



Life Sciences and
Facility Management

Master of Science in
Facility Management





The Master of Science in Facility Management is modular, and each semester has a specific focus. In the first semester, the professional and theoretical aspects of the support processes are the primary concern, while in the second semester it is the core business that is explored, from the perspective of FM. In the third semester, FM is seen in an international context, and the knowledge gained throughout the study programme is incorporated into work on the Master's Thesis.

	1st Semester	2nd Semester	3rd Semester	
Profile Master of Science in Facility Management				
	ECTS*	ECTS*	ECTS*	
Scientific Methods and Business Skills				22
Scientific Research Methods I and II	4	4		
Business Skills	6			
Systems Engineering and Project Management		4		
Leadership in Change Management		4		
FM Processes				20
General Aspects of FM	4			
Managing Property	4			
Managing Services	4			
Managing Workplace	4			
Case Study I – Research Project I	4			
Understanding Organisations				12
Business Environment		4		
FM Environment		4		
Case Study II – Research Project II		4		
International FM and specific FM Aspects				6
International FM			4	
Required Electives, such as			2	
Sector-specific FM (industry, tourism, health care ...)				
FM in the Public Sector				
Corporate Real Estate Management				
Energy Supply and Usage				
Hospitality Management				
Consumer Facility Management				
Master's Thesis		6	24	30
Total full time	30	30	30	90

*ECTS: European Credit Transfer System

The Master of Science (MSc) in Facility Management (FM) deals with methodological, technical and managerial issues in FM. The consecutive Master's degree programme builds on the Bachelor's degree in Facility Management and enables students to deepen their scientific understanding and provides a practical awareness of this interdisciplinary management field.

Master's degree programme in Facility Management

Study programme

The consecutive Master of Science in FM is designed to address current issues and dynamic challenges in Facility Management from a scientific perspective. The study programme is based on the holistic FM model described in the European standards. It is internationally oriented and equips students to carry out applied research and to adapt the FM model to individual business situations.

Building on the Bachelor's degree programme, the first semester of the Master's programme focuses on a company's support processes from the viewpoint of FM, and identifies optimisation potential. In the second semester, students learn about companies' core processes. The central question at this stage is how FM can support these core processes effectively and efficiently. In the third semester, the programme contents of the first and second semester are incorporated into the preparation of the Master's Thesis and are complemented by students' choice of industry-specific issues and particular aspects of the international FM market. In all three semesters scientific knowledge and methods are taught in order to promote action-oriented problem-solving skills. This practice- and project-oriented training promotes transdisciplinary and holistic thinking in FM. Intensive collaboration with partners from the field and with public authorities ensures that the Master's degree programme provides a sound preparation for the world of work. The issues addressed in the Master's Thesis may be defined by the Institute of Facility Management or by business partners, and enable graduates to address practical or theoretical issues in a scientifically sound way.

Research focus

A focus on research and practical orientation are by no means contradictory. Quantitative and qualitative research are imperative in order to generate sound theory for application in everyday FM practice, and to establish new levels of understanding. To ensure that the most up-to-date, practically relevant projects and research are included in the Master's degree programme, MSc students may be involved in national and international research work at the Institute of Facility Management. The goal of this practice-oriented research is to develop practical and economically, environmentally and socially sustainable FM strategies and models, and the corresponding processes. The findings from this research, representing state-of-the-art information, are integrated into everyday teaching and thus enrich the curriculum.

Participants

The Master's programme is intended primarily for graduates with a professional degree in Facility Management at Bachelor's level. Students with a different qualification, for example in the fields of business administration, hospitality management, civil engineering, building services engineering and architecture, may be admitted if they have acquired the necessary competences. For details, please see 'Admission requirements'.

Lecturers

To ensure that a scientific approach and practical orientation are thoroughly linked in the Master's degree programme, lectures and seminars at Master's level will be given by a team of lecturers who have both a sound scientific background and up-to-date practical experience. This interdisciplinary team is composed of the Faculty of the Institute of Facility Management, as well as other nationally and internationally recognized experts from academia and the corporate world.



Educational concept

The educational concept of the Master's degree combines independent learning, (supervised or individual) with contact lessons (lectures, seminars). Participants work individually and in online networks. In the contact situations, the principles the students develop in independent study are discussed in greater depth. With this dual teaching approach, both the dynamic educational requirements of the FM profession and the individual preferences of the students are taken into account. "Exploratory learning" is emphasised in that students' own generation of knowledge comes to the fore during work on the Master's thesis.

Scope, structure and qualification

The study programme carries 90 ECTS points. It is divided into subject specialisation and into learning scientific methods and business skills. 30 ECTS points are awarded for the Master's thesis. The duration of the full-time study programme is three semesters; a part-time option is available generally lasting five semesters. The Master's programme at the Zurich Universities of Applied Sciences and Arts ZFH concludes with the internationally recognised title "Master of Science ZFH in Facility Management".

Language

The lectures will mainly be held in English. English is the language of all scripts and documentation. Knowledge of English (level C1 according to the Common European Framework of Languages proficiency scale) is therefore essential for successful study. Students can choose individually whether to write their assignments in German or English.

Competences

Building upon the sound methodological training provided in the Bachelor's degree programme, the consecutive Master's degree programme enables students to deepen their scientific knowledge of Facility Management. In addition to the refinement of applied methodology and development of specific subject knowledge, competences in independent research work and social, personal and leadership skills will also be nurtured.

Master's students become expert at bridging the gap between theory and practice through dealing with scientific issues, becoming familiar with the latest international research literature, and completing complex projects professionally. They are thus optimally prepared for the challenges of their future leadership roles.

Career prospects

A Master of Science ZFH in Facility Management provides students with a nationally and internationally recognized degree. They develop their ability to cope with complexity and develop their scientific skills. Internationally oriented organisations increasingly expect a Master's degree as an entrance qualification for leadership positions.

Growing cost pressures and the need to increase productivity mean that expert Facility Managers are in demand, not only in the private sector, but also in public institutions. Master's graduates thus have various professional and managerial opportunities, for example:

- Professional and management positions working for
 - large corporations
 - general contractors
 - FM/Total Service Providers
 - public buildings administration/public real estate management
 - project developers
 - construction companies, building cooperatives, real estate managers
 - municipal infrastructure, public service, postal services, transport, energy, water companies
 - health care
 - financial services
 - industry
 - research institutes
- Teaching and research and development at higher education institutes
- Independent development of new business areas (consulting, development, services)
- Specialised functions such as portfolio management
- Consultancy

Modules

Scientific methods and business skills

Scientific working methods are specifically adapted for implementation in FM contexts. The skills imparted, together with managerial and technical competences, form the basis for case studies and the Master's Thesis. Topics in the two modules "Scientific theory and methods" include quantitative and qualitative survey methods, databases and statistics, and the presentation and discussion of research papers. The module "Leadership in change management" deals with the introduction of new processes, organisational models and innovation in FM, and their impact on employees. In the module "Systems engineering and Project management" students gain a solid base in running projects efficiently and effectively. The module "Business skills", finally, contains the basics of CAFM (Computer Aided FM) and Business Informatics for FM, Financial and Managerial Accounting. The third course in this module deals with Analysis, Design, and Management of Business Processes.

FM processes

This module group focuses on organisations' support processes. Special attention is paid to current research issues in order to optimise these processes. In the module "Introduction to FM and Sustainability", today's interpretation of Facility Management and the European standards in FM are presented. Based upon this, FM models, processes and solutions are introduced. Secondly, this module deals with the interrelationship between FM and sustainability.

The module "Managing Property" deals with the significance of land, buildings, equipment, facilities and machines as resources (asset and portfolio management); the optimisation of a property throughout the entire life cycle (life cycle management); and FM during the construction and planning phase. The module "Managing Services" covers issues such as process design, in- and outsourcing, and the content of, and differences between, business-to-business and business-to-consumer relationships. The module "Managing Workplace" is concerned with workspace design and its impact on the productivity and welfare of employees, and the requirements for optimal living and usage conditions in various types of buildings. The primary focus of each module is the relationship of the topic to the FM model, and exploration of relevant sub-areas of the FM model.

Understanding Organisations

In the module "External influences on FM", the political and economic environment and their influence on support services are explored. Examples of such research questions are: the effect of energy price inflation on FM and the impact of new technologies (such as RFID). The module "Internal influences on FM" deals with the effect of strategic and organisational developments within companies, such as new products, financial requirements or law and regulations. The question of optimisation and adaptation of the FM model is always at the centre: how can FM optimally support an organisation's core business?

International FM and specific FM Aspects

In the era of globalization, intercultural skills and knowledge of the international FM market are essential. The course "International FM" investigates successful models from various countries and explores them in greater depth through on-site studies. A course suited to the individual's area of specialisation is selected from a choice of electives. These cover industry-specific requirements of FM, or deal with specialised issues within an FM field such as FM in the public sector, corporate real estate management, energy supply and usage, hospitality management, consumer FM.

Case Studies I and II

Case Study I in the first semester focuses on FM organisations or FM processes, while Case Study II in the second semester concentrates on FM clients (core business). The topics are linked to current research projects at the Institute of Facility Management. Using scientific methods, concrete problems in FM are examined theoretically, scientific surveys conducted and evaluated, and key findings derived for operational practice.

Master's Thesis

The Master's Thesis is an individual scientific work, applying the skills and knowledge acquired during the study programme to specific research questions. It provides a constructive contribution to further optimisation of the FM model and contributes to the understanding of FM and to the work of the Institute of Facility Management.

Studying at the ZHAW in Zurich/Waedenswil

The Zurich University of Applied Sciences (ZHAW) is one of the largest and most productive universities of applied sciences in Switzerland, with a strong presence both nationally and internationally. About 8000 students are enrolled at the ZHAW in a total of 25 Bachelor's degree programmes and 9 consecutive Master's degree programmes. The School of Life Sciences and Facility Management is located in Waedenswil on the southern shore of the Lake of Zurich. This unique location, surrounded by attractive countryside, provides a stimulating teaching and learning environment. About 1000 students are currently attending the five Bachelor's degree programmes in Biotechnology, Chemistry, Food Technology, Natural Resource Sciences and Facility Management. The manageable number of students allows for individual attention from lecturers and assistants. A variety of cultural and sporting activities provide opportunities for recreation and relaxation.



Environment | Food | Health | Society
Our competences in Life Sciences
and Facility Management.

Admission requirements

Building on the Bachelor's degree in Facility Management, a Master's degree offers students the opportunity to deepen their knowledge. Holders of a diploma or a bachelor's degree from the fields of business administration, hospitality management, civil engineering, building services engineering, architecture or other FM-related studies who can provide proof of the required entry competences will be admitted to the Master's degree programme.

Excellence is sought at master's level. Thus, an above-average university degree and/or additional evidence of achievement is expected. Prospective students should attach to their application for the Facility Management study program written evidence of English skills as well as a written statement demonstrating their personal aptitude for this study program. If all the criteria are met, applicants attend an interview to assess their suitability for the study program and for a career in Facility Management.

Dates

The consecutive Master's degree programme in Facility Management begins in September 2011. The registration deadline is April 30 each year.

Contact

**ZHAW Zurich University
of Applied Sciences
Life Sciences and Facility Management**
Registrar's office
Gruental, P.O. Box, CH-8820 Waedenswil
Tel. +41 58 934 56 85
Fax +41 58 934 50 01
E-mail: mscfm.lsfm@zhaw.ch