

DIPLOMA IN INTEGRATED FACILITY MANAGEMENT (T28)

Course Overview

As the world's first diploma to be accredited by the International Facility Management Association (IFMA) as an Associate Degree Programme, this course will give you a worldwide competitive edge. Equipped with many industry certifications like bizSAFE (levels 2 & 4) and the Fire Safety Manager certification, our graduates are ready for the world.

Our multi-disciplinary diploma will equip you with the knowledge and skill-sets in managing the amenities, aesthetics and functionality of some places like Jewel, Marina Bay Sands, Changi Airport and Gardens by the Bay. Identified as the biggest growth area in the built environment, the ever-growing Facilities Management industry is undergoing massive technological transformation, opening up rich and exciting career and further studies opportunities for you! Join us in this exciting journey!

To download a copy of our 4-page course brochure, click [here](#).



INDUSTRY-RELEVANT CERTIFICATIONS

Equip yourself with industry-relevant certifications like BizSAFE Level 2 and 4 (Risk Management, Workplace Safety and Health Management) from the Workplace Safety and Health Council and Fire Safety Manager certification from SCDF.



PICK YOUR NICHE

Diversify your knowledge with our multidisciplinary industry-relevant curriculum by picking a specialisation from the Hospitality, Aviation or Smart Facilities cluster, creating endless career opportunities!



GLOBAL RECOGNITION

With our curriculum mapped to the International Facility Management Association (IFMA), you will be recognised globally for facilities management competencies such as Environmental Stewardship and Sustainability, Finance, Real Estate and Project Management.

Entry Requirements

To be eligible for consideration for admission, applicants must obtain 26 points or better for the net ELR2B2 aggregate score (i.e. English Language, 2 relevant subjects and best 2 other subjects, including CCA Bonus Points) and meet the minimum entry requirements of this course. CCA cannot be used to meet the minimum entry requirements.

Subject	Grade
English Language (EL1)*	1-7
Mathematics (E or A)	1-6
Any one of the listed subjects^	1-6
Any two other subjects, excluding CCA	
2022 Planned Intake	100
Net ELR2B2 aggregate range (2021 JAE)	11 - 19

Note: Applicants should not be suffering from severe vision impairment.

* SPM / UEC holders must have a minimum of grade 6 for the Bahasa Ingggris (English Language) subject.

^ List of acceptable subjects: Biology, Biotechnology, Chemistry, Combined Science, Computing/Computer Studies, Design & Technology, Electronics/Fundamentals of Electronics, Physics/Engineering Science, Science (Chemistry, Biology), Science (Physics, Biology), Science (Physics, Chemistry)/Physical Science.

What You'll Learn

YEAR 1

YEAR 2

YEAR 3

TPFUN

Kick start your facilities management journey by understanding the fundamentals of buildings and discover your competencies, interests and career aspirations through lab work, industrial visits and hands-on learning opportunities.

Core Subjects		
Subject Code	Subject	Credit Units
EGB2002	Air Conditioning & Mechanical Ventilation The Air Conditioning and Mechanical Ventilation (ACMV) system is one of the most important systems of a building and represents a significant portion of its total energy consumption. Hence, an understanding of the operating principles of a typical ACMV system is critical to maximizing the overall energy efficiency of a building.	4
EBD2009	Building Information Modelling Collaboration This subject emphasises the use of Building Information Modelling (BIM) software to design and develop building services systems that meet the intended objectives. You will learn the processes of incorporating established architectural models with Mechanical, Electrical, Plumbing (MEP) and Fire Protection systems and inter-disciplines collaboration work. The use of the as-built models and the information contained therein for BIM Facility Management (BIMFM) and other simulation tools such as energy modelling will also be discussed.	3
EBT2009	Electrical Design & Installation This subject covers basic electrical design. It includes the principles and design of low-voltage	4

	electrical systems in compliance with the relevant local statutory requirements, as well as good engineering practices. It also covers the different types of electrical installation methods and indoor artificial lighting design for buildings.		
EMA1003	Engineering Mathematics 1 This subject introduces the concepts in algebra and trigonometry that are fundamental to an engineering course. Topics include expressions and equations, functions and graphs, trigonometry, complex numbers, matrices and vectors. These also constitute pre-requisite knowledge for a course in Calculus.	4	^
EMA1002	Engineering Mathematics 2 This subject introduces the basic concepts of calculus and statistical method to test a hypothesis. Basic concepts in calculus include limits, derivatives and integrals. Applications of the derivative and integrals in engineering will be discussed. Basic statistical method in hypothesis testing includes normal distribution, confidence interval of population mean and procedure to test hypothesis for a claim made about a population mean.	4	^
EBT1003	Facility Operations & Maintenance Air-conditioning and ventilation, cold water distribution systems, electrical installations, lifts and escalators are the key systems in facilities operations. Knowledge of a system's operation and its maintenance requirements are essential to facility management. Facility management is about the stewardship of existing facilities in a real estate to enable effective operation and better business performance, thus leading to a higher level of work satisfaction and increased productivity.	4	^
EBD2005	Security & Surveillance This subject gives an overview of security and surveillance, including the entire process of security and surveillance design and integration. The main emphasis is placed on applying scientific and engineering principles for the design of the system and the use of component performance measures to establish the effectiveness of such systems when applied across various business sectors.	4	^
EBD1004	Virtual Design & Facility Planning This subject develops your skills to visualise facility design and planning. You will learn facility planning concepts with the use of digital tools for visualisation, simulation and documentation. The knowledge gained can be applied to create virtual design projects in the built environment sector.	3	^
EFM1002	Workplace Safety & Health for Facility Management This subject gives you an overview of a safe working environment in the area of facilities management. You will be equipped with the skills of identifying and reducing workplace related risks at source, and you will also be exposed to common practices taken in the industry to ensure a safe workplace.	4	^

YEAR 1

YEAR 2

YEAR 3

TPFUN

Deepen your knowledge in building sciences and management. In addition to technology and spaces utilisation, you will also get the chance to venture into aviation or hospitality, expanding your career options.

Core Subjects

Subject Code	Subject	Credit Units	
ESE1006	Computer Programming for Problem Solving This subject covers the process of decomposing a problem into a sequence of smaller abstractions. The abstractions are implemented in software in a structured top-down approach. Software implementation includes the process of designing, writing, testing, and debugging program code.	4	^
EFM2004	Contract Management This subject covers the knowledge of contract management that is aligned to the practices in the	4	^

	real estate industry. Students will learn all aspects of contract management which include administration, procurement procedures, evaluation of services and products, tenant management, and service delivery.		
ESE1008	Data Visualisation & Analytics This subject covers the data analytics lifecycle, including gathering, cleaning, processing and visualising of data. Exploratory data analysis methods, descriptive and predictive analytics, and the presentation of insights, will also be covered.	3	^
EBM3005	Energy Management & Audit This subject covers two main areas: energy management and energy audit. For the former, the subject illustrates the intrinsic value and concept of energy management and the implementation consideration and steps involved. On Energy Audit, the emphasis is on energy audit methodology and procedures; and methods used to evaluate energy performance of buildings and its sub-systems. These will include use of energy performance benchmarks and comparison with acceptable practices and prevailing codes and regulations. Finally, the subject discusses the application of life cycle cost concept to evaluate the economic viability of proposals on improving energy performance.	4	^
EBM2005	Fire & Life Safety Management This subject introduces the roles and responsibilities of a Fire Safety Manager for both commercial buildings and industrial premises. You will be exposed to the procedure adopted in running a fire command centre, the use of detection, protection and control systems, fire investigation and formulation of a fire emergency plan.	4	^
EBM2004	Project Management This subject aims to provide an overview of the principles and concepts in project management and equip you with the theoretical foundation and skills in using project management tools. It emphasises the knowledge and practices which are widely applied in project management. Topics covered include the project management framework, project management processes and project management knowledge areas.	4	^
EFM3001	Sustainable Facility Management This subject covers the roles of Facility Management (FM) in environmental sustainability. It will cover the integration of both areas so that you can see a connection between reducing carbon footprint and emission of the assets/properties under effective and thoughtful FM. It will also examine the policies and practices that FM should implement to achieve the said goals. The subject will describe the framework and strategies for achieving 'greener' results at the inception, design, construction to operational stage of a building. The subject will also provide an overview of the standards or rating systems that can be used to gauge the attainment of the sustainable goals.	4	^

Cluster Elective Subjects

Students to choose three subjects from any of these elective clusters

Aviation Facilities Elective Cluster			
Subject Code	Subject	Credit Units	
EAM3002	Airport Administration This subject covers the fundamental concepts and principles involved in the organisational, and administration of modern international airports. Topics include airport performance, productivity and feedback systems, and airport-related commercial management, public relations, corporate/business planning, organisational structures, financial and accounting strategies, as well as revenue and expense sources.	4	^
EAM1001	Airport Operations & Management This subject introduces the fundamental concepts and principles involved in the management and operation of modern international airports. You will learn about the principles of airport management and the various aspects of airport operations, including, airport terminal layout and	4	^

planning, terminal signage systems, gate and baggage belt assignments, terminal contingency planning, airport emergency systems, airport support services and equipment, estate management and terminal landscaping.

EAT2006

Airport Systems

4



This subject provides an overview of the key facilities and systems in both the landside and airside of an airport. Topics covered in landside will include passenger check-in systems, the Flight Information Display Systems (FIDS) and the various airport IT support systems. Other topics include the operation of the fully automated baggage handling system, the People Mover System (PMS) and the Passenger Loading Bridges system. On the airside, topics covered include the causes of wear and tear of aircraft pavements, methods of assessing the condition of aircraft pavements, the programming of maintenance works and techniques of repairs and their compliance to international operational standards and requirements.

Hospitality Facilities Elective Cluster

Subject Code

Subject

Credit Units

BHT2003

Club & Resort Business

4



This subject provides you with good foundation knowledge of the Club, Resort and Spa Business. It is designed to give you a basic understanding of the organization and management of various types of private clubs, resorts and spa businesses. You will discuss issues concerning the successful marketing, management and development of the three types of businesses and will also get to appreciate the opportunities and challenges faced by these businesses.

BHT2005

Event Management

4



The subject introduces the scope of events and their application in the context of the tourism industry. From this macro perspective, you will build a foundation in event conceptualisation, development and production, covering topics such as marketing of events, human resource management and budgeting, and staging.

BHT1010

Introduction to Hospitality & Tourism

4



This subject provides an overview of the multifaceted nature of the hospitality and tourism industry. You will gain an insight into how the key sectors are organised and structured and how they relate to each other as an industry. The concept of tourism demands and tourism consumer behaviour will be introduced. Lastly, you will explore trends, issues and challenges facing the industry.

Smart Facilities Elective Cluster

Subject Code

Subject

Credit Units

EBM2006

Building Management System

4



This subject covers the fundamental knowledge required in the design and operation of a Building Management System (BMS). The concept of controls and monitoring with sensors and Direct Digital Controllers (DDC) will be introduced. Control strategies for air-conditioning, BMS software features for facility management and energy management will also be covered.

EBT2010

Smart FM & Asset Enhancement

4



The subject gives you an understanding on the nation's Smart FM and Real Estate digital transformation roadmap and how the various digital technologies, e.g. smart sensors & IoT, machine vision, video analytics, AI & machine learning, big data analytics, AR/VR, IDD BIM & digital twin, solar PV etc. work in facilities management applications. You will learn to develop plans to maximise value and minimise costs through value engineering perspectives. You will also learn about materials and methods employed in sustainable refurbishment or retrofitting works, as well as the ability to capitalise on them.

ESE3013

Intelligent Automation

3



This subject will provide you with basic knowledge and hands-on digital transformation skills on

rapid multi-experience application development and integration of users, tasks and systems towards enhancing productivity, human augmentation and automatic data-driven decision-making. It will cover techniques on how to leverage on data from information systems and Internet of Things (IoT) devices for agile response and productivity. This subject will enable you to automate data-driven decision making through integration of advanced analytics and learning models to applications.

YEAR 1

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TPFUN

You are now ready to take on the world of facilities management by applying all the knowledge and skills you have learnt over the past two years. Get first-hand work experience in managing your preferred facility during your internship and let your innovative mind solve real world problems during your major project!

Core Subjects

Subject Code	Subject	Credit Units
EMP3002	<p>Major Project</p> <p>In this subject, you will work in teams to integrate and apply your skills and knowledge to implement your projects in a practical work-and-learn environment. Besides research, design, analytics, project management, communication and problem solving skills, the emphasis will also be on innovation, teamwork and self-learning.</p>	8
EBZ2006	<p>Service Quality & Management</p> <p>This subject introduces the key concepts and principles of Service Quality and Management. Topics covered include concepts of quality services, essential skills in customer services, principles and strategy of service management, methods for service quality measurements and service recovery.</p>	4
EBD3006	<p>Building Performance Modelling</p> <p>This module covers the basics concepts of energy modelling methodology using an energy modelling software. It will help you to understand how various building design strategies help to reduce the building's energy consumption. Submission requirements for the "Green Mark" certification for both passive and active building design, as well as an evaluation and analysis of a building's performance, will also be covered.</p>	4

Special Electives

Students can opt to take Special Electives when offered. These optional subjects aim to stretch the students' potential to enable them to meet their aspirations. They are taken in addition to the diploma cluster elective subjects.

Special Electives

Subject Code	Subject	Credit Units
EED3009	<p>Special Project 1</p> <p>The focus of this subject is on the application of students' existing domain knowledge to develop a deliverable. The subject will introduce new skills and knowledge specific to the project, as and when required.</p>	2
EED3010	<p>Special Project 2</p> <p>This subject provides opportunities for students to apply the acquired knowledge and skills, along with their fundamental and in-depth knowledge from different subjects to designing, developing, and implementing a well-engineered project solution.</p>	2
EED3011	<p>Higher Engineering Skills 1</p> <p>Higher Engineering Skills 1 and 2 aim to impart some special design and hands-on skills that allow you to acquire knowledge and skills that are not normally incorporated into a diploma programme. These Special Elective subjects will equip you with the skills and knowledge to participate in competitions and enable you to tackle real challenges.</p>	2

EED3012**Higher Engineering Skills 2****2**

Higher Engineering Skills 1 and 2 aim to impart some special design and hands-on skills that allow you to acquire knowledge and skills that are not normally incorporated into a diploma programme. These Special Elective subjects will equip you with the skills and knowledge to participate in competitions and enable you to tackle real challenges.

YEAR 1

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TPFUN

You will also undergo TP Fundamentals (TPFun) – a set of subjects that equips you with the crucial life skills you need to navigate the modern world as an agile and forward-thinking individual, and team player.

TP Fundamentals (TPFun) Subjects**Subject Code****Subject****Credit Units****GTP1301****Current Issues & Critical Thinking****3**

This subject covers current issues, including diverse local and global concerns, that will impact lives and may have critical implications for Singapore. There will be opportunities to build competence through self-directed learning, communicate and collaborate in active discussions and objectively analyse issues using digital and information literacy skills and critical thinking scaffolds.

This subject aims to provide students with the knowledge and skills to:

- apply critical thinking tools to examine current issues.
- effectively search for relevant information from a variety of sources.
- evaluate research information.
- cite sources to support their views.
- articulate an informed opinion about current issues.

ETX1001**Effective Communication****3**

This subject introduces the fundamentals of effective communication. It also covers how to communicate with and convince an audience through writing and speaking tasks. The skills in this subject will include the application of strategies for communication, appropriate vocabulary, language features, visual aids, tone and style. The **Message, Audience, Purpose and Strategy (MAPS)** framework will also be applied when planning and engaging in written and verbal communication. There will be opportunities to communicate and collaborate through active learning activities, apply digital and information literacy skills and build competence through self-directed learning.

This subject aims to equip students with the knowledge and skills to:

- apply the factors that influence effective communication.
- structure a compelling point of view through a writing task.
- express their ideas convincingly to an audience in an oral presentation.

ETX1002**Professional Communication****3**

This subject covers professional communication skills for the workplace and employability skills in the areas of career preparation. It covers communication and interpersonal skills, including effective virtual communication etiquette, and conducting oneself professionally in the workplace. In addition, essential career preparation skills such as resume writing and interview skills, needed to seek and secure work would be included. The **Message, Audience, Purpose and Strategy (MAPS)** framework would also be applied when engaging in written and verbal communication. There will be opportunities to communicate and collaborate through active learning activities, apply digital and information literacy skills and build competence through self-directed learning.

The subject aims to equip students with the knowledge and skills to:

- communicate effectively in the workplace using principles of effective written communication and interpersonal skills.
- apply effective job search and interview skills in their career preparation.

GTP1101**Leadership Fundamentals****2**

This subject focuses on self-leadership based on the values of integrity, respect, and responsibility. Increasing awareness of self and others will lay the foundations for personal and relationship effectiveness. Consequential thinking, clear articulation of personal values and

visions, emphatic listening, and collaboration in serving others are some of the essential skills covered in this leadership journey. There will be opportunities to build and to apply the concepts of being a values-centred leader.

The aim of this subject is to guide students to:

- design a personal growth plan based on strengths, values and purpose.
- apply the attributes of logical and emotional intelligence to improve team effectiveness.
- identify the key messages of respect in relationships.
- apply the principles of effective personal financial management.

GTP1102

Leadership in Action

1



This subject focuses on Service Learning as an experiential platform to apply the tenets of Self and Team Leadership. Service Learning will be the capstone project for this subject, which will require an analysis of the diverse needs of the community, collaboration with community partners and demonstration of learning, including key elements of empathy. There will be opportunities to build and to apply the concepts of being a values-centred leader.

This subject aims to equip students with the knowledge and skills to:

- plan and carry out a project to demonstrate empathy towards people in a diverse community.
- apply diploma core knowledge and skills through the Service Learning platform to address community needs.
- reflect on the Service Learning experience when working in teams and with community partners.

GTP1201

Career Readiness CARE1

1



This subject focuses on personal management skills. It develops an understanding of one's career interests, values, personality and skills for career success. It covers the necessary knowledge, skills and attitudes needed to succeed in the workplace and achieve professional goals. There will be exposure to apply digital and information literacy skills, build competence through self-directed learning methods and acquire the skills of being a lifelong learner.

This subject aims to equip students with the knowledge and skills to:

- analyse personal characteristics that can contribute positively to achieving personal, educational and career goals.
- make career decisions that are aligned with their interests, skills and values.

GTP1202

Career Readiness CARE2

1



This subject focuses on career management skills. It covers the importance of workplace readiness skills to adapt and respond to the changing job market environment. Career ownership and continuous learning for lifelong employability will be emphasised. There will be exposure to apply digital and information literacy skills, build competence through self-directed learning, and acquire the skills of being a lifelong learner.

This subject aims to equip students with the knowledge and skills to:

- identify their work profiles to help them in their career choices in a changing job market environment.
- take career ownership for continuous learning and lifelong employability.

LSW1002

Sports & Wellness

2



The subject enables students to build a good foundation for healthy living. Students will have the opportunity to participate in hands-on practical sessions where they will experience and develop both physical and technical skills in their chosen sports or fitness activities. Through a structured curriculum that facilitates group participation, practice sessions and mini competitions, students will be able to build lifelong skills such as resilience, leadership, communication and teamwork. Physical activity sessions will also be supplemented by health-related topics that span the dimensions of health, such as diet, nutrition, stress and weight management, to provide students with a holistic approach to healthy living. This subject also prepares students to be self-directed and accountable for lifelong learning for good health.







EIN1001

Innovation & Entrepreneurship

2



The subject is designed for learners from all disciplines to embrace innovation in either their specialised field or beyond. Learners will be taught to apply the Design Thinking framework to develop problem statements, ideate and identify feasible solutions. Learners will be exposed to several tools for prototyping. In addition, commercial awareness will be imbued in learners through various innovation and entrepreneurship concepts or tools. This subject also prepares students to be self-directed lifelong learners who are digital and information literate. It nurtures communicative and collaborative citizens who can use objective analysis in problem-solving.

EGS1002	<p>Global Studies</p> <p>This subject provides essential skills and knowledge to prepare students for an overseas experience. They will examine the elements of culture and learn the key principles of cross-cultural communication. In addition, they will gain an appreciation and awareness of the political, economic, technological and social landscape to function effectively in a global environment. The subject prepares students to be responsible citizens and leaders who can contribute to the global community through effective communication and collaboration.</p>	3	
EGS1003	<p>Managing Diversity at Work*</p> <p>This subject explores the concepts of identity, diversity and inclusion at the workplace. It examines the relationship between identity and diversity, the benefits and challenges of diversity and the strategies that promote inclusion and inspire collaboration in a diverse workplace. Examples of the elements of diversity covered in this subject include nationality, generation, ethnicity and gender. The subject prepares students to be responsible citizens and leaders who can contribute to the global community through effective communication and collaboration.</p>	3	
EGS1004	<p>Global Citizenship & Community Development*</p> <p>Students will examine the meaning and responsibilities of being a Global Citizen, in order to contribute towards a more equitable and sustainable world. In addition, students will learn how sustainable solutions can support community development, and, execute and critique a community action plan that addresses the needs of a specific community/cause. The subject prepares students to be responsible citizens and leaders who can contribute to the global community through effective communication and collaboration.</p>	3	
EGS1005	<p>Expressions of Culture*</p> <p>This subject provides a platform for an understanding of culture and heritage through modes of expression. Students will be introduced to global and local cultures via everyday objects, places and human behaviour seen through time and space. Students will explore issues and challenges in culture and heritage sustainability in community, national and global contexts. The subject prepares students to be responsible citizens and leaders who can contribute to the global community through effective communication and collaboration.</p>	3	
GTP1302	<p>Guided Learning</p> <p>The subject introduces students to the concepts and process of self-directed learning in a chosen area of inquiry. The process focusses on four stages: planning, performing, monitoring and reflecting. Students get to plan their individual learning project, refine and execute the learning plan, as well as monitor and reflect on their learning progress and project. The learning will be captured and showcased through a curated portfolio. The self-directed learning project will broaden and/or deepen a student's knowledge and skills. Students will enhance their problem solving and digital literacy skills through this subject.</p>	3	
ESI3001	<p>Student Internship Programme</p> <p>This structured programme is designed to link your learning with the real work environment. You will be placed in organisation(s) with opportunities to apply the concepts and skills acquired in the course of your study. Besides reinforcing technical concepts and mastering of skills in areas that you have been trained, the practical training will enable you to build important skills such as problem-solving, communication, teamwork, and to cultivate good attitude and a strong work ethic.</p>	12	

*Students must choose one of these three electives under the 'Global Studies 2' subject, or take 'Guided Learning'

GRADUATION REQUIREMENTS

Cumulative Grade Point Average	min 1.0
TP Fundamental Subjects	36 credit units
Diploma Core Subjects	77 credit units
Diploma Cluster Elective Subjects	11 credit units
Total Credit Units Completed	min 124 credit units