



an  egis company

بروجاكس للتدريب والتطوير  
Projacs Training and Development

## Sewage Networks - Planning and Design تخطيط وتصميم شبكات مياه الصرف الصحي

06 - 10 June 2021

Cairo/Egypt



[ProjacsAcademy.com](http://ProjacsAcademy.com)



## Introduction

The intent and objective of this course is to provide the participants with the information relative to the basic concepts and principles involved with the design, installation, and function of plumbing system including drainage, water supply and central heating system , design, maintenance and management procedures.

It is preferable for participants to bring their projects to make their own design for those projects separately by using elite software program.

## Objectives

After attending this course you will be able to:

- Know about design concepts of plumbing system networks for different applications
- How to make a maintenance plan for networks

## Course Outline

- General Design procedures
- Plumbing, fire protection, and site systems
- Site work
- Building work
- Cold water supply system
- Central Hot water system
- Boiler and heat exchangers selection
- Calculation forms
- Maintenance plane
- Hydraulic pressure test procedures
- Flushing techniques

### Outlines.

#### Day (1)

Procedures for the design of plumbing work

- Preparation of plumbing drawings
- Items to be checked when completing a project

## Plumbing systems

- Conformity with requirements
- Preliminary plumbing utility loads
- Energy conservation possibilities in plumbing systems

## Site work

- Drainage systems
- Water supply systems
- Domestic water supply system
- Fire protection system

## Day (2)

### Building work

- Principles of design
- Drainage system
- Storm-water system
- Vent system
- Laboratory waste-water drainage and vent
- Garage drainage and vent
- Domestic water supply
- Street pressure system
- Boosted pressure system
- Hot water system
- Boiler and heat exchanger selection
- Chilled-drinking water system
- Distilled water system
- Demineralized water system
- Swimming pools
- Decorative pools and fountains

## Day (3)

### Building work (cont.)

- Gas systems
- Fire stand pipe system
- Sprinkler systems
- Fire extinguishers
- Dry-chemical fire extinguishers
- Foam fire extinguishers
- Compressed air system, pipe sizing and equipment
- Vacuum cleaning system, pipe sizing and equipment
- Gasoline system principles of design
- Insulation principles of design
- Plumbing fixtures

## Day (4)

## Calculation forms

- Electric connection data sheet
- Storm water drainage
- Water riser sizing
- Water main sizing
- Characteristic curves
- Hot water recirculation system sizing

## Actual Project

- **Every participant will have a part from a real project and apply what he knows from this course on the project and make the following:**
- Drainage network
- Water network distributions
- Hydraulic calculations
- Pump room arrangements
- Control stations
- Boiler room arrangement , design and calculations

## Day (5)

### Maintenance plane preparation outline

- Field check list
- Plumbing drawing check list
- Hydraulic pressure test procedures
- Flushing techniques
- Machine failure trouble shooting table

## Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a binder containing a copy of the presentation
- slides and handouts
- Post-assessment

## Program Support

This program is supported by interactive discussions, role-play, and case studies and highlight the techniques available to the participants.

## Schedule

### The course agenda will be as follows:

- |                     |                  |
|---------------------|------------------|
| • Technical Session | 08.30-10.00 am   |
| • Coffee Break      | 10.00-10.15 am   |
| • Technical Session | 10.15-12.15 noon |
| • Coffee Break      | 12.15-12.45 pm   |
| • Technical Session | 12.45-02.30 pm   |
| • Course Ends       | 02.30 pm         |

## Course Fees\*

- **2,950USD**  
*\*VAT is Excluded If Applicable*