

Postgraduate Diploma (PGD) and Master of Science (MSc) Programs in Environmental Engineering and Management

Program Director:

Irene M C LO, Professor of Civil and Environmental Engineering

In Hong Kong, as in other densely-populated cities, environmental issues such as the deterioration of air and water quality, and increased constraints on solid waste management, have posed great challenges to environmental engineers.

In recent years, rapid technological advances as well as the availability of more and more well-trained personnel in the environmental engineering field have led to a stronger demand for advanced studies at the postgraduate level in environmental engineering. The former factor means more people in the field now feel the need to keep themselves updated on the latest technologies available for solving environmental issues. The latter factor means environmental engineers now feel greater pressure to enhance their professional competency and qualification in order to stay competitive and remain occupationally mobile.

With the above background, the Postgraduate Diploma (PGD) and Master of Science (MSc) programs in Environmental Engineering and Management are meant to meet the needs of practicing engineers who may be engaged in the design, commissioning and management of environmental facilities and infrastructure systems. To suit the schedule of individuals, the programs may be taken in either part-time or full-time mode.

The courses of the programs are designed for those who wish to strengthen their environmental engineering knowledge and to well-prepare themselves for advanced engineering practices with management responsibilities. The programs not only offer advanced environmental engineering courses beyond undergraduate level for part-time and full-time students but also enable students to take several electives from other related programs.

Program Learning Outcomes

On successful completion of the program, graduates will be able to:

- Describe basic and advanced knowledge in environmental engineering and management;
- Identify environmental problems and propose feasible environmental engineering or management solutions;
- Illustrate contemporary environmental issues with the awareness of the environmental impacts;
- Design basic environmental engineering components and systems; and
- Analyze major factors impacting environmental engineering systems and provide strategies for managing these.

Admission Requirements

Applicants must possess a bachelor's degree in Civil / Chemical / Mechanical Engineering or a related engineering field with second-class honors or higher, or an equivalent qualification from a recognized university or tertiary institution.

Program Duration

MSc program:

- 1 - 1.5 years for full-time mode; or
- 2 - 2.5 years for part-time mode.

PGD program:

- 1 year for full-time mode; or
- 1.5 years for part-time mode.

Program Fees

The program fee for the PGD program is HK\$62,500. The program fee for the MSc program is HK\$125,000 for full-time mode, and HK\$120,000 for part-time mode. New students admitted with credit transfer and graduates of the PGD program subsequently admitted to the MSc program are also required to pay the full program fee.

The program fee covers two terms of study for the full-time PGD program, three terms for the part-time PGD program, four terms for the full-time MSc program, and six terms for the part-time MSc program. Students who stay in the program beyond the normative study period covered by the program fee, or take additional course or need to retake any courses are required to pay additional fee. Students should refer to the program webpage for details.

Curriculum

MSc Degree

To meet the graduation requirements, MSc students are required to complete a minimum of 30 credits of relevant coursework approved by the Program Director, including:

- 6 credits of JEVE 6980 Independent Project;
- at least 18 credits of foundation courses from the list below; and
- at least three management related courses.

Postgraduate Diploma

To meet the graduation requirements, PGD students are required to complete a minimum of 15 credits of relevant coursework approved by the Program Director, including:

- at least 9 credits of foundation courses from the list below; and
- at least two management related courses.

Foundation Course List

CIEM	5810*	Engineering Risk, Reliability and Decision
CIVL	4460	Process Design of Environmental Engineering Facilities
IBTM	5330*	Energy Management in Buildings
IBTM	5430*	Indoor Air Quality Technology and Management
JEVE	5260	Air Pollution Meteorology
JEVE	5320	Water Quality and Assessment
JEVE	5410*	Risk Assessment and Contaminated Land Cleanup
JEVE	5420*	Biological Waste Treatment and Management
JEVE	5430 ⁽¹⁾	Solid Waste Landfill Engineering Design
JEVE	5460 ^{*(2)}	Design and Management of Physico/Chemical Processes of Environmental Engineering
JEVE	5470	Industrial Wastewater Treatment
JEVE	5480	Wastewater Treatment and Reuse
JEVE	5490	Modeling of Biological Treatment
JEVE	5510*	Municipal Hydraulic System Design and Management
JEVE	5530*	Environmental Management and Regulatory Compliance
JEVE	5760	Advanced Physico-Chemical Treatment Processes
JEVE	5810*	Pollution Prevention and Cleaner Production
JEVE	5820*	Energy, Environment and Sustainable Development
JEVE	5900*	Carbon Management for Sustainable Environment

Elective Course List

Pre-approved elective course list will be made available to students at the beginning of every term.

Subject to the recommendation from the Program Director and approval of the course instructor, PGD and MSc students may take respectively a maximum of 3 and 6 credits of CIVL courses at 4000-level to meet the graduation requirements of the programs.

Part-time PGD and MSc students may take a maximum of 9 credits in each term.

Credit Transfer

Upon the approval of the Program Director, a maximum of 6 credits and 9 credits can be transferred from other institutions to the PGD and the MSc programs respectively.

Notes:

(1) JEVE 5430 can be substituted by CIVL 5460.

(2) JEVE 5460 can be substituted by CIVL 5410.

* Management related courses.

Graduation Requirements

To graduate from either program, a student must complete the program with a graduation grade average (GGA) of 2.850 or above as required of all postgraduate students at the University. Students failing to meet the GGA requirement are required to repeat or take additional course(s) even if they attain passing grades for all courses.