

**Training Mode:
Physical**



Approved Duration: HRD Corp Serial No:
26/08/2025 - 10001593429
27/08/2026

**ORGANISED BY:
ENGINEERING EDUCATION TECHNICAL DIVISION, IEM**

Physical Half Day Seminar on AN OVERVIEW: DESIGNING A FLOOD CONTROL PUMPING STATION

BEM APPROVED CPD: 4

REF NO: IEM25/HQ/378/S

Tailored for engineers, designers and professionals involved in flood mitigation projects, this course equips learners with appropriate knowledge to attempt design of a flood control pumping station.

Date : 25 October 2025 (Saturday)
Time : 9.00 am - 1.00 pm
Venue : Wisma IEM, Petaling Jaya
Speaker : Ir. Ana Miraa Mohd Yusof



CLOSING DATE : 10 OCTOBER 2025

REGISTRATION FEE'S (subject to 8% SST)

ONLINE FEE (NON HRDF Claimable)
(Log-in for registration & payment:
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NORMAL FEE (HRDF Claimable)
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Synopsis

This course provides a general guideline in designing a flood control pumping station.

A flood pumping station, is a vital component of flood control systems. These stations are designed to efficiently remove excess water from areas prone to flooding, preventing damage and ensuring public safety. Their design focuses on maximizing pumping capacity, ensuring reliable operation during extreme weather events, and minimizing environmental impact.

Key Design Consideration

Location:

The station's location is critical for optimal performance. It should be situated near the flood-prone areas, ideally on a site with access to a drainage system or natural waterway.

Inlet Structure:

The inlet structure, often a sump or wet well, must be large enough to accommodate the expected floodwater flow. It should also have features to prevent debris and other contaminants from entering the pumps, such as screens or pre-treatment systems.

Pumps:

The pumps are the heart of the station, responsible for lifting the water. Their capacity must be sufficient to handle the peak flood flow. Vertical axial-flow or mixed flow pumps are commonly used due to their efficiency and suitability for floodwater applications.

Outflow:

The station must have a robust outflow system to transport the pumped water away from the flooded area. This may include a discharge pipe or channel, often designed with a slope to facilitate gravity flow.

Control System:

A sophisticated control system is essential for monitoring water levels, initiating pumping operations, and preventing overpumping. This system may also include alarms and sensors to notify operators of any malfunctions or issues.

Power Supply:

A reliable power supply, including backup systems, is crucial for ensuring continuous operation during emergencies. Generators and other emergency power sources are often used to provide a stable power supply.

Structural Design:

The station's structural design must withstand the forces of both flooding and strong winds, ensuring the safety of both the station and its operators. It should also be designed to allow easy access for maintenance and repairs.

Mechanical components:

The station shall be equipped with auxiliary components ie column and discharge pipes, trash screens, stop logs, valves, and flood gates.

PROGRAMME

TIME	PROGRAMME
08:30am – 09:00am	Registration of Participants
09.00am - 09.45am	Introduction
09.45am - 10.30am	Pump Station Component
10.30am - 10.45am	Break
10.45am - 11.45am	Pump Station Design Design Guidelines General Design Procedure Design Tool
11.45am - 1.00pm	Design Issues Q&A Session

LEARNING OUTCOME

After this training you will:

- Have an overview of flood control pumping system
- Have general knowledge of working principle of flood pumps
- Have general knowledge in flood pumping station design

CONTENT HIGHLIGHT

- PUMP STATION COMPONENT
- PUMP STATION DESIGN
- DESIGN GUIDELINE
- DESIGN PROCEDURE – WORKING EXAMPLE
- DESIGN TOOL
- DESIGN ISSUE

TARGET PARTICIPANTS

- Engineers, designers, project owners and relevant stakeholders dealing with flood pumping stations.

SPEAKER'S PROFILE



Ir. Ana Miraa Mohd Yusof is a certified Asean Chartered Professional Engineer (ACPE) and Professional Engineer with Practicing Certificate (PEPC-BEM). She holds MSc in Water Resource Engineering from Universiti Teknologi Mara and BEng (Mechanical) from Queensland University of Technology, Brisbane Australia. She has a 25-year working experience covering pumping system design and analysis, flood mitigation and irrigation system, rainwater harvesting and stormwater treatment system. Previously she worked in several companies in positions including Technical Director, Sales & Marketing Manager and Pump Applications Engineer. She started working in Grundfos Pumps Malaysia in October 2016 and currently holding a position as Grundfos Flood Control Solution Manager (Water Utility - Malaysia). She works closely with engineers/designers/end users providing consultancy in pump station design fundamentals. She actively provides training sessions to water utility authorities - among others: Department of Irrigation and Drainage (DID/JPS), Majlis Bandaraya Shah Alam (MBSA), Malaysia Stormwater Organisation (MSO), Dewan Bandaraya Kuala Lumpur (DBKL), Syarikat Air Selangor (AIS), Perbadanan Bekalan Air Pulau Pinang (PBAPP), Syarikat Air Negeri Sembilan (SAINS), Perbadanan Air Negeri Pahang (PAIP), Jabatan Air Negeri Sabah (JANS) as well as private C&S and M&E consultants all over Malaysia.

Cancellation Policy

No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with 7 days prior notification and substitute will be charged according to membership status.

Personal Data Protection Act

I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at <http://www.myiem.org.my> and I agree to IEM's use and processing of my personal data as set out in the said notice.



REGISTRATION FORM

PHYSICAL HALF DAY SEMINAR ON AN OVERVIEW: DESIGNING A FLOOD CONTROL PUMPING STATION
25 OCTOBER 2025 (SATURDAY)
CLOSING DATE: 10 OCTOBER 2025
Email : ezzaty@iem.org.my

REGISTRATION FEE'S (subject to 8% SST)		
	ONLINE FEE (NON HRDF Claimable) (Log-in for registration & payment: www.myiem.org.my/member/login.aspx)	NORMAL FEE (HRDF Claimable) (By Email : Payment by cash, credit card, bank-in, Quotation & Invoice)
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NAME	I/C No	MEMBERSHIP NO. / GRADE	FEES (RM)
Sub Total:			
SST Added 8% :			
Total Amount Payable :			

FULL PAYMENT must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participant fails to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non refundable. The Registration Fee includes lecture notes, refreshment and lunch.

For **ONLINE REGISTRATIONS**, please note that payment **MUST** be made **BEFORE the closing date**. If payment is not received within the stipulated time, the registration fee will be reverted to the normal registration fee.

Contact Person: _____ Designation: _____

Name of Organization: _____

Address : _____

Telephone No. : _____ (O) _____ (Fax No.)

_____ (H) _____ (HP)

Email : _____

Signature & Stamp

Date