



# WE088: Operation of Water and Wastewater Treatment Plants



## Training Description:

This course is designed to teach proper analytical techniques for the analysis of chlorine in water. Analytical technologies covered in the course will be colorimetry and testing parameters associated with chlorine analysis. Participants are required to analyze water samples of known and unknown values.

## Training Objectives:

The course objectives will be met by presenting test theory, incorporating practical applications of analytical techniques with hands-on experience with testing systems.

## Training Designed for:

This course is intended for Biologists, Water Services, Supervisors, Chemists, Team Leader - water & power, Physics Analysts and Technicians as well as other professionals who want a better understanding of the subject matter.

## Training Program:

### FIVE DAYS:

- ❖ PRE-TEST
- ❖ Water treatment technology
  - Fundamentals of analytical chemistry and most important principles and techniques used in laboratories
- ❖ Water sampling and analysis
  - Practical techniques and methods used in sampling of waters from different sources
  - The chemical and physical properties of water samples
  - Qualitative and Quantitative analysis of water
- ❖ Graphical presentation of analysis results
  - Water patterns (Stiff pattern)
  - Water quality techniques and presentations
- ❖ Microbiological treatment of water
  - Most important types of organisms present in water
  - Methods of identification and measurements
- ❖ Water purification
  - Techniques used for water purification as filtration, flocculation and sedimentation
  - Treatment and disinfection of drinking water
- ❖ Chlorination and residual chlorine measurement
  - Ways for using chlorine for disinfection, measurement and evaluation
- ❖ Disinfection using Ozone gas
  - Ways of using Ozone for disinfection
- ❖ Disinfection using Ultraviolet radiation
  - Using Ultraviolet radiation in water treatment systems
- ❖ Testes used in field and laboratory applications
  - Most essential ASTM Standard tests used in water analysis inside and outside Laboratories



- E-coli test, fecal coli form, SRB bacteria and general aero
- ❖ Course Conclusion
- ❖ POST-TEST and EVALUATION

### Training Requirement:

“Hand’s on practical sessions, equipment and software will be applied during the course if required and as per the client’s request”.

Please note that the above topics can be amended as per client’s learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

### Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Software & General Discussions
- Pre and Post Test

### Training Certificate(s):

Internationally recognized certificate(s) will be issued to each participant who completed the course.

### Training Fees:

**As per the course location** - This rate includes participant’s manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01<sup>st</sup> of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

### Training Timings:

#### Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:30	Recess (Prayer Break & Lunch)
13:30 - 15:00	Last Session

**For training registrations or in-house enquiries, please contact:**

**Aisha Relativo:** [aisha@cmc-me.com](mailto:aisha@cmc-me.com)

Tel.: +971 2 665 3945 or +971 2 643 6653 | Mob.: +971 52 2954615

Training & Career Development Department

