design, planning and drawing. Students will be able to apply knowledge gained from this and other building modules to manage the aesthetics and displays for commercial and residential projects. They will be given the opportunity to apply computer aided design skills to demonstrate their creativity in studio sessions. Three-dimensional modelling and elements of Building Information Modelling (BIM) will also be introduced in this module to prepare students for advanced applications in a later module.

LEVEL 1.2

Electrical Systems

This module covers the different electrical facilities found in high-rise buildings. Topics covered include the electrical supply system, lifts and escalators, and communication systems. Emphasis will be placed on real-life applications in the operation and maintenance of these facilities in buildings.

Principles of Law

This module provides an introduction to the legal system of Singapore, the law of contract and commercial law, and the law of torts. Real-life examples, particularly those relating to buildings and real estate, are used to illustrate the application of legal principles. In addition, students will study the legal approach of critical analysis, logical reasoning and issue resolution.

Building Technology

In this module, students will learn the basic principles and construction techniques for the main building elements of light structural forms including low-rise buildings. The properties of common materials and functional requirements of various building elements are also examined. This module prepares students for the study of more complex structures and multi-storey buildings in the second year module of Advanced Building Technology.

Real Estate Market Research

This module provides students with an understanding and working knowledge of research methodology for real estate market studies. Students will learn the purpose and value of research, methods of gathering and analysing data, and the presentation of results.

Introduction to Real Estate Business

This module provides an introduction to the business of real estate by studying the characteristics of land including both the uses and users of land at the national, institutional, corporate organisation and individual level. Students will be given an overview of the property development process through a study of the various stages involved. The roles and functions of the regulatory authorities, professional institutions, business associations, professionals and practitioners in real estate business will also be examined.

LEVEL 2.1

Project Management

This module introduces students to the rudiments of modern construction project management. The module covers the principles of Project Management in the construction business at the various stages of planning. Elements of contract administration, construction and engineering economics and finance will be taught.

Property Management

In this module, students will study the management practices for buildings of different uses. Students will acquire sufficient supervisory management knowledge and problem-solving skills to manage private and public housings, as well as retail outlets, offices and industrial spaces. A considerable portion of the module is devoted to legislation governing the maintenance and management of strata developments.

Real Estate Marketing

This module presents real estate from a business perspective and provides students with an understanding of the fundamentals of marketing and real estate agency practices. Students are exposed to real estate marketing techniques and will learn to

COURSE MODULES

identify problems and to apply problem-solving skills to face the challenges of the real estate marketing profession. Current and relevant case studies will be highlighted during lectures and discussed during smaller tutorial group settings.

Real Estate Finance

This module will provide students with an understanding of real estate financing issues. Topics include financial markets and institutions, financing instruments and financial risks. Students will have the opportunity to apply their knowledge in real estate market research, collect and collate property data and with the aid of computer software, generate spreadsheets for decision-making and scenario analysis.

Environmental Health Management

The module covers the general aspects of environmental health including the study of epidemiology, vector control and food hygiene. Students will learn to apply these concepts and principles to health management, and workplace health and safety. Students will also be given an overview of indoor air pollution sources, types of pollutants and the corresponding health impacts. Current methods of treating and controlling poor indoor air quality and local guidelines on indoor air quality will also be introduced.

LEVEL 2.2

Property Valuation

This module covers the basic concepts and principles of property valuation, the purposes for which valuation is requested, the six functions of \$1, and the various methods used locally for the valuation of both public and private properties. Students will be given a good working knowledge of the valuation of real estate interests for the purposes of sale and purchase, investment, mortgage, development charge, and property tax.

Real Estate Law

Students will study the area of law relating to the various types of interest in land, the rights and duties attached to these interests, and the legal consequences for infringing these rights. The Law of Real Property includes the study of land law

concepts, landlord and tenant law, interests in land, and property registration. Topics covered under Public Administration and Control of Land include law of taxation relating to property, legislation governing sale of residential and commercial properties, and restriction on foreign ownership of residential properties.

Advanced Building Technology

This module is an extension of the module of Building Technology. It examines the more complex forms of construction used in high-rise buildings and large-span structures. The knowledge gained prepares students for third-year modules in Building Maintenance & Diagnostics and Building Refurbishment.

Urban Planning & Economics

This module complements the modules of Property Valuation and Real Estate Marketing. The topics covered in this module include a study of the concept of land as an economic resource, the real estate market and planning system in Singapore. This module will provide students with an adequate knowledge of urban planning and urban economics.

Two-month Internship

In this module, students will be attached to organisations for a period of eight weeks to gain practical experience related to their course of study. This allows students to adapt themselves to the work environment in preparation for future employment. During their internship, they will undertake projects and tasks assigned by the organisation.

LEVELS 3.1 & 3.2

Building Maintenance & Diagnostics

This module covers the causes of building defects and their corresponding rectification methods. Topics covered include defects related to foundations, concrete structures, roofs, floor and wall finishes. In addition, students will learn how to investigate building problems and handle maintenance repair works related to the building fabric. Real-life case studies and laboratory work involving non-destructive testing of concrete are also included.

Building Refurbishment

This module covers the options that are available to owners of existing buildings faced with the problem of obsolescence or redundancy. The option of refurbishment with reference to redevelopment from the process of feasibility study, decision making, procurement, project planning and management to project completion and delivery are covered in this module. The management of problems specific to refurbishment works and their concomitant risks will also be taught.

Hospitality Management

This module provides students with an understanding of the importance of managing real estate in the hospitality industry. Students will appreciate the relevance and connectivity of how the functions of property and facilities management contribute to enhance the value of hotels, serviced apartments, lofts, resorts and the like. Emphasis is placed on effective operations and preventive maintenance programs that, in the long run, will save costs in operations and increase the property value of these hospitality establishments.

Project Design & Development 1

In this module, students are expected to integrate the knowledge they gained during the first two years of study and undertake a year-long project on a topic in the field of real estate or building. This could be done as a case-study, fabrication or computer-application project.

Client Relationship Management

This module introduces the principles and concepts of customer relationship management (CRM) skills. Students will learn the appropriate tools to respond effectively to customers and stakeholders within the real estate and facilities management industry. Topics covered include the definition of customer/client service, understanding client needs, solutions to real estate challenges and implementation of client relationship management. Case studies and mini projects equip students with the ability to view CRM as an asset to the organisation and leverage on this to add value to the organisation.

COURSE MODULES

Real Estate Investment

Students will be given an understanding of the real estate investment decision-making process in this module. It focuses on the fundamental concepts and principles of investment and the practical skills needed for making real estate investment decisions. Topics covered include market studies, financial analysis, risk-return relationship, sensitivity analysis and decision-making criteria.

Building Quantities & Costing

This module draws on the students' knowledge of Building Technology and Advanced Building Technology taught in Level 1 and 2 respectively. In this module, students will study the various models for building cost estimation and techniques on measurement of quantities from given drawings. They will learn how to prepare cost estimates for new constructions or improvement works during the service life of a building. Students will also be given hands-on practice on computer software for automated taking-off and billing.

International Business

Students will learn the various types of business models, marketing and risk management for overseas projects. The focus is on critical success factors such as understanding cultural differences, project financing and human resource management in different countries.

Project Design & Development 2

This module is a continuation of Project Design & Development 1 where students undertake a year-long project on a topic in the field of real estate or building.

Six-month Internship

In this module, students will be attached to organisations for a period of six months. This is to prepare them for future employment in their particular discipline of study. During their internship, they will undertake projects and tasks assigned by the organisations. This allows them the opportunity to take initiatives as well as to develop their self-confidence, interpersonal and adaptation skills.

DIPLOMA PLUS PROGRAMME

The Diploma Plus Programme (DPP) is designed to provide students with adequate proficiency in a selected domain area, either to broaden or deepen a student's knowledge/skills in his/her main discipline of study, or to equip a student with additional professional knowledge that would better prepare him/her for further study or increase their employability. DPP is optional and it will not affect the graduating requirement for the award of a diploma.

Students can choose the DPP cluster listed below. The offer of a DPP cluster is subject to the condition that the minimum class size is met and based on available vacancies.

Cluster

- Leisure & Retail Management

Other Available Diploma Plus Certificates

- Business
- Innovation Management
- Languages (Japanese)

For detailed module descriptions under each cluster, please refer to page 176.