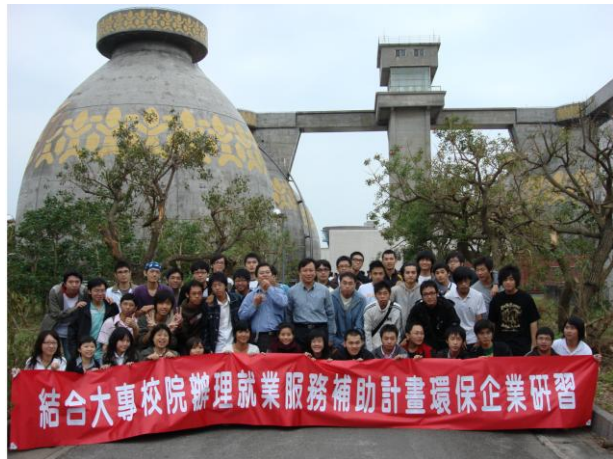


Department of Environmental Engineering and Health

Introduction

History

Department of Environmental Engineering and Health (EEH) was accredited by the Ministry of Education in 1991, and started to admit undergraduate students in 1999. After that, a graduate program was approved in 2007. Currently, the department has nearly 380 students.



Features

Curriculum

The society has been concerning about the environmental health and disaster regarding pollution throughout Taiwan, thus pollution prevention and control have become crucial issue.



Recognizing the seriousness of the threat owing to pollutants to human being and the environment, Department of Environmental Engineering

and Health at Yuanpei Technology was established in August 1991, and thousands of graduates from this department have been turning to the outstanding environmental engineers and industrial hygienists in Taiwan.

Students undertake field trips to visit industry to gain understanding of how industry operates. Waste treatment management is practiced within university where waste is sorted, categorized and determined how best to manage each category. Some waste items are sent to be incinerated where students visit to see the end product. Water and air sampling for biological and toxic chemicals is also conducted on site where students collect and analyze data then according to findings construct a management plan and make recommendations.

Faculty

The department faculty consists of twelve full-time teachers.

Facilities

Gas Chromatograph Mass Spectrometer (GC-MS), Inductively Coupled Plasma/Optical Emission Spectrometry (ICP-OES), Total Organic Carbon Analyzer (TOC), UV-VIS Spectrophotometer (UV-VIS), Atomic Absorption Spectrophotometer (AA), High Pressure Liquid Chromatography Instrument (HPLC), Sound Level Meter, Elemental Analyzer, Dissolution Tester, Bioaerosol Sampler.

Career Development

Students are prepared for their professional license for environmental engineering technician and industrial and mining hygienist. Furthermore, students are prepared for qualifications awarded by Environmental Protection Agency (EPA) for air pollution prevention, toxic chemical substance management, waste water treatment, waste

elimination and disposal inspector.

Students can secure positions in environmental laboratories, local and central government departments, Occupational Health and Safety organizations and environmental engineering industries alike.

Degrees Offered

■ Bachelor ■ Master



■ Mission & Objectives

Educational Objectives

Program	Objectives
Undergraduate	<ol style="list-style-type: none"> 1. Cultivating concept of environmental engineering and health. 2. Understanding the technology of analysis, operation, monitoring, pollution control and management. 3. Ability to obtain professional qualifications. 4. Understanding and realizing both professional ethic and social responsibility.
Graduate	<ol style="list-style-type: none"> 5. Cultivating professionals of environmental engineering and health. 6. Able to design and perform experiments. Can independently identify, analyze and solve problems. 7. Ability to obtain professional qualifications.. 8. Understanding and realizing both professional ethic and social responsibility

Core Competences

Program	Competences
Undergraduate	<ol style="list-style-type: none"> 1. Ability to apply knowledge of mathematics, science and engineering. 2. Ability to design and conduct experiments, as well as to analyze and interpret data. 3. Ability to use techniques, skills and tools necessary for engineering practices. 4. Ability to design an engineering system, component or process. 5. Ability to manage projects, communicate effectively and function on teams. 6. Ability to identify, analyse and solve problems. 7. Knowledge of contemporary issues; an understanding of

the impact of engineering solutions in environmental, societal, and global contexts; and the ability to cultivate habits of life-long learning.

8. Understanding of professional ethics and social responsibility.

Graduate

1. Professional knowledge in environmental engineering and health.
2. Ability to organize and implement a research project.
3. Ability to conduct professional journal writing.
4. Ability for innovative thinking and independent problem solving.
5. Ability to collaborate with people in an interdisciplinary setting.
6. Sound international scope of view.
7. Ability for life-long learning.
8. Understanding of professional ethics and social responsibility.

Curriculum

Undergraduate Program of Department of Healthcare Management, Yuanpei University(Academic Year 2014)

Year 1

Required	Credits	Elective	Credits
Chemistry (1)	2	Public Health	2
Chemistry Experiment	1	Introduction of Environment Protection For Hospital	2
General Biology	2	Vector Control	2
Basic Calculations in Environmental Engineering and Health(I)	2	Environmental Ecology	2
Environmental Science	2		
Chemistry (2)	2		
Biostatistics	2		
Physics	2		

Basic Calculations in Environmental Engineering and Health (II)	2		
Experiments in Environmental Chemistry	1		
Vector Control			
Environmental Ecology			
Year 2			
Required	Credits	Elective	Credits
Biostatistics and Software	2	Engineering Mathematics	3
Fluid Mechanics	2	Basic Chemical Kinetics	2
Environmental Microbiology	2	Water Quality Analysis and Operation	2
Environmental Health	2	Environmental Analytical Chemistry	2
Industrial Hygiene	2	Introduction of Occupational Safety and Health Laws	2
Air Pollution	2	Introduction of Industrial Processes	2
Epidemiology	2	Pollution Control	2
Water Supply Engineering	2	Biotechnology and Safety	2
Environmental Engineering Chemistry	2	Lab Physiology	2
		Environmental Microbiology Lab	1
Year 3			
Required	Credits	Elective	Credits
Sewage Engineering	2	Occupational Safety and Health	2
Work Environment Measurement	2	Engineering Mathematics Software	2
Instrumental Analysis	2	Semiconductor Manufacturing Safety	2
Waste Treatment	2	Air Pollutants Sampling and Analysis	2
Environmental Protection Laws and Regulations	2	Professional English(1)	2
Environmental Sampling and		Exposure Assessment	2

Analysis			
Introductory to Soil and Groundwater Pollution and Remediation	2	Environmental Hydrology	2
Air Pollution Control	2	Environmental Organic Chemistry	2
Noise and Vibration	2	Quality Control and Assurance	2
		Environmental Disease	2
		Environmental Education	2
		Industrial Ventilation	2
		Industrial Wastewater Treatment	2
		Laboratory of Work	2
		Environmental Monitoring	2
		Technical Writing	2
		Aerosol Science	2
		Energy and Environmental Engineering	2
		Health Management	2
		Professional English(2)	2
		Green Technology and Sustainable Development	2
		Green Industries and Economics	2
		Instrumental Analysis Experiment	1
		Waste Analysis and Experiments	2
		Environmental System and Sustainable Management	2
		Pollutants Fate and Transport in The Environment	2
		Environmental Research and Information System	2

Year 4

Required	Credits	Elective	Credits
Human Factor Engineering	2	Wastewater Quality Examination and Laboratory	1
Risk Assessment	2	Seminar on Industrial Health	2
Special Topics and Practical Trainings	2	Operation and Maintenance for Wastewater Treatment Plant	2
Industrial and Environmental Toxicology	2	Indoor Air Quality	2
		Unit Design	2
		Incineration and Thermal Treatment Technology	2
		Short-Term Intern	2
		The Development and Application of Green Healthful Products	2
		Green Energy and Environmental Mechatronics	2
		Radiation Safety	2
		Seminar For Environmental Engineering and Health	2
		Environmental System Analysis	2
		Environmental Impact Assessment	2
		Industrial Safety	2
		Management of Industrial Safety and Hygiene	2
		Control Engineering of Workplace	2

	Construction Management	2
	Air Pollution Control of The High Technology Manufactures	2
	Waste Minimization and Pollution Prevention	2
	Operation and Maintenance of Incineration Process	2
	Trace Element Analysis and Experiment	2
	Biological Wastewater Treatment	2
	Bachelor Thesis	2
	Environmental Unit Operation	2
	Environmental Ethics	2
	Environmental Hormone	2
	Environmental Programming and Management	2

Graduate Program of Department of Healthcare Management, Yuanpei University(Academic Year 2014)			
Year 1			
Required	Credits	Elective	Credits
Technical Writing (1)	2	Special Topics on Water and Wastewater Treatment	3
Seminar (1)	1	Hazardous Waste Management	3
Special Topics Environmental Engineering	3	Special Topics Air Quality Management	3

and Health			
Research Methods For Environmental Experiments	2	Industrial Safety and Health for High-Tech industries	3
Technical Writing (2)	2	Wastes Treatment and Resource Technology	3
Seminar (2)	1	Remediation For Groundwater Contamination	3
		Survey and Analysis For Pollution Hazard	3
		Control Engineering of Workplace	3
		Gaseous Pollution Control and Design	3
		Advanced Water Treatment	3
		Special Topics in Environmental Toxicology Analysis	3
Year 2			
Required	Credits	Elective	Credits
Seminar (3)	1	Technical Writing (3)	2
Seminar (4)		Special Topics Water Treatment For High-Tech industries	3
Thesis		Particulate Pollution Control and Design	3
		Assessment and Management For Manufacturing Hazard and Risk	3
		Environmental Programming and Management	3
		B	1
		B	6
		Special Topics Bio-Aerosol	3
		Technical Writing (4)	2
		Special Topics on Radiation Safety	3

Faculty and Staff

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Research

The main research field as follows:

- Water and Wastewater Treatment
- Waste Treatment and Management
- Air Pollution Control
- Environmental Microbiology and Toxicology
- Environmental Sampling and Analysis

