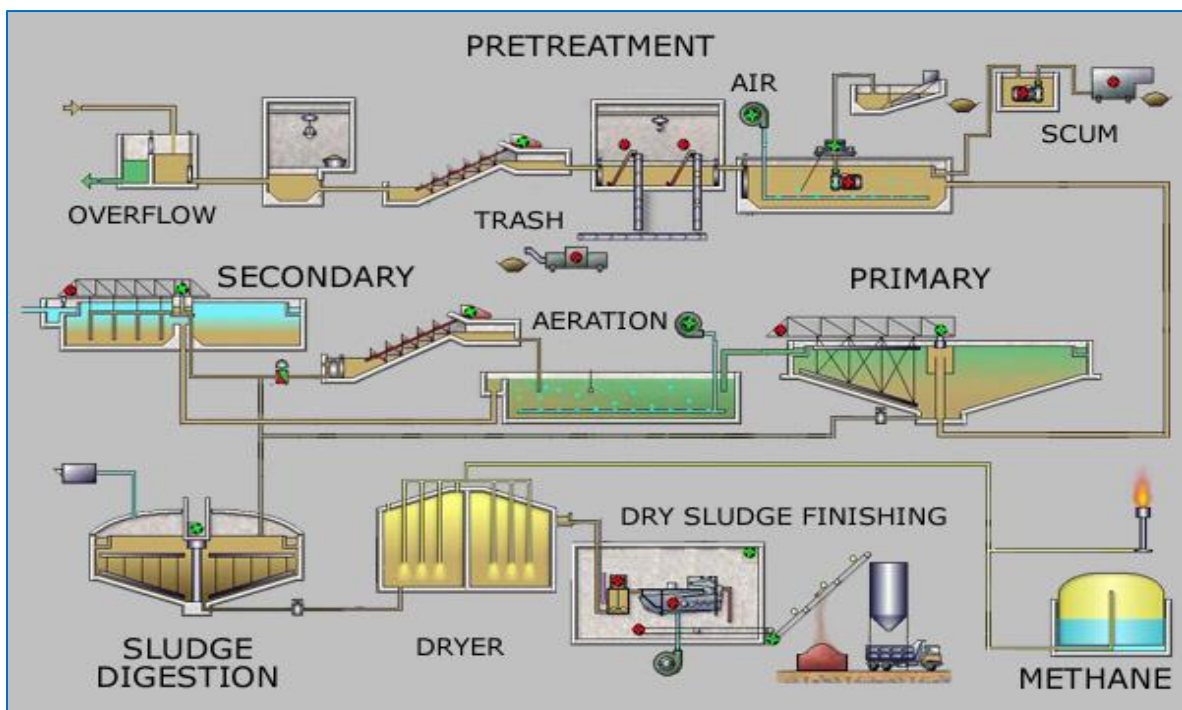




WE093: Principles of Wastewater Management & System Design

Training Description:

This intensive course volume offers comprehensive coverage of the design and construction of municipal water and wastewater facilities. The course addresses water treatment in detail, following the flow of water through the unit processes and coagulation, flocculation, softening, sedimentation, filtration, disinfection, and residuals management. Each stage of wastewater treatment preliminary, secondary, and tertiary is examined along with residuals management.

Training Objectives:

At the end of the training, participants will be able to:

- ✓ Select the most suitable and cost-effective wastewater treatment process technology (among the most widely applied anaerobic, aerobic, land-based and on-site systems) to treat certain wastewater stream given its composition and characteristics and taking into account the required effluent standards
- ✓ Carry out a preliminary design of a wastewater treatment system (based on the most widely applied anaerobic, aerobic, land-based and on-site systems) including the engineering process layout, hydraulic profile and process flow-diagram (PFD)
- ✓ Identify and estimate the construction, operational and maintenance costs of a wastewater treatment plant and the investments required to secure its satisfactory operation throughout the expected life-span of the system
- ✓ Describe the main elements and components involved in the project planning, project management, and project administration for the design, engineering, construction, start-up and operation of a wastewater treatment plant

Training Designed for:

This course is intended for all wastewater professionals with background and/or proven qualifications in sanitary engineering, civil engineering, chemical engineering and environmental engineering. Working in the public or private sector dealing with wastewater treatment design.

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.”

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client’s learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

DAY ONE:

- ❖ PRE-TEST
- ❖ Introduction
- ❖ The design and construction processes
- ❖ General water supply design considerations
- ❖ Intake structures

- ❖ Wells
- ❖ Chemical handling and storage
- ❖ Coagulation and flocculation

DAY TWO:

- ❖ Lime–soda softening
- ❖ Ion exchange
- ❖ Reverse osmosis and Nano filtration
- ❖ Sedimentation
- ❖ Granular filtration
- ❖ Membrane filtration

DAY THREE:

- ❖ Disinfection and fluoridation
- ❖ Removal of specific constituents
- ❖ Water plant residuals management
- ❖ Drinking water plant process selection and integration

DAY FOUR:

- ❖ Storage and distribution systems
- ❖ General wastewater collection and treatment design considerations
- ❖ Sanitary sewer design
- ❖ Headworks and preliminary treatment
- ❖ Primary treatment
- ❖ Wastewater microbiology

DAY FIVE:

- ❖ Secondary treatment by suspended growth biological processes
- ❖ Secondary treatment by attached growth and hybrid biological processes
- ❖ Secondary settling, disinfection, and post aeration
- ❖ Tertiary treatment
- ❖ Wastewater plant residuals management
- ❖ Clean water plant process selection and integration
- ❖ Course Conclusion
- ❖ POST-ASSESSMENT and EVALUATION

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, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

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



Training Fees:

TBA 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 01st 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 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

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

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