





# **Course: Storm Water Drainage Study and Design**

Code	City	Hotel	Start	End	Price	Language - Hours
573	Madrid (Spain)	Hotel Meeting Room	2025-06-09	2025-06-13	5450 €	<b>En - 25</b>

# **Objectives**

- Understand storm water drainage importance in society
- Determine storm water Drainage systems requirements for a given community
- Understand procedures for analysis and design of storm water drainage systems

# **Daily Outline**

## Day One: Introduction, General information and Hydrology

## Fundamental Hydrology for Sewer Design

- Factors affecting Floods
- Design frequency criteria
- Drainage Basins
- Storm water flow

## **Runoff computation methods (Rational Formula, Hydrograph Methods and**

### others...)

## Day Two: Storm Drainage Systems

- Storm Water Drainage Systems Components
- Pavement Drainage



- Gutter Flow
- Storm Water Inlets
- Storm Drains

## **Day Three: Hydraulics of Sewers**

- Fundamental Hydraulic for Sewer Design
- Manning's Formula
- Solution of Manning's equation for circular pipes
- Design of Sewer Systems
- Preliminary Design
- Detailed Design
- iii. Principles of Design
- Providing Quality and
- Professional Training Since 1984

# Day Four: Design Procedures and Preliminary Design

- Storm Water Drainage Sewers
- Culverts
- Ponds
- Drainage Well

# Day Five: Practical problems

Open Discussions



The Scandinavian Academy for Training and Development employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:

#### • Theoretical Lectures:

 We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.

#### • Scientific Assessment:

 $\circ\,$  We evaluate trainees skills before and after the course to ensure their progress.

### • Brainstorming and Interaction:

 We encourage active participation through brainstorming sessions and applying concepts through role play.

#### • Practical Cases:

- $\circ\,$  We provide practical cases that align with the scientific content and the participants specific needs.
- Examinations:
  - $\circ\,$  Tests are conducted at the end of the program to assess knowledge retention.
- Educational Materials:
  - $\circ\,$  We provide both printed and digital scientific and practical materials to participants.
- Attendance and Final Result Reports:
  - $\circ\,$  We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- Professionals and Experts:
  - $\circ\,$  The programs scientific content is prepared by the best professors and trainers in various fields.
- Professional Completion Certificate:
  - $\circ~$  Participants receive a professional completion certificate issued by the Scandinavian Academy for
    - Training and Development in the Kingdom of Sweden, with the option for international authentication.
- Program Timings:
  - Training programs are held from 10:00 AM to 2:00 PM and include coffee break sessions during lectures.