



SHUKALB
WATER SUPPLY AND SEWERAGE ASSOCIATION OF ALBANIA



SHUKOS
WATER AND WASTEWATER WORKS ASSOCIATION OF KOSOVA

JOINT TRAINING PROGRAM

WASTEWATER LABORATORY
QUALITY SOURCE
OPERATION
EFFICIENCY LEAKAGE
DISTRIBUTION
ASSETS
FINANCE PLANNING
COLLECTION SYSTEM
WATER DRINKING WATER
SAFETY LOSS MAINTENANCE
EMERGENCY TREATMENT PLANT
BUSINESS PLANNING
MANAGEMENT
PERFORMANCE

Training Catalog

CONTACT

SHUKALB

Water Supply and Sewerage Association of Albania

Tel: +355 69 70 66 222

E-mail: training@shukalb.al

Web: www.shukalb.al

SHUKOS

Water and Wastewater Works Association of Kosova

Tel: +383 44 182 497

E-mail: shukos2001@gmail.com

Web: www.shukos.org

TABLE OF CONTENTS

WATER SUPPLY AND TREATMENT	6
WATER TREATMENT PLANT OPERATION AND MAINTENANCE	7
WATER SOURCES AND INTAKE STRUCTURES.....	8
SMALL WATER SYSTEMS	9
INTRODUCTION TO WATER TREATMENT	10
WATER QUALITY IN THE WATER DISTRIBUTION.....	11
SAMPLING AND LABORATORY PROCEDURES FOR WATER AND WASTE WATER	12
METERS, VALVES AND FIRE HYDRANTS	13
FUNDAMENTALS OF WATER SYSTEM HYDRAULICS.....	14
WELLS OPERATION.....	15
WATER MAINS AND STORAGE FACILITIES	16
APPLIED MATHEMATIC FOR WATER TREATMENT OPERATORS	17
PRETREATMENT & TASTE AND ODOR.....	18
METALS CONTROL.....	19
SEWERAGE AND WASTEWATER TREATMENT	20
OPERATION AND MAINTENANCE OF WASTEWATER COLLECTION I	21
OPERATION AND MAINTENANCE OF WASTEWATER COLLECTION SYSTEM II.....	22
REPAIR AND REHABILITATION OF WASTEWATER COLLECTION SYSTEM.....	23
OVERVIEW OF WASTEWATER TREATMENT	24
SAFETY FOR WASTEWATER PROFESSIONALS.....	25
PRELIMINARY AND PRIMARY WASTEWATER TREATMENT.....	26
SECONDARY WASTE WATER TREATMENT – PONDS, LAGOONS, AND CONSTRUCTED WETLAND ...	27
SECONDARY WASTEWATER TREATMENT– FIXED FILM PROCESSES.....	28
SECONDARY WASTEWATER TREATMENT – ACTIVATED SLUDGE PROCESSES.....	29
SLUDGE TREATMENT AND BIOSOLIDS MANAGEMENT	30
MATHEMATICS FOR WASTEWATER TREATMENT PROFESSIONALS	31
NUTRIENT REMOVAL – BIOLOGICAL AND CHEMICAL.....	32
SAMPLING AND LABORATORY PROCEDURES FOR WASTEWATER	33

MANAGEMENT.....	34
MANAGEMENT.....	35
SUPERVISION.....	36
PERSONAL AND PROFESSIONAL SKILLS.....	37
ETHICS FOR WATER AND WASTEWATER PROFESSIONALS.....	38
FINANCIAL MANAGEMENT FOR NON FINANCIAL MANAGERS.....	39
CRISIS AND EMERGENCY MANAGEMENT.....	40
CUSTOMER SERVICE AND PUBLIC RELATIONS.....	41
DISCIPLINE THEME	42
ASSET MANAGEMENT.....	43
PERFORMANCE MANAGEMENT THROUGH BENCHMARKING	44
GUIDELINES FOR ADMINISTRATION COUNCIL MEMBERS OF WATER SUPPLY AND SEWERAGE UTILITIES.....	45
BUSINESS PLANNING FOR PERFORMANCE IMPROVEMENT.....	46
WATER LOSS MANAGEMENT - I.....	47
WATER LOSS MANAGEMENT II.....	48
LEAKAGE CONTROL.....	49
GENERAL SAFETY FOR WATER AND WASTE WATER PROFESSIONALS.....	50
EQUIPMENT MAINTENANCE - MOTORS, PUMPS AND VALVES FOR DRINKING WATER AND WASTE WATER PROFESSIONALS	51
GENERAL MATHEMATICS FOR WATER AND WASTEWATER PROFESSIONALS	52
ENERGY EFFICIENCY IN WATER AND WASTEWATER UTILITIES	53
SCADA SYSTEM OVERVIEW FOR WATER AND WASTEWATER PROFESSIONALS.....	54

INTRODUCTION

This catalogue is designed to provide an overview of all the training courses that are being offered and delivered under the Joint Training Program. The Joint Training Program is an initiative of SHUKALB and SHUKOS that was launched in the beginning of 2017, after the signing of a MoU between the Presidents of the respective associations. The purpose of the Joint Training Program is to offer a unified training program that addresses the capacity development needs of the water sector workforce in both countries, in an effort to ensure reliable and safe delivery of water supply and sewerage services.

The training courses presented in this catalogue have been developed by SHUKALB, in the framework of the Project “Sustainable Water Sector Capacity Development”, with the financial support of USAID. The training courses have been developed by using published materials and references from some of the most respected learning and training development institutions all over the world. During the development of each training course, SHUKALB has worked with International Subject Matter Experts, and a team of Albanian Experts, to ensure the quality of the material presented, as well as the material’s practicality in the Albanian context.

As in year 2017, the training courses will be offered and delivered both in Albania, and Kosovo, with trainers from both countries. The target group for each training course is specific, and it ranges from the skilled workers, to the technical and finance managers, the director of the water utility, as well as the members of the administrative councils of water utilities. The training courses are relevant also for the personnel of central and local government institutions, concerned with the water sector.

For easier reading and selection, the catalogue has been arranged around three general topics:

1. Water Supply and Water Quality
2. Sewerage and Wastewater Treatment
3. Management
4. Discipline theme

SHUKALB together with SHUKOS are committed to maintain the current library of training courses, and expand it with other topics as it will be necessary in the future, driven by the needs of their member water utilities.

WATER SUPPLY AND TREATMENT

WATER TREATMENT PLANT OPERATION AND MAINTENANCE

Course Description

The purpose of a drinking water treatment plant is to produce safe water for consumers. Water must not contain toxic substances or organisms that may cause diseases. A treatment plant consists of a series of treatment processes, such as: aeration, coagulation, flocculation, sedimentation, filtration and disinfection.



This training course aims at identifying and explaining the procedures on operation and maintenance of these processes.

Target Group

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

Objectives of the Training Course

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

- Identify the operating problems associated with aeration and know the solutions to minimize the problems;
- List the typical functions performed by an operator in the normal operation of the coagulation and flocculation process;
- Perform a jar test;

- List the safety hazards an operator may encounter when operating coagulation – flocculation process;
- Know the procedures to operate and maintain the coagulation – flocculation process;
- Know the procedures to operate a sedimentation process and maintain the associated equipment items;
- Know the procedures to operate and maintain filter process;
- Collect samples from basins;
- Know the procedures to operate and maintain chlorination equipment;
- Select the proper chlorine dosage;
- Troubleshoot and solve corrosion problems.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on “Water Treatment Plant Operation and Maintenance”. In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000

ALL/person

Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

WATER SOURCES AND INTAKE STRUCTURES

Course Description

The proper selection of water sources and a good management of the water storage facilities are the main factors and very important to produce low cost and good water quality. If the water quality is good at the source or reservoir, then the intake structures will transport clean water, and in an effective manner into the treatment plant or in water distribution network.



In this training course the participants will learn the basic knowledge on water sources and their characteristics. The training course will address and discuss the programs and methods of reservoirs management and their advantages. In addition, it will identify and describe the types of intake structures, as well as their operation and maintenance procedures.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for directors of technical department, operation and maintenance engineers, and production and design engineers.

Objectives of the Training Course

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

- Know the hydrologic cycle;
- Recognize the physical and chemical characteristics of water source;

- Evaluate the sustainability of a water source for drinking purposes;
- Recognize the factors affecting water quality;
- Know the advantages of a reservoir management program;
- Implement the appropriate methods of reservoir management and water quality improvement;
- Safely operate, maintain, and troubleshoot intake facilities.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on “Water Sources and Intake Structures”. In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 13,000 ALL/person
Non-members: 16,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

SMALL WATER SYSTEMS

Course Description

Water supply systems consist of water resources, such as surface water and groundwater, wells, pumps, water treatment plants, as well as distribution system, which includes storage facilities and water mains that supply consumers with water. Workers at water supply and sewerage utilities are responsible for the maintenance of all the above-mentioned components, and for good quality drinking water supply.



This training course aims at introducing the basic operation and maintenance components of small water systems. In addition, the identification of problems, their causes and repair will also be explained and discussed during the course.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for maintenance and operation engineers and technicians.

Objectives of the Training Course

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

- Know and explain the water system components and identify typical water system schemes;
- Know the four major categories of water quality classification;

- Identify the parts of a well and pumping system and the procedures to maintain and rehabilitate a well;
- Operate and maintain a well pump and identify the problems;
- Identify the purpose of a water treatment plant and explain its importance;
- Identify the types of contaminants that could get into a water distribution system;
- Explain the importance of a water distribution system surveillance program;
- Explain the importance of a cross-connection control program;
- Operate and maintain the water facilities;
- Protect the storage facilities from corrosion and conduct their disinfection;
- Know the basic formula to calculate the areas, volume, pressure, velocity and flow.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on "Small Water Systems". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 13,000

ALL/person

Non-members: 16,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

INTRODUCTION TO WATER TREATMENT

Course Description

In order to provide safe drinking water and safe services to the consumers, water should pass through a series of treatment processes. These processes reduce the pollutants found in the water and improve the quality of taste and odor. Water Supply and Sewerage Utilities, especially operators and laboratory technicians working in water treatment plants, should have the basic knowledge about these treatment processes, and know how to operate and maintain the equipment properly.



This training course will explain all the water treatment processes and required basic controls. The included processes are aeration, sedimentation, flocculation, filtration, disinfection, as well as corrosion, and taste and odor controls.

Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and it is especially useful for workers and engineers working in water treatment plant, production engineers, laboratory technicians, and chemists.

Objectives of the Training Course

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

- Explain the aeration process and identify the types of aerators;
- Identify the need of coagulation and flocculation process;
- List the types of coagulants;
- Explain the sedimentation process;
- Explain the filtration process and identify the types of water filters;
- Explain the process of disinfection and identify the points of chlorine applications;
- Recognize adverse effects of corrosion and factors that influence corrosion;
- Identify causes of taste and odors and prevent development of tastes and odors through monitoring programs.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on "Introduction to Water Treatment". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

WATER QUALITY IN THE WATER DISTRIBUTION

Course Description

The mission and main responsibility of the Water Supply and Sewerage Utilities is to supply safe and secure drinking water, in accordance with the standards and existing regulations.

A drinking water supply system is considered to be of a good quality when it does not contain pathogenic organisms, which may cause diseases. In addition, the system is in a good quality when it does not contain toxic chemicals, when it is attractive in taste and appearance, and it is ready to be used by households.



This training course will benefit to the individuals who work at the Water Supply and Sewerage Utilities, to better understand the chemical, physical and biological water transformations, when it enters and circulates in the distribution network. Moreover, will explain and identify programs for network monitoring and surveillance. Disinfection process and points of chlorine applications will also be explained in details.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for directors of the technical and distribution department, operation and maintenance engineers, metering engineers, billing specialist, and billing and collection managers.

This course is of interest to consulting engineers, design engineers, public health officials, or other similar regulatory institutions.

Objectives of the Training Course

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

- Identify the origin and the type of pollutants entering the water distribution system;
- Develop a water distribution system surveillance program;
- Develop a water quality monitoring program for a water distribution system;
- Prevent cross-connections and develop a program to properly control them;
- Have knowledge on the factors that affect disinfection and some of the disinfection methods;
- Disinfect the water pumps and pipes and storage facilities;
- Identify the points of chlorine application.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. In addition to lectures and discussions, participants will analyse specific case studies and engage in problem solving and laboratory work.

Training Course Materials

The participants of this training course will be provided with the Training Manual on "Water Quality in the Distribution System". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

SAMPLING AND LABORATORY PROCEDURES FOR WATER AND WASTE WATER

Course Description

A clear understating of the laboratory procedures and their proper implementation is a necessity for operators working in water supply and sewerage utilities. Samples are representatives of the water supply system, in terms of water quality and safety of human consumption.



This training course aims at explaining the laboratory procedures and identifying the necessary equipment to perform it, as well as explaining procedures for collecting samples and specifying the right steps to conduct necessary laboratory analyses.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for operators working in laboratory.

Objectives of the Training Course

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

- Understand the importance of laboratory safety;
- Know and use the laboratory equipment in an appropriate manner;
- Identify some potential laboratory hazards;
- Practice and complete a recordkeeping worksheet;
- Identify the sampling devices and techniques;
- Apply the necessary conditions during laboratory analysis;
- Perform the laboratory tests for: alkalinity; chlorine residual; chlorine demand; coliform; hardness; jar test; pH; temperature and turbidity.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on "Sampling and Laboratory Procedures for Water and Waste Water". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 13,000 ALL/person

Non-members: 16,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

METERS, VALVES AND FIRE HYDRANTS

Course Description

This training course will provide basic knowledge on water meters, valves and fire hydrants and will identify their importance in the water system. Participants will be able to understand how important their proper function is, particularly measuring the accurate water consumption, its distribution with the required pressure, and good quality.



Benefits of measuring, and its connection with water losses, operation and maintenance of valves, as well as the uses of fire hydrants in the distribution system, will be addressed during this training course.

Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and it is especially useful for hydraulics, and operation and maintenance engineers of the water supply system.

Objectives of the Training Course

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

- Identify and test various types of water flowmeters;
- Identify the various electronic flowmeters types;
- Recognize types of valves and the number for their installation in a cross-connection pipeline;

- Define the location of valves' installation and the necessary procedures;
- Identify types of hydrants and its use within the distribution system;
- Recognize hydrant-related issues.

Training Method

The training is based on lectures presented in Power Point, combined with discussions and case studies. In addition to lectures and discussions, private companies that manufacture and offer the training course related products, will make in-class and on the field demonstration.



Training Course Materials

The participants of this training course will be provided with the Training Manual on "Meters, Valves and Fire Hydrants". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 13,000

ALL/person

Non-members: 16,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

FUNDAMENTALS OF WATER SYSTEM HYDRAULICS

Course Description

Hydraulics is very important in the water supply systems. Water in motion produces forces and pressure whenever the velocity, flow direction or elevation changes. Identifying the pressure and flow at a certain point of the pipe, helps determining the pipe size and capacity. In addition, it helps to identify the type of pipeline material needed in a specific situation.



Furthermore, possessing a good knowledge in hydraulics helps managers to decide whether the water pressure reducers or pumps are necessary for transporting water in an effective manner.

This training course will cover the basic concepts of hydraulics in the water supply system, from the source to water taps.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for engineers and technicians.

Objectives of the Training Course

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

- Know the basic principles of pressure;
- Calculate the pressure in bar and kPa;

- Identify pressure losses;
- Identify friction losses;
- Identify losses at pipe fittings;
- Understand and calculate pump horsepower and efficiency;
- Calculate the flow rate;
- Identify the flow measuring devices.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on "Fundamentals of Water System Hydraulics". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 13,000 ALL/person

Non-members: 16,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

WELLS OPERATION

Course Description

Most of the urban areas and all rural areas in Albania use groundwater as the main drinking water supply source. Therefore, preservation and protection of these sources and practices application to prevent potential pollution is a necessity. Water Supply and Sewerage Utilities must implement sanitary risks requirements and regulations for the wells location. The workers must operate and consistently maintain the wells in a properly manner.



This training course provides knowledge on installation, repair and maintenance of well components. In addition, the testing of the wells' performance and the variety of the pumping tests will be addressed and discussed during the training.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for directors of technical departments, maintenance and operation engineers, as well as design and production engineers.

Objectives of the Training Course

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

- Identify some of the potential sources of groundwater pollution;
- Recognize the legislation regarding the well protection;

- Define the factors that should consider while designing a well field;
- Identify the types of wells;
- Identify the purposes of each surface features of the well;
- Identify the factors that affects maintenance of well;
- Know the procedure for abandoning and plugging a well;
- Identify and recognize the problems caused by the sand;
- Identify the available methods to reduce sand production;
- Explain the procedures for testing well yield;
- Explain the importance of well-designed and installed components, in terms of protection from contamination;
- Identify the types of test for specific wells.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on "Wells Operation". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person
Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

WATER MAINS AND STORAGE FACILITIES

Course Description

Water mains and storage facilities are very important components of a water supply system. Their proper installation maximizes their service life and minimizes future maintenance problems, thus providing safe drinking water and reducing unnecessary costs for the water supply and sewerage utility.



This training course aims at introducing participants with the most frequently used types of water mains and their characteristics. They will become familiar with the necessary steps of pipe installation and will be introduced to different types of storage facilities, as well as their operation and maintenance procedures.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for directors of distribution and technical department, operation and maintenance engineers, and production engineers.

Objectives of the Training Course

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

- Identify a typical layout of the distribution system;
- Identify the types of pipes;
- Identify the types of joints;

- Recognize protection procedures for pipes;
- Identify the inspections procedures while transporting the pipes;
- Apply the steps that should be followed in order to unload, stack and string the pipes;
- Describe the excavation process;
- Recognize the steps for laying pipes;
- Identify the leak testing procedures;
- Know the procedures for flushing and disinfecting the water mains;
- Operate and maintain the pipes and fitting;
- Identify various types of storage facility;
- Know the procedures to maintain the storage facilities.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on "Water Mains and Storage Facilities". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 13,000

ALL/person

Non-members: 16,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

APPLIED MATHEMATIC FOR WATER TREATMENT OPERATORS

Course Description

Prior to distribution, water utility operators should ensure an acceptable and standardized water quality for their customers. In order to achieve this quality in the most efficient way, water utility operators must know the mathematical calculations necessary for water treatment processes.



Participants in this training course will increase their knowledge in hydraulic concepts, pump power and efficiency calculations, and coagulation, flocculation, sedimentation, filtration and disinfection processes. Also the course will focus on hard water and how it can be softened.

Target Group

This training course is developed for professionals of water supply and sewerage utilities which responsibilities include treatment plant designing, water treatment and water distribution. It is also for laboratory personal which monitors the water quality at exits point of the treatment plant and in the supply system.

Objectives of the Training Course

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

- Calculate water parameters such as head, pressure, gauge pressure, discharge;
- Evaluate pumps power and efficiency;
- Perform water source calculation, drawdown, head, yield, specific yield;
- Calculate iron and manganese removal;

- Perform coagulant and flocculation calculations;
- Perform calibration calculations for dry chemical and chemical solution feeders;
- Calculate filtration flow rate;
- Chlorine dosage, demand and residual;
- Calculate calcium, magnesium, carbonate and noncarbonated hardness.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. In addition to lectures and discussions, participants will analyse specific case studies by engaging in exercises that include the use of utility's data.

Training Course Materials

The participants of this training course will be provided with the Training Manual on "Applied Mathematics for Water Treatment Operators". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 13,000 ALL/person

Non-members: 16,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

PRETREATMENT & TASTE AND ODOR

Course Description

Knowing pretreatment processes is important because they prevent equipment from damage and extend the operation lifespan of other plant faculties. Additionally by controlling taste and odor, water utility operators can avoid customer complaints related to the water quality.



This course focuses on the importance of pretreatment and it extends on its three main processes. Moreover, it explains the necessity of taste and odor control, and identifies their causes of origin.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for engineers and specialists that work in water treatment plants.

Objectives of the Training Course

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

- Identify the three processes of the preliminary treatment;
- List the cleaning and inspection procedures that are required to maintain the screens;
- Identify the types of pre-sedimentation systems and explain them;

- Know how to operate and maintain the pre-sedimentation system;
- Identify the purpose of microstraining process and know its components;
- List the advantages and disadvantages of microstraining;
- Explain the importance of taste and odor control;
- Identify causes of taste and odors;
- Prevent development of tastes and odors through monitoring programs.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. In addition to lectures and discussions, participants will analyse specific case studies by engaging in exercises that include the use of utility's data.

Training Course Materials

The participants of this training course will be provided with the Training Manual on "Pretreatment & Taste and Odor Control". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

METALS CONTROL

Course Description

Even though the presence of metals in water isn't harmful to our bodies, it makes water esthetically unacceptable for consumption. Excessive metals contribute to the pipes' flow rate reduction, though, increasing pressure in the distribution system.



This course aims to train the participants in iron and manganese control methods. To discuss issues related to lime soda ash and ion exchange softening. And also, will focus on internal and external corrosion control methods.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for engineers, specialists and laboratory technicians.



Objectives of the Training Course

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

- Explain the importance of iron and manganese control;
- Understand why levels of iron and manganese rise;
- Identify the operational processes of iron and manganese removal plants;
- Explain what makes hard water and the advantages of softening;
- Describe the processes used to soften water;
- Describe iron exchange and softening processes;
- Determine when maintenance is needed and analyze and solve serious problems
- Select the proper chemical dose to control corrosion;
- Troubleshoot and solve corrosion problems.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. In addition to lectures and discussions, participants will analyse specific case studies by engaging in exercises that include the use of utility's data.

Training Course Materials

The participants of this training course will be provided with the Training Manual on "Metal Control". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000

ALL/person

Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

SEWERAGE AND WASTEWATER TREATMENT

OPERATION AND MAINTENANCE OF WASTEWATER COLLECTION I

Course Description

This course provides basic knowledge of the wastewater collection system, which are necessary to efficiently handle the daily challenges that emerge during its operation and maintenance.



Participants will also gain sufficient knowledge to analyse the design and construction of new sewerage system, on maintenance perspective, in order to avoid errors that would hamper in the future its operation and maintenance.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for technicians and specialists working on maintenance of wastewater collection system.



Objectives of the Training Course

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

- Comprehend wastewater collection system appurtenances and their function.
- Identify the main issues of wastewater collection system
- Program the operation and maintenance of the system considering the flow variations
- Understand the design process elements that impact the system operation and maintenance
- Relate the effects of sewer slope and size on wastewater flow
- Estimate the volume and velocity of water flowing in a sewer.
- Comprehend the different type of pipe, joints and manhole materials.
- Review plans and specifications for collection systems from the viewpoint of effective operation and maintenance.
- Analyze the design and construction process of wastewater collection systems from the perspective of operation and maintenance.

Training Method

Training is based on lectures presented in Power Point, combined with discussions and case studies. In addition to lectures and discussions, participants will analyse concrete case studies doing exercises for the calculation of flow and speed.

Course Materials

The participants of this training course will be provided with the Training Manual "Operation and Maintenance of Wastewater Collection I". 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

OPERATION AND MAINTENANCE OF WASTEWATER COLLECTION SYSTEM II

Course Description

This course addresses the main issues encountered during the operation and maintenance of the wastewater collection system, and provides practical knowledge how to effectively use the methods available for inspection, testing and cleaning of sewers and manholes.



Participants will gain sufficient knowledge how to avoid sewage overflowing and streets flooding, by identifying and solving the failure of collection system in a timely manner.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and is especially useful technicians and maintenance specialists of wastewater collection system.

This course is recommended to be attended by all participants of the course "Operation and Maintenance of the Wastewater Collection System I", as this course is its continuation.

Objectives of the Training Course

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

- Comprehend wastewater collection system appurtenances and their function.

- Identify the main issues of wastewater collection system
- Program the operation and maintenance of the system considering the flow variations
- Understand the design process elements that impact the system operation and maintenance
- Relate the effects of sewer slope and size on wastewater flow
- Estimate the volume and velocity of water flowing in a sewer.
- Comprehend the different type of pipe, joints and manhole materials.
- Review plans and specifications for collection systems from the viewpoint of effective operation and maintenance.
- Analyze the design and construction process of wastewater collection systems from the perspective of operation and maintenance.

Training Method

Training is based on lectures presented in Power Point, combined with discussions and case studies. In addition to lectures and discussions, participants will watch videos of sewer pipes inspection and cleaning by using the methods explained in the manual.

Training Course Materials

The participants of this training course will be provided with the Training Manual "Operation and Maintenance of Wastewater Collection System II". In addition, the participants will receive certificate of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000

ALL/person

Non-members: 25,000 ALL/person

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

REPAIR AND REHABILITATION OF WASTEWATER COLLECTION SYSTEM

Course Description

Drinking water pollution, collection network blockage and sewers overflow are some of the challenges that water supply and sewerage utilities face daily, as a result of the old and damaged wastewater collection system.

In order to address these issues, this training course covers the procedures of collection system rehabilitation, starting with the analysis of the network current condition, assessment of the need for rehabilitation, selection of the most suitable and economic method, up to the implementation of the rehabilitation work.



In addition to the classical repair and rehabilitation methods, in this training course are also addressed the latest rehabilitation techniques for sewer pipes and manholes.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for technicians and engineers of the wastewater collection system operation and maintenance.

Objectives of the Training Course

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

- Evaluate the condition of a sewer and determine the need for rehabilitation;

- Establish priorities for a sewer rehabilitation program;
- Understand the steps and procedures of new sewer installation;
- Safely repair the existing sewer lines.
- Identify the various sewer rehabilitation methods;
- Select the appropriate sewer rehabilitation method;
- Comprehend and identify the manhole defects.
- Recognize the manhole rehabilitation methods;
- Safely repair or construct manholes;
- Inspect a sewer under construction for proper bedding materials and construction, pipe laying procedures, and backfilling and compaction;
- Keep accurate records and prepare necessary reports;

Training Method

The training is based on lectures presented in PowerPoint, combined with discussions and case studies. In addition to lectures and discussions, private companies that manufacture and offer the training course related products, will make in-class and on the field demonstration.

Training Course Materials

The participants of this training course will be provided with the Training Manual "Repair and Rehabilitation of Wastewater Collection System". In addition, the participants will receive certificate of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000

ALL/person

Non-members: 25,000 ALL/person

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

OVERVIEW OF WASTEWATER TREATMENT

Course Description

Wastewater treatment plants are complex systems, composed of different units and processes, which are related and have an impact on each other's operation. Therefore, the possession of some general knowledge about the overall function and construction of the wastewater treatment plant is necessary to effectively operate specific treatment units.



This training course aims to introduce participants with wastewater characteristics, basic concepts for its treatment, and variety of the treatment methods.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for technicians, engineers and specialists working in wastewater treatment plants, as well as for the specialists of wastewater collection sector who aspire working in a treatment plant.

Objectives of the Training Course

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

- Identify various types of waste discharges;
- Explain the importance of wastewater treatments and introduce the effects that discharge of untreated wastewater has on humans and the environment;

- Comprehend the composition of wastewater and describe its physical, chemical and biological characteristics;
- Describe various types of wastewater treatment plants;
- Comprehend the schematic plan layouts of a typical wastewater treatment plant;
- Describe various types of process units used for preliminary, primary and secondary treatment and explain how they achieve the target level of treatment;
- Distinguish between mechanical and biological treatment;
- Explain the various types of units used for solids treatment;

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 make a study visit at a wastewater treatment plant.

Training Course Materials

The participants of this training course will be provided with the Training Manual "Overview of Wastewater Treatment Plant". 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.

SAFETY FOR WASTEWATER PROFESSIONALS

Course Description

Collection systems and wastewater treatment plants, by their nature and location, can be dangerous places to work.

This training course aims to make employees that work in these environments aware of the many hazards that may be encountered in their workplace, as well as to provide them with the necessary knowledge for the identification and prevention of these risks.



In addition to the use of engineering solutions for eliminating workplace hazards, safe behaviours and use of personal protection equipment are the main focus of this training.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for engineers, technicians and specialists working in the wastewater collection and treatment sector.

Objectives of the Training Course

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

- Understand the importance of safety rules and procedures;
- Recognize the causes of accidents and injuries;

- Identify potential and existing hazards;
- Protect yourself from physical injuries, infections, toxic chemicals, excessive noise, fires, electric shock and explosive mixtures;
- Follow safe procedures during confined space entry, work and exit;
- Identify the types of hazards you may encounter operating a wastewater treatment plant;
- Comprehend the importance and use of safety equipment;
- Identify different types of safety equipment that are used by wastewater operators;
- Select and use the proper personal protective equipment;

Training Method

The training is based on lectures presented in PowerPoint, combined with discussions and case studies. In addition to lectures and discussions, private companies that manufacture and offer the training course related products, will make in-class and on the field demonstration.

Training Course Materials

The participants of this training course will be provided with the Training Manual "Safety for Wastewater 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.

PRELIMINARY AND PRIMARY WASTEWATER TREATMENT

Course Description

Preliminary and primary treatments play a key role in the wastewater treatment and have a significant impact on the effectiveness of other treatment processes.



This training course addresses the main operation and maintenance issues of the preliminary treatment, primary treatment, and septic tanks. The training aims to provide participants with adequate skills for the selection and use of the best operational practices specific for the particular conditions of their treatment plants.

Target Group

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

Objectives of the Training Course

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

- Explain the purposes of preliminary and primary treatment methods;
- Properly start up, operate, shut down, and maintain the preliminary treatment process;

- Determine the volume of screenings and how long a disposal site will last before it is full;
- Place a new primary clarifier into service;
- Sample influent and effluent, interpret lab results, and make appropriate adjustments in the treatment process;
- Recognize factors that indicate a clarifier is not performing properly, identify the source of the problem, and take corrective action;
- Determine when, how often, and how much sludge should be pumped;
- Develop an operating strategy for primary clarifiers;
- Comprehend the procedures of septic tank construction and installation;
- Operate and maintain a septic tank system;

Training Method

Training is based on lectures presented in Power Point, 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 "Preliminary and Primary Wastewater Treatment". 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.

SECONDARY WASTE WATER TREATMENT – PONDS, LAGOONS, AND CONSTRUCTED WETLAND

Course Description

Alternative secondary wastewater treatment methods like ponds, lagoons, and constructed wetland, have been widely used in Albania, since they provide high treatment quality with relatively low construction and operation costs.



This training course aims to provide participants with sufficient knowledge to select and use the best practices for operation and maintenance of these treatment units based on the specific conditions of their plant.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for engineers, technicians and specialists working in wastewater treatment plants that use ponds, lagoons and constructed wetland as treatment method.

Objectives of the Training Course

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

- Describe alternative wastewater treatment, discharge, and reuse methods for small systems;
- Identify the different types of ponds and explain their treatment principle;
- Explain the components and treatment principle of constructed wetlands;

- Comprehend the procedures for placing a new pond into operation and conducting normal operation and maintenance duties;
- Collect samples, interpret lab results, and make appropriate adjustments in pond operation;
- Recognize factors that indicate a pond is not performing properly, identify the source of the problem, and take corrective actions;
- Develop a pond operating strategy.
- Calculate the organic and hydraulic loading of a pond;
- Start, operate and maintain subsurface constructed wetlands;

Training Method

The participants of this training course will be provided with the Training Manual “Secondary Wastewater Treatment – Ponds, Lagoons and Constructed Wetlands”. In addition, the participants will receive certificate of attendance.

Training Course Materials

As participants in this course, you will be provided with the Training Manual “Secondary Treatment of Waste Water – Ponds, Lagoons, and Filter Beds and Constructed Wetland”. In addition, you will also receive a certificate for your participation in this training.

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.

SECONDARY WASTEWATER TREATMENT– FIXED FILM PROCESSES

Course Description

Although trickling filter is considered as one of the most trouble-free types of secondary treatment processes, some problems do exist, and the treatment efficiency depends entirely on the measurement taken for their control.



This training course addresses the main issues of the trickling filter operation and maintenance, and will provide participants with sufficient knowledge for their timely identification and repair.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for engineers, technicians and specialists working in wastewater treatment plants, which use trickling filter as treatment method.

Objectives of the Training Course

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

- Comprehend the concept of fixed film treatment processes;
- Explain the principle of fixed film treatment methods and their controlling parameters;
- Identify the different types of trickling filters;

- Place a new filter into service and conduct operation and maintenance duties;
- Recognize factors that indicate a trickling filter is not performing properly, identify the source of the problem, and take corrective action;
- Sample influent and effluent, interpret lab results, and make appropriate adjustments in the treatment process;
- Develop an operating strategy for a trickling filter system.
- Operate a trickling filter under abnormal conditions;
- Calculate the hydraulic and organic loadings on a trickling filter;
- Inspect a new trickling filter for proper installation;

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 make a study visit at a wastewater treatment plant where trickling filter is applied as treatment method.

Training Course Materials

The participants of this training course will be provided with the Training Manual “Secondary Wastewater Treatment – Fixed Film Processes”. In addition, the participants will receive certificate of attendance.

Registration fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL/person

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

SECONDARY WASTEWATER TREATMENT – ACTIVATED SLUDGE PROCESSES

Course Description

The activated sludge process is the most widely used biological method for wastewater treatment. When properly operated, these methods produce the most high quality effluent compared to other biological methods. In order to reach the desirable treatment efficiency, it is important to use the adequate operation practices, accurately estimate the control parameters, as well as take the proper measures for the identification and correction of problems.



This training course addresses the main issues of the activated sludge processes operation and maintenance, and will provide participants with sufficient knowledge for their timely identification and repair.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for engineers, technicians and specialists working in wastewater treatment plants, which use activated sludge processes as a treatment method.

Objectives of the Training Course

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

- Comprehend the concept of activated sludge treatment processes;
- Explain the principles of the activated sludge process and its controlling parameters;

- Distinguish between different activated sludge processes;
- Place a new activated sludge process into service and safely conduct its operation and maintenance;
- Operate the activated sludge processes during normal and abnormal conditions;
- Recognize factors that indicate an activated sludge process is not performing properly then identify the source of the problem and take corrective actions;
- Describe the various methods of determining return activated sludge and waste activated sludge rate;
- Select the best methods of calculating waste activated sludge and return activated sludge for your plant conditions;
- Explain the controlling parameters of a secondary clarifier and conduct its operation and maintenance;

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 make a study visit at a wastewater treatment plant where activated sludge is applied as a treatment method.

Training Course Materials

The participants of this training course will be provided with the Training Manual "Secondary Wastewater Treatment – Activated Sludge Processes". In addition, the participants will receive a certificate of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person
Non-members: 25,000 ALL/person

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

SLUDGE TREATMENT AND BIOSOLIDS MANAGEMENT

Course Description

Treatment of the sludge generated by the treatment plants is as crucial as the wastewater treatment itself, as it contains the same pathogenic microorganisms and pollutants present in wastewater. Sludge treatment process goes through the thickening, stabilisation and dewatering phases by using a variety of technologies and methods.



This training course covers the diverse methods and technologies used for the sludge treatment, by addressing the issues related to the operation, maintenance and control of each of them. In addition, this course will also cover the disposal and reuse methods of the treated sludge.

Target Group

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

Objectives of the Training Course

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

- Understand the importance of proper sludge treatment and explain the various methods used for this purpose;
- Explain the treatment principle of the commonly used sludge thickening methods, such as gravity, dissolved air flotation and centrifuge thickeners;

- Operate and troubleshoot the sludge thickening methods;
- Explain the treatment principle of the anaerobic and aerobic digesters;
- Properly start up, operate, shut down, and maintain anaerobic digesters;
- Recognize factors that indicate that anaerobic and aerobic digesters are not performing properly then identify the source of the problems and take corrective actions;
- Explain the treatment principle of operation of the commonly used sludge dewatering methods such as drying beds, belt filter presses, dewatering centrifuges, and vacuum and pressure filters;
- Operate and troubleshoot the sludge dewatering methods;
- Comprehend the different options of the sludge and use;

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 "Sludge Treatment and Biosolids Management". In addition, the participants will receive certificate of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000

ALL/person

Non-members: 25,000 ALL/person

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

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.

NUTRIENT REMOVAL – BIOLOGICAL AND CHEMICAL

Course Description

Excessive amounts of nutrients released to the environment by human activities can harm ecosystems, causing the eutrophication of surface waters, and impact human health. Therefore, all the wastewater treatment plants, which discharge the treated water in sensitive water bodies, must reduce the level of nitrogen and phosphorous in order to meet the discharging standards.



This training course aims to introduce the most common processes used for nutrient removal from wastewater, as well as to explain the procedures used for their operation and maintenance.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for engineers, technicians and specialists working in wastewater treatment plants that remove nutrients.

Objectives of the Training Course

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

- Explain the need for nutrient removal;
- Identify the types of nitrogen and phosphorus removal systems;

- Comprehend the principle of biological phosphorus removal;
- Place a phosphorus removal system into service and safely conduct operation and maintenance duties;
- Comprehend the nitrification and denitrification processes;
- Describe the differences between nitrification in suspended growth and fixed film reactors;
- Operate nitrification and denitrification methods;
- Explain how ammonia stripping, breakpoint chlorination, and ion exchange processes remove nitrogen;

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 “Nutrient Removal – Biological and Chemical”. 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.

SAMPLING AND LABORATORY PROCEDURES FOR WASTEWATER

Course Description

Proper understanding and correct application of the laboratory procedures it is fundamental for the effective operation of wastewater treatment plants.



This training course aims to explain the laboratory procedures, from the collection of representative samples to the steps to follow for conducting laboratory analyses, for every parameter required for the adequate operation and control of wastewater treatment plants.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for specialists working in laboratories of wastewater treatment plants.

Objectives of the Training Course

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

- Understand the basic concepts of laboratory procedure;
- Work safely in a laboratory.
- Identify some potential laboratory hazards;
- Recognize the most commonly used laboratory equipment and use them properly;

- Identify the sampling devices and techniques;
- Collect representative samples of influents to, and effluents from, a treatment process as well as sample the process;
- Prepare samples for analysis;
- Understand general laboratory procedures for plant control and monitoring of the treated wastewater quality;
- Recognize precautions to be taken for laboratory tests;
- Perform plant control tests such as, Suspended Solids, Total Solids, Settleability, Sludge volume index, Sludge age, Dissolved Oxygen, Mean Cell residence Time etc.;
- Perform wastewater quality test control such as, BOD, COD, Total Suspended Solids, Nitrogen and Phosphorus;

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 "Sampling and Laboratory Procedures for Wastewater". In addition, the participants will receive certificate of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000

ALL/person

Non-members: 25,000 ALL/person

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

MANAGEMENT

MANAGEMENT

Course Description

This training course has been developed with the aim of stressing the role of management in providing quality service to consumers. The course addresses issues related to daily responsibilities of managers, such as communication, team building and management, problem-solving and decision-making.



Participants will gain the necessary knowledge and skills to cope with everyday challenges and improve the performance of the utility they manage

Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and it is especially useful for general directors, technical directors and managers.

Objectives of Training Course

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

- Communicate effectively;
- Identify the most important characteristics of an effective leader;
- Select and use appropriate management styles;
- Set up and guide teams;
- Develop long and short-term plans to fulfil the mission of the company;
- Write goals and objectives to implement your plans;

- Use specific techniques to aid in the early recognition of problems;
- Analyze a problem by using a variety of techniques to gather as much information as possible about the problem and its causes;
- Work alone or as a part of a team to generate a comprehensive list of possible solutions to the problem;
- Use several recommended tools and techniques available to assist in making decisions;
- Communicate before and after a decision is made to the groups of people most likely to be affected by the decision;
- Keep tabs on the financial outlook of your company by closely monitoring income and expenditures.

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 "Management". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person
Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

SUPERVISION

Course description

This training course emphasizes the role of the supervisor in fulfilling the water supply and sewerage utility mission and objectives. This training course addresses the knowledge and skills that a supervisor must have on planning, workforce coordination and motivation, in order to effectively meeting the objectives.



The main objective of the course is to provide to the participants supervision knowledge and techniques to improve the water supply and sewerage utilities performance.

Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and is especially useful for the managers and supervisors of the human resources and public relations department, and supervisors.

Objectives of the Training Course

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

- Identify the main elements of a supervisor's job;
- Design a workforce plan for your utility;
- Motivate and direct the work of others;
- Coordinate the work of a team developing standard operating procedures;
- Recognize the benefits of working as a team;

- Effectively communicate goals, expectations, and instructions to subordinates;
- Delegate tasks to improve performance and provide development opportunities for employees;
- Select and use appropriate management style;
- Identify and use various techniques of conflict resolution;
- Use appropriate time management strategies.

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 analyze specific case studies.



Training Course Material

The participants of this training course will be provided with the Training Manual "Supervision". In addition, the participants will receive certificate of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

PERSONAL AND PROFESSIONAL SKILLS

Course Description

This training course summarizes personal and professional skills needed for any employee to effectively fulfill duties and responsibilities. This training course addresses issues related to standards of quality work, ethics, group work, communication, problem solving, time management, conflict resolution, delegation, decision making and effective presentations.

The participants will gain the necessary knowledge and skills to effectively perform their functions, as well as to influence the improvement of their society's performance.



Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and it is useful for all employees of water supply and sewerage utilities.

Objectives of Training Course

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

- Recognize the potential benefits associated with an effective ethics program in your organization;
- Recognize the benefits of working as a team;
- Identify the key components in productive teams;
- Select the most effective medium to convey your message;

- Use specific techniques to aid in the early recognition of problems;
- Analyze a problem by using a variety of techniques to gather information about the problem and its causes;
- Recognize the benefits of time management and the costs of not managing it;
- Identify different conflict resolution styles and techniques;
- Recognize what and how to delegate;
- Identify different decision levels;
- Prepare and deliver an effective presentation.

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 "Personal and Professional Skills". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL / person.

The registration fee includes course materials, coffee breaks and lunch breaks.

ETHICS FOR WATER AND WASTEWATER PROFESSIONALS

Course Description

This training course aims to raise awareness on the role of ethics in the water sector. This training course addresses issues related to “water integrity”, ethical values and standards, standard elements of a Code of Ethics, as well as the procedure followed by utilities for drafting their Code of Ethics.

The participants will gain the necessary knowledge and skills to handle ethics dilemmas during their everyday activities.



Target Group

This training course has been designed for professionals of water supply and sewerage utilities, and is useful for all workers of water supply and sewerage utilities, laboratory and customer service personnel.

Objectives of Training Course

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

- Understand the importance of water integrity;
- Recognize the consequences of corruption in the water sector;
- Recognize the potential benefits associated with an effective ethics program in their organization;

- Implement ethical standards in order to enforce preferred behavior;
- Recognize the content of a standard Code of Ethics and Conduct;
- Recognize the basic legal framework in which a utility can be based to develop the Code of Ethics.

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 “Ethics for Water and Wastewater Professionals”. In addition, the participants will receive certificates 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.

FINANCIAL MANAGEMENT FOR NON FINANCIAL MANAGERS

Course Description

Financial management is vital for the general management of water supply and sewerage utilities. The decisions made without understanding the financial consequences may affect the performance of the utility. This training course aims to raise awareness of the participants regarding the role of financial management.

This training course addresses issues related with financial management cycles, roles and tools, accounting, cost of service, tariff setting and capital planning.

Participants will gain the necessary knowledge and skills to use financial information to make better short-term and long-term decisions.



Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and it is especially useful for managers, directors and every employee interested in gaining basic financial knowledge.

Objectives of the Training Course

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

- Recognize the role of financial manager and other individuals in the utility involved with financial management;

- Discuss the use of financial statements as a financial management tool;
- Identify different financial management tools that can be used in your utility;
- Define revenue requirements for your utility;
- Identify operating and maintenance expenses;
- Recognize the general objectives behind Water Regulatory Authority tariff policy;
- Analyse a tariff structure;
- Identify capital expenditures;
- Weigh factors which affect capital planning;
- Analyse capital projects;
- Determine cash and non-cash benefits of each project;
- Conduct a benefit-cost analysis.

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 Material

The participants of this training course will be provided with the Training Manual "Financial Management for Non-Financial Managers". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL/person.

This fee includes course materials, coffee and lunch breaks.

CRISIS AND EMERGENCY MANAGEMENT

Course Description

Water utilities have a legal responsibility to provide safe drinking water for their consumers, even during emergencies. The utility that is prepared will be more effective at responding to and recovering from disaster. This training course aims to raise awareness on the role of planning in emergency management and in reducing their consequences.

This training course addresses issues related to emergency causes in water supply and sewerage utilities, vulnerability assessment of major system components from emergencies and natural disasters, mitigating measures for system components, as well as drafting a preparedness plan (emergency plan).



Participants will gain the necessary knowledge and skills to effectively address the complete emergency management cycle.

Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and it is especially useful for managers, engineers, technicians and operational and maintenance staff.

Objectives of the Training Course

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

- Recognize the importance of planning for disasters;
- Establish the potential effects of probable disaster hazards on each component of the system;
- Identify critical system components;

- Identify mitigation measures for each category of the system components;
- Develop the mitigation measures for each category of the system components;
- Recognize the importance of emergency preparedness planning;
- Recognize the basic principles of a preparedness plan;
- Analyse the type and the severity of the emergency;
- Evaluate response and preparedness plan.

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 "Crisis and Emergency Management". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person
Non-members: 25,000 ALL/person.

This fee includes course materials, coffee and lunch breaks.

CUSTOMER SERVICE AND PUBLIC RELATIONS

Course Description

Customer Service is one of the key functions of any water supply and sewerage utility. This training course emphasizes the role of customer service and public relations for the success of water utilities. This training course addresses issues related to customer service principles, impact of customer service organization and personnel on the commercial performance of the utilities, customer database management, customer feedback and complaints management, meter reading management, billing and collection management.



The participants will gain the necessary knowledge and skills to cope with daily challenges and improve customer services and public relations of their utilities.

Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and it is especially useful for customer service supervisors, specialists, operators and updaters, press and public relations specialists, supervisors and meter readers.

Objectives of Training Course

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

- Understand the importance of offering an excellent customer service;
- Recognize how employee attitude affects customer satisfaction;
- Recognize the elements of bad service and good service;
- Recognize the strategic importance of a dedicated customer service unit in a water utility;

- Recognize the importance of managing customer information;
- Recognize the relationship between the customer database management and responding quickly to customers inquiries;
- Recognize the role of public relations and communications in establishing a good image of the utility;
- Identify the variables that influence customer satisfaction;
- Recognize the importance of customer feedback management;
- Recognize the importance of proactive customer complaints management;
- Operate clear procedures of complaints management;
- Recognize the role of meter installation in reducing water consumption and in the commercial performance of water utilities;
- Recognize the importance of having clear procedures in case of non-paying customers;
- Schedule a communication strategy based on citizens needs and in open consultation with them;
- Use bills as a universal communication tool.

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 "Customer Service and Public Relations". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL/person

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

DISCIPLINE THEME

ASSET MANAGEMENT

Course Description

Many water supply and sewerage utility managers today face the challenge of reducing non-revenue water, while increasing level of service, expanding the distribution network to respond to population growth, finance replacement and timely maintenance of existing assets, as well as treating wastewater.



The way a water utility manages its assets determines the success in facing these challenges.

A water utility can improve the level of service, reduce water losses, reduce costs and justify tariffs, if it know what assets it owns, what is the condition of the assets, when and how to maintain or replace them.

This training course adresses all the basic elements of asset management with the main purpose of raising awareness for the importance of asset management.

Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and it is especially useful for directors, engineers, accountants and managers.

Objectives of Training Course

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

- Recognize the concept of asset management and its main components;

- Recognize the benefits of asset management;
- Complete the asset inventory of the utility;
- Use different ranking systems to estimate asset condition;
- Recognize what is an asset data management system and its purposes;
- Determine the level-of-service that the utility will strive to provide and the most efficient way to deliver that level-of-service;
- Determine which assets are critical and identify the possible costs of their failure;
- Identify the appropriate operating and maintenance procedures;
- Recognize the concept asset life-cycle management;
- Identify founding sources to finance asset management program.

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 analyses specific case studies.

Training Course Materials

The participants of this training course will be provided with the Training Manual "Asset Management". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 13,000 ALL/person
Non-members: 16,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

PERFORMANCE MANAGEMENT THROUGH BENCHMARKING

Course Description

One of the main challenges faced by water supply and sewerage utilities is performance improvement. This training course aims to raise awareness on using benchmarking as a valuable internal tool in performance improvement. The training course addresses issues related to the performance improvement program, prerequisites of a successful benchmarking process, alignment of benchmarking activities with strategic objectives, data acquisition and validation, as well as identification and prioritization of improvement actions.

Participants will gain the necessary knowledge and skills to use the data collected and analysed during the benchmarking process for the improvement of the utility's performance.



Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and it is especially useful for managers and reporting specialists.

Objectives of the Training Course

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

- Recognize the issues to be addressed in moving from strategic goals to improved performance;
- Develop a complete performance improvement program and action plan;

- Recognize the importance of benchmarking as a means of improvement;
- Recognize the importance of aligning benchmarking activities with strategic activities;
- Explain the importance of performance assessment;
- Recognize the quality of information during the data collection step;
- Recognize the necessity of data validation;
- Recognize the importance of performing an internal analysis;
- Apply a trend analysis for the selected indicators;
- Identify the improvement actions;
- Prioritize improvement action.

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 "Performance Management through Benchmarking". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS:

22,000ALL/person

Non-members: 25,000 ALL/person.

This fee includes course materials, coffee and lunch breaks.

GUIDELINES FOR ADMINISTRATION COUNCIL MEMBERS OF WATER SUPPLY AND SEWERAGE UTILITIES

Course description

The Government of Albania launched the Water Sector Reform in 2016 aiming the reorganization of all services of drinking water supply, wastewater collection, treatment and disposal. Among other things, this reform changed the structure of the water supply and sewerage companies.

This training course aims to raise awareness of the complexity and responsibility of administrating water and sewerage utilities. The training course addresses governance issues of the water supply and sewerage sector, laws and regulations affecting the management and operation of water utilities, role of the Economic Regulator in licensing and tariff approval, tools and methodologies of performance monitoring, etc.



The training course serves as a reference to individuals holding key administrative functions in water supply and sewerage utilities, as well as for the elected members of local government council.

Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and it is especially useful for individuals appointed as administrators of water supply and sewerage utilities, members of the Administrative Council as well as all interested individuals in water supply and sewerage services in Albania.

Objectives of Training Course

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

- Recognize the role, responsibilities and duties of governing bodies of water and sewerage utilities;

- Recognize the role and functions of General Assembly of water and sewerage utilities;
- Recognize the role and functions of the General Administrator of the utility;
- Recognize the main elements of water supply and sewerage utilities and their functions;
- Recognize the main elements of wastewater collection and treatment system and their functions;
- Understand the role and functions of Water Regulatory Authority in licensing operators and tariff setting;
- Understand the integrated management of water sources, functions and duties of National Water Council, its Technical Secretariat, State Water Inspectorate;
- Recognize the importance of drafting a business plan;
- Distinguish the role of the General Administrator of the Utility and the role of the Advisory Council and its members;
- Understand the processes of performance management;
- Recognize the importance of private sector participation.

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 "Guideline for Administration Council Members of Water Supply and Sewerage Utilities". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL/person.

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

BUSINESS PLANNING FOR PERFORMANCE IMPROVEMENT

Course Description

This training course addresses the necessary steps to take for developing a 5 year Business Plan for the Water Supply and Sewerage Utilities. Some of the steps are: analysis of the current situation, identification of strategic objectives, translating them into specific plans for performance improvement, and monitoring and updating of the business plan.



As part of this course is developed a template on Excel, wherewith the participants can automatically predict and calculate the performance indicators for the next 5 years, by entering the data of the current year.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for directors and managers of the economic, engineering, sales, and customer service Departments.



Objectives of the Training Course

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

- Comprehend the structure, process and key elements of the Business Plan

- Formulate a unique Vision and Mission Statement for their companies.
- Analyze the company current situation and identify the priority issues
- Assess the current and future water demand for different category of customers and estimate the nonrevenue water.
- Identify and analyze the issues of the actual organizational structure of the company and create a new improved organization structure.
- Formulate the Strategic Goals
- Develop a complete Performance Improvement Program – Action Plan
- Anticipate the operation and maintenance budget, capital expenditures and total need for revenue
- Identify factors influencing the tariff strategy and select the desired tariff structure.
- Schedule the business plan monitoring and update.

Training Method

Training is based on lectures presented in Power Point, combined with discussions and case studies. In addition to lectures and discussions, the participants will development the first draft of company's business plan.

Course Materials

The participants of this training course will be provided with the Training Manual "Business Planning for Performance Improvement". In addition, the participants will receive certificate of attendance.

Registration Fee

Members of SHUKALB/SHUKLB: 122,000 ALL/people
Non-members: 132,000 ALL/people.

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

WATER LOSS MANAGEMENT - I

Course Description

The annual volume of water losses (non-revenue water) is an important indicator, for the distribution of water in an effective manner, as well as for the administrative procedures of water supply and sewerage utilities. Water losses are one of the main factors of low pressure and interrupted water supply. The lack of a continuous interrupted water supply, combined with network amortization, contributes in the pollution of drinking water.



Water losses control, either technical or administrative, are the main challenges for the water supply and sewerage utilities. Water loss management improves drinking water quality and has a positive impact on the financial sustainability of the company.

This training course will provide to the participants the basic knowledge on monitoring and water loss management. Some of the main topics that will be addressed during this two-day training course are: Water Audit, Management of District Metering Areas (DMA) and Pressure Management.

Target Group

This training course is developed for the professionals of water supply and sewerage utilities, and is particularly helpful for the directors of the distribution and technical department, operation and maintenance engineers, metering engineers, billing specialist and billing and collection managers.

This course is of interest to consulting engineers, design engineers, public health officials, or other similar regulatory institutions.

Objectives of training course

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

- Identify the benefits of water loss management;
- Understand audit process methods;
- Explain the main elements of administrative loss;
- Understand strategies of leakage management;
- Understand the importance of district metering areas and explain their results;
- Identify performance indicators on technical and administrative loss;
- Identify the types of pressure management;
- Explain the application of pressure monitoring program.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. In addition to lectures and discussions, participants will analyse specific case studies and engage in problem solving that includes the use of utility data.

Training Course Materials

The participants of this training course will be provided with the Training Manual on "Water Loss Management I". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

WATER LOSS MANAGEMENT II

Course Description

The Water Loss Management II training course is a follow-up of the first training course on Water Loss Management. This training course will describe the need to implement water loss reduction programs. In addition, it emphasizes the importance of improving commercial efficiency in Water Supply and Sewerage Utilities, based on the best international practices, in relation to measurement and performance indicators of the commercial efficiency.



Participants will understand that huge investments on the construction or reconstruction of the water supply networks needs good and continues maintenance to ensure system efficiency and providing low cost services.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for the Directors of Distribution and Technical Department, Operation and Maintenance Engineers, Metering Engineers, billing specialist, as well as billing and collection managers.

This training course specifically aims the participation of the professionals who attended Water Loss Management I.

Objectives of the Training Course

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

- Understand the importance of water demand management and the importance of water measurement;
- Quantify the water flow and demand without fixed meter
- Recognize the importance of commercial efficiency
- Identifying the economic level of NRW
- Explain the importance of prioritizing the components of NRW reduction
- Explain the importance of prioritizing the components of NRW reduction
- Complete a Water Balance Table
- Plan customer awareness campaigns

Training Method

The training is based on lectures presented in Power Point, combined with discussions. In addition to lectures and discussions, participants will analyse specific case studies by engaging in exercises that include the use of utility's data.

Training Course Materials

The participants of this training course will be provided with the Training Manual on "Water Loss Management II". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 13,000 ALL/person

Non-members: 16,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

LEAKAGE CONTROL

Course Description

Leakages control is one of the main challenges of Water Supply and Sewerage Utilities. Real losses, which included leakages, are one of the main components of non-revenue water. They cause damages to the water distribution network and affect the quality of drinking water. Therefore, their proper control and management is essential.



In this training course the participants will acquire the basic knowledge on developing strategies on leakage management and detection, as well as explaining pressure management techniques and design District Metering Areas (DMA).

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for directors of distribution and technical department, operation and maintenance engineers, metering engineers and production engineers.

Objectives of the Training Course

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

- Identify the basic leakage control strategies;
- Describe the performance indicators for leakage;

- List the issues that should be considered while formulating a leakage plan;
- Identify the Economic Level of Leakage;
- Identify some of the leak detection techniques and technologies used;
- List the criteria for the PRV selection;
- Discuss regarding meter selection;
- List the factors that should take into account when designing a DMA;
- Explain a typical District Meter Area (DMA) Scheme;
- Discuss about the DMA management including maintenance and monitoring;
- List and explain the types of problems of DMAs.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on "Leakage Control". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 13,000 ALL/person

Non-members: 16,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

GENERAL SAFETY FOR WATER AND WASTE WATER PROFESSIONALS

Course Description

Workplace safety is a shared responsibility for any water supply and sewerage utility, starting from the decision makers to the field workers. Daily duties and responsibilities of employees may lead to risky situations. Therefore, they should possess basic knowledge on personal safety, develop and implement the health and safety program.



This training course aims at identifying potential workplace hazards and taking preventive measures to avoid accidents. In addition, the course will highlight the importance of developing self-safety programs.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for workers of technical department, including engineers, technicians and laboratory technicians.

Objectives of the Training Course

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

- Think safety;
- Explain what is a safety program;
- Identify the role of management and operators in safety program;
- Identify some of the unsafe activities and hazardous chemicals while working;
- Identify the appropriate protective clothes while working;
- Avoid physical injuries;
- Recognize the possible infections and infectious diseases;
- Apply the recommended steps to entry into any confined space;
- Recognize the safety precautions needed to operate the electrical equipment;
- Operate and maintain pumps;
- Work safely in traffic.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on “General Safety for Water and Wastewater Treatment Professionals”. In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person
Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

EQUIPMENT MAINTENANCE - MOTORS, PUMPS AND VALVES FOR DRINKING WATER AND WASTE WATER PROFESSIONALS

Course Description

Adequate and timely maintenance of equipment maintain the water supply and sewerage system in good conditions. Maintenance of equipment can be preventive, repairing and emergent.



This training course aims at identifying types of pumps, motors and valves, which are very important for the water supply and sewerage system, as well as explains their maintenance program. In addition, it will address different solutions of problems during operation of these equipment.

Target Group

This training course is developed for professionals of water supply and sewerage utilities and it is especially useful for engineers of technical department, maintenance and operation engineers, and technicians.

Objectives of the Training Course

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

- Develop a maintenance program for the equipment used in a water system;
- Schedule and perform maintenance of equipment at proper time intervals as directed by the manufacturers;

- Recognize symptoms that indicate equipment is not performing properly and identify the source of problem and take corrective action;
- Identify safety protection devices;
- Recognize the types of motors and identify the types of motor failures and the reasons for failures;
- Recognize the step by step procedure for effective troubleshooting;
- Recognize the types of pumps and maintenance required for each one;
- List the most common causes of failure and troubleshooting;
- Identify the types of valves and maintenance procedures for each type of valves.

Training Method

The training is based on lectures presented in Power Point, combined with discussions. 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 on "Equipment Maintenance - Motors, Pumps and Valves for Water and Waste Water Professionals". In addition, the participants will receive certificates of attendance.

Registration Fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

Non-members: 25,000 ALL/person

The registration fee includes course materials, coffee breaks and lunch breaks.

GENERAL MATHEMATICS FOR WATER AND WASTEWATER PROFESSIONALS

Course Description

The ability to perform arithmetic calculations is fundamental for the operation and maintenance of water supply and sewerage systems.

This course summarizes the basis of mathematics that operators and technicians working in the water sector should have in order to effectively perform their daily tasks.



Main topics addressed in this training course are, basic arithmetic operations; units conversion; equation solving; finding the unknown value; calculating the perimeter, area, volume, speed, flow and pressure; and concept of mass balance.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for supervisors, hydraulics and operators of the water supply and sewerage sector.

Objectives of the Training Course

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

- Understand and be able to use the language, symbols and notation of mathematics;

- Utilize necessary conversion factors to change units of measure;
- Develop a strategy for solving word problems;
- Solve problems and solve for unknown variables within the formula;
- Calculate the perimeter, surface area, and volume of pipes, tanks, containers and other facilities found in water/wastewater systems;
- Convert pressure from bars to head of water in meters;
- Calculate pumps power and efficiency;
- Calculate the flow rate and velocity;
- Calculate the chemicals dosage;
- Perform the composite sampling calculations;

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 "General Mathematics for Water and Wastewater 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.

ENERGY EFFICIENCY IN WATER AND WASTEWATER UTILITIES

Course description

Many water and wastewater utilities have energy costs that account for 30-40% of the direct operating costs. This training course provides a general methodology to help utilities self-assess the energy efficiency for each component of their water and wastewater systems and plants.

This training course addresses the implementation of the energy audit program through some stages to determine where and how much energy is used in the system, the level of the efficiency, specific measures to implement to reduce the consumption and cost, the cost benefit or cost-effectiveness of such actions, and methods to evaluate and monitor results.



Participants will gain the necessary skills and knowledge to perform the energy audit of system components.

Target Group

This training course has been developed for professionals of water supply and sewerage utilities, and is especially useful for managers and technical staff responsible for the operations and maintenance of drinking water and wastewater treatment plant and pumps stations.

Objectives of the Training Course

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

- Recognize the importance of applying an energy efficiency program;
- Identify the basic data necessary to perform an energy audit;
- Apply electrical and hydraulic measurement for your utility;
- Calculate energy losses in electrical conductors and transformers, electrical motor efficiency, pump efficiency, head losses in piping, and leaks in water network;
- Analyse energy indicators based on historic data;
- Recognize how to improve efficiency of electric motors or pumps operations;
- Recognize the importance of using renewable energies.

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 Material

The participants of this training course will be provided with the Training Manual "Energy Efficiency in Water and Wastewater Utilities". In addition, the participants will receive certificate of attendance.

Registration fee

Members of SHUKALB/SHUKOS: 22,000 ALL/person

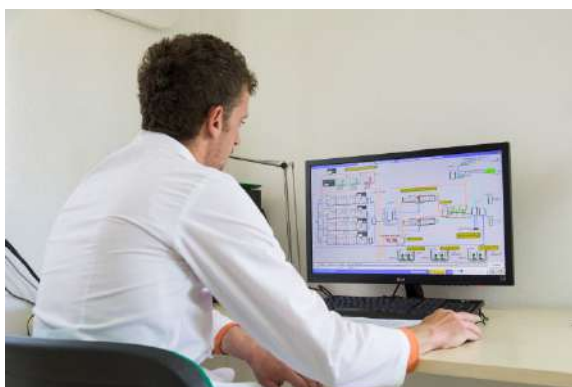
Non-members: 25,000 ALL/person.

This fee includes course materials, coffee and lunch breaks.

SCADA SYSTEM OVERVIEW FOR WATER AND WASTEWATER PROFESSIONALS

Course Description

Effective instrumentation and control systems are critical for the efficient operation of any water or wastewater treatment facility. They allow more flexibility and greater control over the treatment plant and provide complete and timely data available to management, aiding in decision making and trouble shooting.



This training course aims to introduce the basis of instruments, sensors and computer programs used for proper operation and control of drinking water and wastewater treatment plants.

Target Group

This training course is developed for professionals of water supply and sewerage utilities, and it is especially useful for engineers, technicians and specialists that work in a Drinking or Wastewater Treatment Plants and are in charge to operate SCADA systems.

Objectives of the Training Course

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

- Recognize the importance of instrumentation and control system in operation of treatment facilities;

- Understand the application of sensors;
- Recognize various types of sensors and transducers;
- Read instruments and make proper adjustments in the operation of wastewater treatment facilities;
- Identify symptoms of measurement and control system problems;
- Identify tasks in their treatment plant that could be performed by computers;
- Recognize cautions that must be exercised by operators using computers;
- Evaluate both computer hardware and software;
- Comprehend the use of SCADA programs in water and wastewater treatment plants;

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 "SCADA System Overview for Water and Wastewater 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.