

MATHEMATICS FOR WASTEWATER TREATMENT PROFESSIONALS

Course Description

Mastering and performing different mathematical calculations is necessary for proper operation and maintenance of wastewater treatment plants.



This training course provides knowledge of calculation of key parameters, which are fundamental for the effective operation of different treatment processes, such as: screens, grit removal, primary and secondary clarifiers, trickling filters, aeration tanks, ponds, lagoons and sludge treatment units.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for engineers, technicians and operators working in a wastewater treatment plant.

Objectives of the Training Course

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

- Calculate the amount of screenings and grit removed from flow;
- Evaluate the surface loading and weir overflow rate of the primary clarifier;
- Calculate BOD and SS removal during the primary treatment process;

- Understand and calculate the controlling parameters for secondary treatment methods such as trickling filter, activated sludge, ponds and lagoons;
- Determine the BOD and SS removal efficiency from the secondary treatment methods;
- Calculate the sludge produced by primary and secondary treatment processes;
- Calculate solid concentration of the produced sludge;
- Estimate the sludge pumping rate and time;
- Use math calculations to control and operate thickening and dewatering equipment;
- Perform the necessary calculations for the operation of sand drying beds;
- Control aerobic and anaerobic sludge digestion units.

Training Method

The training is based on lectures presented in PowerPoint, combined with discussions and case studies. In addition to lectures and discussions, participants will analyse specific case studies.

Training Course Materials

The participants of this training course will be provided with the Training Manual "Mathematics for Wastewater Treatment Professionals". In addition, the participants will receive certificate of attendance.

Registration fee

Members of SHUKALB/SHUKOS: 13,000

ALL/person

Non-members: 16,000 ALL/person

This fee includes course materials, coffee breaks and lunch breaks.