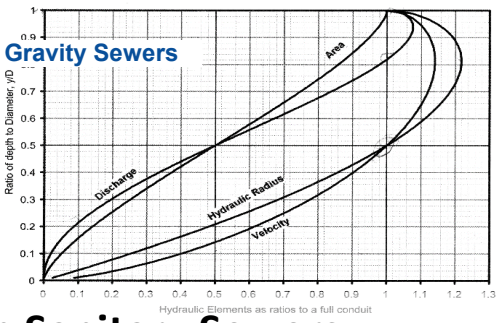
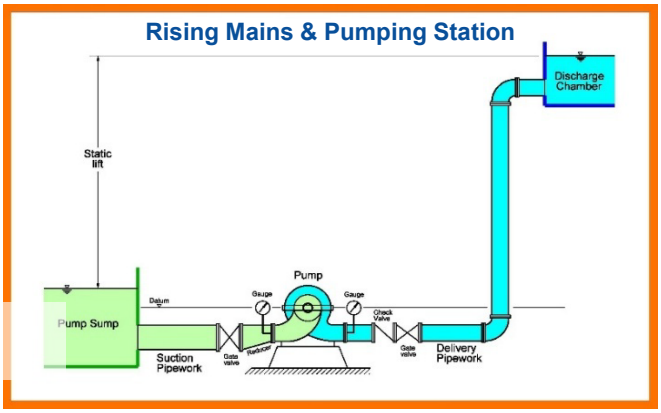
hkpc Academy 生產力學院

CONNECTION TECHNOLOGY 裝備未來 FUTURESKILLS





Training on Sanitary Sewers

INTRODUCTION

Separate Systems are provided in HK to collect wastewater (by Sanitary Sewers) and stormwater (by Stormwater Drains). The Wastewater Infrastructure safeguards public health by collecting wastewater (by Sanitary Sewers), treating it (by Wastewater Treatment Plants) and discharging the effluent into the receiving inland or coastal waters (via well designed outfalls). This 2-day Course deals with Sanitary Sewers which have received much less attention in environmental engineering literatures than wastewater treatment and disposal.

Programme code	10018320
Date and time	28 January 2026 (Wed) 9:30-17:30 29 January 2026 (Thurs) 9:30-17:30
Venue	Future Theatre (Theatre 2), 1/F, HKPC Building
Medium	Cantonese with English terminology
Course fee	HK$4,800 (10% Early-bird discount for application and payment **on or before 19 December 2025**)
Remarks	Participants who have fulfilled 75% attendance will be awarded an e-certificate of attendance issued by the Hong Kong Productivity Council

COURSE DESCRIPTION

This Course on Sanitary Sewers addresses both Gravity Sewers and Rising Mains & Pumping Stations. Hydraulic aspects cover both open channel flows in closed conduits and pressurised pipe flows in surcharged sewers and sewage rising mains/pumping stations. Sediment Transport & Sewer Biochemical Processes are also briefly addressed. Formation of sulfides have implications on sewer corrosion, health & safety of sewer workers and odour nuisance to the public. Formation of methane, a Greenhouse Gas with much higher warming potential than Carbon Dioxide, aggravates Climate Change.

Structural Design of Rigid and Flexible Pipelines for Gravity Sewers and Rising Mains are also covered. So are inspection and Operation & Maintenance aspects.

WHO SHOULD ATTEND?

This course is targeted at civil and environmental engineers and scientists in the public and private sectors, responsible for project management, planning, investigation, design, construction, operation and management of wastewater infrastructure., which is increasingly important for sustainable development to meet social economical needs in times of Climate Change. Meanwhile, the Course is also relevant to public or private sector owners of Sanitary Sewers who have to undertake regular Inflow/Infiltration Surveys, CCTV Inspections and necessary sewer repair and rehabilitation works to ensure the hydraulic and structural conditions of sewers are adequate.

SUPPORT ORGANISATIONS

CIWEM Chartered Institution of Water and Environmental Management
Hong Kong Branch

HKIE THE HONG KONG INSTITUTION OF ENGINEERS 香港工程師學會
Environmental Division 環境分部

IAHR AIRH
The HK Chapter of the International Association for Hydro-Environment Engineering and Research

Inquiries to Ms Mandy LAM | +852 2788 5023 | mandylam@hkpc.org

Training on Sanitary Sewers

COURSE OUTLINE

Day 1

Lecture 1 – Sanitary Sewers System Planning
- Centralized vs Decentralized Systems
- Quantity of Wastewater
- Sewer Alignments: Plans & Profiles
- Statutory Matters
- Ma Wan Case Study Problem Definition

Lectures 2 - Gravity Sewers
- Cross Sections & Materials
- Open Channel Flow vs Surcharged Flow
- Basic Sewer Hydraulics
- Maximum & Minimum Velocities
- Aeration

Lecture 3 – Sewer Processes
- Biogenic Formation of Sulfides and methane
- Corrosion of Pipe Materials
- Safety & Health of Sewer Workers
- Odour Nuisance to Public
- Management of Sewer Processes
- Carbon Footprint of Sewers

Lecture 4 - Operation & Maintenance Issues
- Inflow/Infiltration Surveys & CCTV Inspections
- Sewer Rehabilitation by Trenchless Methods
- Sewer Appurtenances
- Planned/Unplanned Cross-connections between sewers & drains
- Village Sewers

Day 2

Lecture 5 – Pumping Systems
- Screw Pumps
- Centrifugal Pumps
- Hydraulics of Pumping System
- Pump Characteristic Curves
- Cavitation design
- Variable Speed Pumps

Lectures 6 - Pumping Stations & Rising Mains
- Pumping Station Layout Options
- Wet Well Design
- Surge Analysis & Suppression for Rising Mains
- Air Valves/Drain Valves
- Discharge Chamber
- Power Supply, Automation & Instrumentation

Lecture 7 - Structural Design Aspects
- Rigid Pipelines
- Flexible Pipelines
- Thrust Blocks
- Sewer Tunnels
- Pumping Stations Layout Options

Lecture 8 – Conclusions
- Ma Wan Case Study: Solution
- Climate Change Aspects
- Miscellaneous Topics
- Historical Note on Sanitation in Hong Kong

TRAINER

Graduated from The University of Hong Kong with BSc(Eng) in 1977, Ir Professor CHAN Pak Keung became a qualified civil engineer in 1980 after undergoing 3-year professional training with the Public Works Department. Since then, he has spent his entire career in Drainage Services, both on the Wastewater & Stormwater sides, retiring as an Assistant Director of Drainage Services Department in 2014. Prior to that, he was awarded an Honorary Fellow of Hong Kong Chapter of the International Association for Hydro-Environment Engineering & Research, in recognition of his dedicated efforts and vision of life-long learning of hydraulic engineers as well as his exceptional contributions to Design & Construction of Hydro-Environment Projects.

Since 2015, Ir Professor CHAN has been active in water education and has been Adjunct Professor of HKU. From 2015 to 2018, he was also Professor of Practice (Infrastructure), PolyU. He has also taught many CPD Courses for Engineers and Scientists organised by HKPC and other training vendors.

Enrolment Method

1. Scan the QR code to complete the enrolment and payment online.

OR

2. Mail the crossed cheque with payee name "Hong Kong Productivity Council" in HK dollar and the application form should be mailed to Hong Kong Productivity Council, 2/F, HKPC Building, 78 Tat Chee Avenue, Kowloon (ATTN: Ms Mandy LAM). **Please indicate the course name and course code on the envelope.**

Enrol HERE

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