

Welcome to

IGM SHORT COURSE SERIES ON GROUNDWATER

“1ST COURSE: FUNDAMENTALS OF GROUNDWATER, TECHNOLOGY AND MANAGEMENT”

1.0 BACKGROUND

Groundwater is a valuable natural resource. It has become an important source of water to meet the increasing requirement for domestic, industrial and agricultural needs. Surface water, such as rivers, lakes and drainage areas, have in several places become inadequate or even unavailable due to several factors:

- i. rapid increase in demand due to population growth,
- ii. industrial or agricultural expansion,
- iii. deteriorating quality of surface sources, and
- iv. low flow of surface source during prolonged droughts.

As a result of these factors, a limitation on the availability and capacity of the surface supply is being experienced. Groundwater is thus considered the only logical alternative to supplement the supply.

2.0 THE COURSE

The short course is modelled as a continuing professional development programme (CPD) by IGM and is offered to any person from any disciplines. The course series are divided into a number of smaller courses in order to limit the length per courses.

It is developed and delivered in consultation with JMG, NAHRIM, JKR and UM as partners and associate organisations. The course delivers professional development for a wide range of disciplines in the groundwater including research, engineering, groundwater policy and management, environmental consulting, mining, hydrogeology, agriculture, landuse, environmental science as well as environmental education. The aim of this short course is to increase understanding of groundwater processes including recharge, discharge, contamination, remediation and management.

This course will help in fostering a closer working relationship among scientists, engineers, managers and the private sector who are involved in the investigation, management and utilisation of groundwater resources.

This 1st Course will focus on the **“FUNDAMENTALS OF GROUNDWATER, TECHNOLOGY AND MANAGEMENT”**.

3.0 OBJECTIVES

The objectives of this 1st Course are as follows:

- To extend the basic knowledge in the field of hydrogeology.
- To enhance the knowledge in the groundwater exploration, development and management.
- To increase the number of groundwater professionals.

4.0 WHO SHOULD ATTEND?

Geologists, Hydrogeologists, Engineers, Researchers, Academicians, Policy Makers, Federal and State Governments Officers, Water Supply Companies, Bottled Water Industries, Groundwater Well Drillers and other interested organisations and individuals.

5.0 KEY COURSE TOPICS

The course will cover these listed topics:

- Water cycle and water balance concepts (global/local), surface/groundwater interaction
- Hydrogeological system, relation of geology to groundwater, groundwater characteristics, groundwater flow, aquifer type
- Groundwater recharge and discharge
- Groundwater exploration – alluvial and fractured aquifers
- Basics of drilling, pumping test and treatment
- Water chemistry and standards
- Basics in managing groundwater

The instructors are recognized as the leading experts and teachers in the field and collectively have over 50 years of practical experience. The course is targetted to be the established as standard among groundwater training courses and has targetted to be attended by 30 participants.

Substantial number of pages of lecture notes has been written specifically for this course. Practical aspects are particularly emphasised through the study of illustrative case histories of groundwater development and management.

6.0 ACCOMMODATIONS

Attendees are to **arrange own accommodation**.