



**List of Approved
Training Programs
2024**

No	Program's name	No of Days	program content	Attendance requirements
Electrical Engineers & Electrical Technicians Programs				
1	Necessary tests and inspection methods for electrical equipment	5	<ul style="list-style-type: none"> inspection and tests on electric motors. Cable inspection. Inspection of distribution boards. Inspection of electrical transformers 	<ul style="list-style-type: none"> - Electrical Engineers - Electrical Technicians
2	electrical circuit analysis	5	<ul style="list-style-type: none"> Types of codes used in electrical circuits. How to analyze electrical circuits. Infer what all the symbols and notes on the electro gram mean. A careful study to repair control circuits and determine the causes of malfunctions. 	<ul style="list-style-type: none"> - Electrical Engineers - Electrical Technicians
3	SCADA	5	<ul style="list-style-type: none"> SCADA System Basics. computer networks. data collection. Data transfer. 	<ul style="list-style-type: none"> - Electrical Engineers - Electrical Technicians
4	Electrical protective, measuring and protection devices		<ul style="list-style-type: none"> Electrical measuring devices. Electrical protection systems and protection relays. fuses. electrical circuit breakers 	<ul style="list-style-type: none"> - Electrical Engineers - Electrical Technicians

No	Program's name	No of Days	program content	Attendance requirements
5	electrical cables	6	<ul style="list-style-type: none"> The different types of cables, their components, and the different types of insulation. Types of cable connectors Cable laying methods and cable monitoring rules. How to test cables on site Regular maintenance of cables Develop technical specifications for cables end of Rikm links 	<ul style="list-style-type: none"> - Electrical Engineers - Electrical Technicians
6	Operation and maintenance of electric motors	6	<ul style="list-style-type: none"> Classification of electric motors. Engine operating theory. Ways to start the movement. How to maintain the engine Power Transformer Working Theory Power losses in the power transformer Cooling methods (detailed study of transformer oil). Standard specifications for transformers. Transformer tests. Different types of standard connectors for transformer windings. Preventive maintenance and virtual inspection of transformers 	<ul style="list-style-type: none"> - Electrical Engineers - Electrical Technicians
7	Operation and maintenance of electrical transformers	6	<ul style="list-style-type: none"> Operation and control circuits. generator maintenance. 	<ul style="list-style-type: none"> - Electrical Engineers - Electrical Technicians
8	Operation and maintenance of generators	5	<ul style="list-style-type: none"> capacitors. power and power factor. Improving the power factor - a general study. 	<ul style="list-style-type: none"> - Electrical Engineers - Electrical Technicians
9	Capacitors and power factor improvement	6	<ul style="list-style-type: none"> capacitors. power and power factor. Improving the power factor - a general study. 	<ul style="list-style-type: none"> - Electrical Engineers - Electrical Technicians

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> Improving power factor in industry. Installation specifications. Terms and laws. 	
10	Operation and maintenance of distribution boards	6	<ul style="list-style-type: none"> Distribution panels and their types. Power feeding systems with distribution panels. How to test the location of the motherboard. Protective devices and their types. Circuit breakers used in distribution boards and their specifications. Products that are installed on the board from the outside. Distribution panel components. Forms of receipt list for electrical installation works. Inspection and testing of electrical installations and certificate of completion of works. Documents and procedures that precede the initial receipt. 	<ul style="list-style-type: none"> - Electrical Engineers - Electrical Technicians

No	Program's name	No of Days	program content	Attendance requirements
11	Electrical scientific experiments (Practical program)	6	<ul style="list-style-type: none"> • Practical Training of RELAY protection test • Practical training on designing and executing electrical circuits, analyzing control circuits and tracking malfunctions of boards via tracking the circuits. • Practical training on Engine disassembly, installation and maintenance and the tests operating on it. • Practical training on executing circuits (Star – Delta) and submersible pumps. • Practical training on operating 11K.V engine. • Practical training on insulation test (cables , converters , engines) • Practical training on oil insulation test. • Practical training on designing , executing and innovating various control circuits 	Electrical Engineers - Electrical Technicians

Mechanical Engineers & Mechanical Technicians Programs

1	Operation and maintenance of pumps	6	<ul style="list-style-type: none"> • Types of pumps. • Operation and protection methods for pumps. • Maintenance and inspection of pumps. • Pumping capacities and number of units. • Lift curves and operating conditions. • Pump output control. 	- Mechanical Engineers - Mechanical Technicians
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No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> Automatic operation of the pumps. Causes of pump problems and ways to overcome them cavitation; 	
2	Operation and maintenance of pipes, valves and water hammer	6	<ul style="list-style-type: none"> Types of pipes. Maintenance of valve rooms. Pipe cutting. Network cleaning and disinfection. General theory on valves. Valves of different types and applications. Inspect and test valves. Install valves. Loss of pressure for valves. water hammer. The causes and factors that affect the process of water hammer. 	Mechanical Engineers - Mechanical Technicians
3	Operation and maintenance of Clarification	5	<ul style="list-style-type: none"> clarification Chemical injection Types of clarification process. Operation and maintenance 	- Mechanical Engineers - Mechanical Technicians
4	Operation and maintenance of filters	5	<ul style="list-style-type: none"> Filters working theory. Types of sand filters. Gravity quick sand filters. Rapid pressure sand filters. Hydraulic laws for the operation of rapid sand filters. Filter maintenance. 	- Mechanical Engineers - Mechanical Technicians
5	Sterilization systems and chlorine devices	5	<ul style="list-style-type: none"> Water disinfection. Chlorine properties and system. Dormitory cylinders. evaporators. chlorine devices. Personal protection devices and general protection devices. 	- Mechanical Engineers - Mechanical Technicians

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> Chlorine cylinders' dormitory (storehouse). Cylinder scales. Feeding lines and accessories. 	
6	mechanical measuring devices	5	<ul style="list-style-type: none"> Pressure gauges. Behavior measuring devices. Level measuring devices. Displacement and rotational velocity measuring devices. 	<ul style="list-style-type: none"> - Mechanical Engineers - Mechanical Technicians
7	Inspection of pumps and diesel engines	5	<ul style="list-style-type: none"> Types of pumps. Positive pumps. Procedures required before arriving at the factory. Diesel engine. Diesel engine components. 	<ul style="list-style-type: none"> - Mechanical Engineers - Mechanical Technicians
8	Oils and grease	3	<ul style="list-style-type: none"> Lubrication theory. Origin and composition. Oil industry. Methods of testing used oils. 	<ul style="list-style-type: none"> - Mechanical Engineers - Mechanical Technicians
9	Operation and maintenance of generators and diesel engines	6	<ul style="list-style-type: none"> Distribution panels and their types. Power feeding systems with distribution panels. How to test the location of the motherboard. Protective devices and their types. Circuit breakers used in distribution boards and their specifications. Products that are installed on the board from the outside. Distribution panel components. Forms of receipt list for electrical installation works. Inspection and testing of electrical installations and certificate of completion of works. 	<ul style="list-style-type: none"> - Mechanical Engineers - Mechanical Technicians

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> Documents and procedures that precede the initial receipt. 	
10	sealants	3	<ul style="list-style-type: none"> Mechanical seal damage. Mechanical Seal Classification. fixed and rotating Mechanical Seal test Choose the right mechanical seal. Causes of mechanical seal damage. sealant deflection. Rapid abrasion. fumigation. Magnetic pump 	<ul style="list-style-type: none"> - Mechanical Engineers - Mechanical Technicians
11	Bearings	5	<ul style="list-style-type: none"> Types of bearings. The materials used. Basic skills for installing bearings. Bearing maintenance. 	<ul style="list-style-type: none"> - Mechanical Engineers - Mechanical Technicians
12	Transmissions	5	<ul style="list-style-type: none"> Transmission by friction discs. Use of friction discs. Transmission chain Move and reverse movement. Electromagnetic clutches. Transmission of movement by gears. Simple gear transmission calculations. Transmission of movement by means of couplings. Sealants Shafts 	<ul style="list-style-type: none"> - Mechanical Engineers - Mechanical Technicians
13	Blowers, compressors and air systems	5	<ul style="list-style-type: none"> Define compressors. The importance of air compressors in water plants. The basic components of a washing blower. Basic components of reciprocating compressors. 	<ul style="list-style-type: none"> - Mechanical Engineers - Mechanical Technicians

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> Standard operating instructions for a breathing air compressor. Standard guidelines for preventative maintenance of washing blower. Disassembly, installation and repair. 	
14	alum injection system	5	<ul style="list-style-type: none"> Chemical treatment theory. Types of coagulants and the characteristics of each type. Factors affecting the dosage of the coagulants. The basic components of the injection system. Precautions for the injection system. Calculate the amount of alum and the amount of strategic stock. Types of pumps used in alum injection. Alum concentration. Adjust the alum pumps. Regular maintenance of the system. Alum pumps calibration. 	<ul style="list-style-type: none"> - Mechanical Engineers - Mechanical Technicians
15	Mechanical practical experiments (Practical program)	6	<ul style="list-style-type: none"> Running a test experiment and drawing the performance curves of individual , respectively and in parallel engines both manual and electronic (using Computer) Performing all pumps installation measurements (Temperature, pressure, speed, vibration , straightening of pump and engine) practical training in Plants on various measurements 	<ul style="list-style-type: none"> Mechanical Engineers - Mechanical Technicians
16	Practical training on mechanical tools maintenance (Part	6	<ul style="list-style-type: none"> Practical training on blower maintenance (disassemble and assemble 	<ul style="list-style-type: none"> Mechanical Engineers - 6Mechanical

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	one)		<ul style="list-style-type: none"> • Practical training on compressor maintenance (disassemble and assemble) • Practical training on chlorine devices, Gifar, and non-return valve maintenance (disassemble and assemble) • Practical training on alum pump and sucking and expulsion valve maintenance (disassemble and assemble) • Practical training on scavenging pumps maintenance (disassemble and assemble) 	Technicians
17	Comprehensive maintenance of filters wash blowers(Practical program)	6	<ul style="list-style-type: none"> • a brief of the blower , its components and functions in water plants. • - Disassembling the oil parts • - disassembling the blower gears. • - disassembling Rollman bell • - disassembling oil controllers . • - Cleaning the blower body and drying it • - Assembling the gaskets of installation and loading sides. • - Assembling , cleaning and greasing the frontal rollman bell. • - Assembling and setting the gears. • - Constructing the gaskets of the outer sides (Front and back) • - Sides installation 	Mechanical Engineers - Mechanical Technicians
18	Operation and maintenance of spiral pumps	6	<ul style="list-style-type: none"> • Introduction about spiral pumps. • Knowing spiral pumps parts • Operation curves of spiral pumps • Types of engines utilized with the 	Mechanical Engineers.- Mechanical Technicians

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			<ul style="list-style-type: none"> spiral pumps. Protection and control devices of spiral pumps. Greasing and installation of Chairs Pumps Operational instructions. Common malfunctions of dipper pumps and ways of avoiding it. Preventive maintenance of pumps 	
19	Operating and maintenance of dipper pumps (Theoretically & Practically)	6	<ul style="list-style-type: none"> Practical training on the usage of standard operational methods pumps maintenance practically obligatory maintenance of pumps attachments Discovering common malfunctions and ways of repairing them practically. Knowing about pumps theoretically Operational curves of pumps 	Mechanical Engineers.- Mechanical Technicians
20	Diesel engine maintenance (practical - theoretical)	6	<ul style="list-style-type: none"> Knowing the necessary maintenance procedures on the machine and its accessories. malfunctions - their discovery and practical treatment. How to adjust fuel pumps practically. Practically adjust the speed regulator. 	Mechanical Engineers.- Mechanical Technicians
Chemists & Lab Technician Programs				
1	sedimentation chemicals	5	<ul style="list-style-type: none"> Coagulation and flocculation operations. Preparing the work of coagulation and flocculation. Operational control tests. Alum injection pumps. 	chemists
2	water biology	5	<ul style="list-style-type: none"> Identify the characteristics of biological organisms in water. 	chemists

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> Identify the features, characteristics and reasons for choosing the coliforms as a guide for detecting water pollution. Knowing the types and methods of preparing and preserving nutrient media for bacteria. Knowledge of standard methods for detecting coliform and other bacteria 	
3	Sand analysis	5	<ul style="list-style-type: none"> Introduction to sand filters. Sand quality and size testing. Analyzes conducted on sand filters. Use curved sand in filters. Curved sand applications. Take advantage of sand analysis in water plants. 	chemists
4	Methods used to treat resulted mud	6	<ul style="list-style-type: none"> Types of mud and their uses. Chemical composition of the mud. Methods of treating mud. Doing the analysis of the mud. Calculation of the laboratory dose of the polymer material. Calculation of the field dose of the polymer material 	chemists
5	Electrochemistry	6	<ul style="list-style-type: none"> Introduction to pH. pH measurement methods. Factors affecting pH measurement. Using pH measurement to judge the efficiency of the purification process in water plants. Introduction to electrical conductivity. The method of measuring electrical conductivity and the devices used in 	chemists

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> it. The relationship between electrical conductivity and dissolved salts. Factors affecting electrical conductivity measurement. The use of electrical conductivity measurement to judge the quality of the water sample 	
6	Determine technical specifications for laboratory equipment	6	<ul style="list-style-type: none"> Introduction to the determination of technical specifications. Forming a committee to set specifications, determine the quality of its work, and give it enough time. Field study of the laboratories before setting the specifications to create a database to determine the needs of the laboratories. Conducting a field study of the laboratory supplies market from a technical point of view. Estimate the estimated value of any product to be purchased. Accuracy in setting specifications and tightening them to suit what is required for water laboratories. Preparing the administrative procedures followed. 	chemists
7	Safety and security in laboratories	6	<ul style="list-style-type: none"> Security of individuals and institutions. Safety and security in the lab. Electricity hazards. fires. first aid. 	chemists
8	cathodic protection	6	<ul style="list-style-type: none"> The concept of corrosion and the damage it causes to metals. The nature of rust is chemical - 	chemists

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			electrochemical and chemical. <ul style="list-style-type: none"> • Types of rust corrosion and methods of protecting metals from rust. • Military Economic Disadvantages Corrosion. • Corrosion control methods. • Principles of corrosion and cathodic protection of the vicinity. • Cathodic protection systems for tanks. • Factors affecting the age of concrete. • Protection of concrete from corrosion. • Stages of maintenance on concrete. 	
9	Disinfection of tanks and sterilization of pipelines	3	<ul style="list-style-type: none"> • Final cleansing. • Storage and distribution. • Disinfection and cleaning of drinking water tanks. • High Lift Pumps. • Test, wash and disinfect of pipelines. • Washing and sterilizing the old lines after repairing any breakage. 	chemists
10	algae	5	<ul style="list-style-type: none"> • Division and identification of algae and the process of photosynthesis • Factors affecting the growth of algae. • Algae as indicators of water quality. • Damage caused by algae and the problems it causes in treated water. • Monitoring the change in numbers and types of algae. • Factors affecting the formation of algal assemblies. • risk management plan. 	chemists

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> Collection of phytoplankton samples and methods for calculating the bio-content of algae. Division of algae according to the company's counting method. 	
11	Measurement of heavy metals in drinking water and the Nile by Atomic and ICP	6	<ul style="list-style-type: none"> Preparation of standard solutions. preparing water samples by digestion. Using the Atomic Absorption Spectrometer to measure the concentration of samples. The use of the ICP (plasma) device. 	chemists
12	Spectro photometer	6	<ul style="list-style-type: none"> Theory of work of spectroscopy devices. Workshop on the area (Photometric mode). Measure the concentration of iron. Working theory (Spectrum mode. Determine the most appropriate wavelength for fluoride. Measure in Multi wavelength. Measurement of the aluminum element in Quantitation mode Fluoride measurement. Quantitation mode. 	chemists
13	Detection of pesticides in drinking water by GC	7	<ul style="list-style-type: none"> GC gas chromatographic analyzer. Features of the chromatographic analyzer. GC Detectors. FID Flame Ionization Detector. NPD nitrogen and phosphorous reagent. ECD Electron Catcher Detector. Detection of chlorinated pesticides by EPA 608 method. 	chemists

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> Extraction of Nile samples and expulsion to detect pesticides. Quality control. 	
14	Measurement of the secondary results of disinfectant by GC	6	<ul style="list-style-type: none"> results of various disinfectants used in the disinfection of drinking water. Methods used to measure the by-products of disinfectants. Learn about the parts and functions of the GC device. Knowing the method of extraction and injection into the GC device, its functions, calibration, and extracting the results from the computer. 	chemists
15	HPLC High Performance Liquid Chromatography Analyzer	5	<ul style="list-style-type: none"> Chromatographic analysis and its types. Liquid chromatographic analyzer, its components and method of operation. Measurement of the concentration of carbamate compounds by liquid chromatography. Quality control and its application to carbamate compounds. 	chemists
16	Measurement of organic compounds using GC/MS gas chromatography	5	<ul style="list-style-type: none"> An overview of gas chromatography and the reagents used in it. The GC-MS device, its components and its function. Semi-volatile compounds in water. Use of a GC-MS device to measure semi-volatile compounds in water. Quality control program applied to the use of a chromatographic analyzer equipped with a mass spectrometer according to ISO 17025. 	chemists

No	Program's name	No of Days	program content	Attendance requirements
17	Principles of quality control and assurance	6	<ul style="list-style-type: none"> • Sources and types of errors in the analysis. • Preparing a quality manual for the laboratory. • Take necessary corrective and preventive actions for errors. • Preparing a program to control and confirm the quality of the analysis results. • Preparing and interpreting various tuning graphs. 	chemists
18	Principles of drinking water laboratory analysis	4	<ul style="list-style-type: none"> • Why do we purify the Nile water. • Nile water purification stages. • The role of the laboratory in the purification process. • The division of the internal laboratory and the role of each section. • Processing chemicals. • Methods of raising samples for chemical analyzes and microbiological tests. 	Lab. Technician
19	laboratory experiments	4	<ul style="list-style-type: none"> • Drinking water plants labs. • Responsibilities of a drinking water plant technician. • The method of raising samples for analysis and the type of container used • physical measurements. • Chemical analyses. • preparations. • microbiology. 	Lab. Technician
20	Field follow-up of drinking water treatment	4	<ul style="list-style-type: none"> • Water sources and their properties. • The purpose of water purification. • Water purification methods. • Protection and security system. 	Lab. Technician

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21	Field follow-up of filters and clarifiers	4	<ul style="list-style-type: none"> filtering theory. Filter drain system. Selection of sand filters. Filter maintenance. clarification stage. Factors affecting sedimentation efficiency. 	Lab. Technician
22	Field follow-up of bacteriological operations	4	<ul style="list-style-type: none"> forms of bacteria. Factors affecting the activity of bacteria. Bacteriological laboratory. How to use McConkey's farm 	Lab. Technician
23	Effective operation program for drinking water treatment and purification plants	6	<ul style="list-style-type: none"> Characteristics of water in its sources - why water needs treatment. An overview of water treatment and its basic operations. Basic treatment processes (primary treatment - clarification - filtration - purification). Optimum operation to achieve the highest efficiency in processing operations. The role and duties of laboratories and research. The principle of chlorine disinfection - the three stages of chlorine injection - the calculation of chlorine doses. Properties and use of alum - Preparation of solutions suitable for operation. Calibration of alum injection pumps. The optimal method for operating the pulsator. Filters and their problems and overcoming them. 	All technical specialties

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> Optimal operation of water plants (chlorine - semi - wasted water). Determining the nature of the work of the plant and station. Determine the effective method of cooperation between the laboratory and the station. Choosing a system for feedback. Monitoring information according to a scientific system (Procedure - Technical Report). Choosing the optimal information circulation system. processing stages. Source types and selection according to the Egyptian code. The theory of clarification and types of clarifiers. Test Jar. Operation and maintenance of the clarifiers. Filters working theory. Operation and maintenance of filters. Chemical additives. Alum add system. Calibration system. Operation and maintenance of alum pumps. Sterilization theory. Experiment with refractive index and sterilization efficacy. Operation and maintenance of the sterilization system. 	
24	Efficient work for shift engineers and chemists	6		network technician
25	Primary Processing of	6	<ul style="list-style-type: none"> Composition and characteristics of 	Engineers -

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	sanitation water		Sanitation water <ul style="list-style-type: none"> Primary processing, Networks and borders, sand separator, initial ventilation basins. Infiltration Basins waste disposal (refinery and sand separator) 	sewage plant technicians
26	Secondary Processing of sanitation water	6	<ul style="list-style-type: none"> The purpose of secondary processing of sanitation water Types and ways of secondary processing of sanitation water Processing using activated sludge. Secondary Infiltration basins The biological process control basics Hardship of Operation and ways to overcome it 	(Engineers - Chemists-Technicians).
Network Engineers and Network Technician Programs				
1	Technical assets of distribution networks	5	<ul style="list-style-type: none"> The basic components of water distribution networks. Network systems, types of pipes and their connections Technical foundations for laying network pipes. valves or cocks. counters. 	Network engineers and network technician
2	Operation and maintenance of distribution networks	5	<ul style="list-style-type: none"> Network operation. Maintenance and accessories of water networks. Meter calibration. Detection of the valves. Training on threading machine and pipe cutting 	Network engineers and network technician
3	leak detection	6	<ul style="list-style-type: none"> Leakage and its types. Leak Detectors Methods used to detect leaks. 	Network engineers and network

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			<ul style="list-style-type: none"> • Pressure and disposition recorders devices. • Methods used to determine the path of metallic and non-metallic pipes. • Spreading a culture of rationalizing water consumption in the future 	technician
4	Design of pipelines of different diameters	6	<ul style="list-style-type: none"> • The behaviors used in the design of pipelines. • Hydraulic design of pipelines • thrust forces. • Foundations for pipes. 	Network engineers
5		5	<ul style="list-style-type: none"> • Water sources. • pumping stations. • treatment plants. • High cabinets and lifting units. • Main piping network and distribution network. • Water distribution tanks. • Network planning and systems. • pipes; • Valves. • Pieces and connections. • counters. • Network operation and maintenance. 	network technician
6	Personal skills for network supervisors	5	<ul style="list-style-type: none"> • The role of the technical supervisor. • Network Documentary Course. • Supervision relationship with different departments. 	network technician
7	counters	5	<ul style="list-style-type: none"> • Meters usage. • Advantages of using meters. • Technical terms used. • How to choose the right diameter? • meters types. • The main components of the meter. 	network technician

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> meter operation theory. Proper way to install the meters. Important requirements when installing counters. Transportation and storage. meters maintenance and calibration. Meter maintenance and repair. Calibration devices. How to calculate the error? How to take a meter reading when testing? Standard categories for the meters. Comparison of meters' categories. An analytical study. 	
8	sewage network maintenance	6	<ul style="list-style-type: none"> Identify the types of sewage networks and their relationship to lifting stations. Responsibilities of network operators and precautions to be observed and followed. Various delivery methods Various tests and methods for controlling hydrogen sulfide gas. 	Mechanical Engineers.- Mechanical Technicians
Different Specialists Programs				
1	Programmable Logic Controller (PLC) – Level One	12	<ul style="list-style-type: none"> The new technicalities of Programmable Logic Controller (Two Levels) 	Different specialists
2	Scada	6	<ul style="list-style-type: none"> A system for gathering and analyzing real time data and supervising control (advanced) 	Engineers
3	Designing & planning projects using	12	<ul style="list-style-type: none"> The application presents the modern ways in managing and planning major projects (2 levels) 	Engineers

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	Primavera			
4	Designing and planning schemes using SAP	10	<ul style="list-style-type: none"> Using computer in calculating the loads & designing concrete and structural constructions 	Engineers
5	Engineering drawing & designing using AutoCAD	12	<ul style="list-style-type: none"> The software enables you to make engineering drawings & designs 	Engineers
6	Water networks design using CAD water	8	<ul style="list-style-type: none"> The software helps to analyze and design major & complicated water networks 	Engineers
7	Forming & designing Geographical information Systems using GIS-ARC	10	<ul style="list-style-type: none"> The software helps in building the geographical organization of major water networks 	Engineers
8	Integrated electronic monitoring station	6	<ul style="list-style-type: none"> Foundations and principles of cadastral survey. Parts of the device and the function of each part. How to use the GTS-235. The different programs on the device and the use of each of them. 	Engineers - Surveyors - Painters
9	TSM	6	<ul style="list-style-type: none"> Quality control and assurance. performance. maintenance. Human Resource Management. Security, safety, occupational health and work environment. 	Station heads – lab. managers - engineers and chemists
10	Management and planning of maintenance and services	6	<ul style="list-style-type: none"> introduction to maintenance (definitions and terms, types and strategies of maintenance) Maintenance and prevention (components and benefits, 	Engineering

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			<p>standards for measuring their performance, functions of the maintenance department, computer use)</p> <ul style="list-style-type: none"> malfunctions concept, causes and sources, maintenance work planning, technical information base, annual schedule preparation Maintenance costs, types and classification, & reporting Human needs, selection and training of employees, incentives 	
11	Follow-up maintenance systems for machines and equipment by computers	5	<ul style="list-style-type: none"> Types of maintenance (preventive - corrective). How to download the program and link it to its database. The basic stages of the program..data entry stage..preventive and scheduling procedures stage..work orders and reports stage. A practical case of a station implementing the program and an explanation of the reports in detail and an explanation of the benefits of the reports at the station or company level. 	engineers, technicians and data entry
12	Preparing and qualifying specialized Distinguished employees in the field of new and renewable energy	15	<ul style="list-style-type: none"> New types of renewable energies Wind Energy Wind turbine steering angle wind power calculations velocity triangle Types of wind turbines Foundations and Standing Tower Wind Turbine Components - 	Engineers, fresh graduated technicians and specialists

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			Alternator <ul style="list-style-type: none"> • Monitoring and control system • Solar angles • solar energy applications • solar thermal heating • photovoltaic cells • Cell performance curve • Types of solar energy systems • Choosing the right location for solar cells • Check-related system design • Mixture system design • Solar pumping system design • A visit to the site of a solar power plant 	
13	Learning about the methods and techniques of reverse osmosis water desalination	10	<ul style="list-style-type: none"> • Introduction to the natural water cycle • The important of Water for humans and the division of water on the surface of the globe • Types of impurities in raw water • Classification of water according to salinity • Different types and methods of desalination • Thermal desalination • The concept of reverse osmosis & how to choose between them • Types of membranes in terms of manufacture • Components of desalination plants • chemical injection system • energy recovery system • The problems that we face in the operation of membranes and their 	Mechanical, civil and electrical engineers and specialists

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> solutions Maintenance and operation instructions for reverse osmosis desalination plants Types and chemical submarines Instructions for handling, preservation and storage of membranes A working visit to the Rumaila desalination plant in Matrouh 	
14	Water Safety Plan	10	<ul style="list-style-type: none"> Overview of water and wastewater safety plans (SP) Multi-barrier approach and ecological wastewater concepts Assemble the SP team Describe the Water and Sanitation System Identify hazards and hazardous events and assess the risks Determine and validate control measures, reassess and prioritize the risks Develop, implement, and maintain an improvement/upgrade plan Define monitoring of the control measures Prepare management procedures Develop supporting programs Plan and carry out a periodic review of the SP 	Engineers and chemists
15	Enhancing environmental compliance of drinking water and wastewater	5	<ul style="list-style-type: none"> Understanding the Surrounding Environment and Impacts of Water and Sanitation Facilities Environmental Role of Water and Sanitation Facilities Environmental and Social Impact 	Engineers and chemists

No	Program's name	No of Days	program content	Attendance requirements
	treatment plants		Studies <ul style="list-style-type: none"> • ISO 14001 Standards • Preparation of Environmental Records • Emergency Plan • Handling Hazardous Waste • Awareness on Carbon Footprint • Energy Management in Facilities • Environmental Laws and Regulations • Community Communication and Awareness • Occupational Health and Safety 	
16	Managers of water and wastewater treatment plants	20	<ul style="list-style-type: none"> • regulations and legislations of drinking water and wastewater. • Water Safety Plan. • Standard operation and maintenance of the drinking water purification system> • Standard Operation and Maintenance of Sewage Treatment System. • Operational Plans. 	Station Managers
17	executive water leaders	38	<ul style="list-style-type: none"> • Learning through gamification • Technological techniques • Experience and knowledge exchange with experts • Analytical case studies 	Candidates for leadership positions
IT Programs				
1	Microsoft Windows	6	<ul style="list-style-type: none"> • General knowledge of computer components and software. • The utmost benefit of windows operational system and its content. 	Different specialists
2	Microsoft Word office	6	<ul style="list-style-type: none"> • General knowledge of report writing and all forms of other writings. 	Different specialists
3	Microsoft power point	6	<ul style="list-style-type: none"> • Making various and effective power 	Different

No	Program's name	No of Days	program content	Attendance requirements
	office		point presentations.	specialists
4	Microsoft Excel Office	6	<ul style="list-style-type: none"> The perfect usage of excel sheets and equations to ease the users job. 	Different specialists
5	Microsoft Access Office	6	<ul style="list-style-type: none"> Making accounting software that provides an ease in time , effort and accuracy. 	Different specialists
6	Adobe Photoshop	6	<ul style="list-style-type: none"> Images processing and editing and printings design. 	Different specialists
7	Adobe Illustrator	6	<ul style="list-style-type: none"> Logos and vectors designing 	Different specialists
8	Adobe InDesign	6	<ul style="list-style-type: none"> Designing books, magazines and brochures. 	Different specialists
9	Computing and Internet Certification Core	12	<ul style="list-style-type: none"> International computer driving license (ICDL) 	Different specialists
10	Making professional presentation using PowerPoint, Photoshop, & illustrator	6	<ul style="list-style-type: none"> The basic principles of making more efficient and professional presentation The steps of making more efficient presentation Computer soft wares that aid in making presentation: Adobe Photoshop, Adobe illustration. 	Various specialists

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11	Data Analysis using Excel Advanced	6	<ul style="list-style-type: none"> Multiple ways of data and information analysis Facilitates data reading and interpretation for the data receiver The application aiding Excel Advanced 	Various specialists
Accountant Programs				
1	Accounting for non-accountants for employee in water and wastewater companies	5	<ul style="list-style-type: none"> Financial statements issued by drinking water and wastewater companies. Statement of financial position. income list. Statement of Cash Flows. statement of changes in owner's equity. Proposed dividend list. The notes complementing the financial statements and the auditor's report. financial lists analysis. 	All specialists except accountants
2	modern perspectives in accounting standards	6	<ul style="list-style-type: none"> Presenting financial statements Accounting policies, changes in accounting estimates and error cash flow statements Fixed assets and their depreciation Borrowing cost Inventory Accounting for government grants and disclosure of government aid 	accountants
3	unified accounting system	5	<ul style="list-style-type: none"> Introducing the unified accounting system (accounting for assets) Accounting for liabilities (equity and liabilities) 	accountants

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> Accounting for costs and expenses Accounting for revenue Financial statements and reports 	
4	Modern perspective in Cost Accounting	6	<ul style="list-style-type: none"> Target costing system (TC). Activity-Based Costing system (ABC). (TDABC). Total Quality Costing System (TQC). Value Chain System (VC). Balanced Score Card (BSC) 	accountants
5	Cost accounting	6	<ul style="list-style-type: none"> Introduction to cost accounting: Methods of Product Cost Measurement (Lists of Costs and Business Results): Break-even analysis and the relationship between costs, activity size and profit: Material cost component management: Management of Wages Managing the indirect industrial costs 	accountants
6	General sales tax	6	<ul style="list-style-type: none"> General framework for the general sales tax. The accounting system in the general sales tax. General sales tax under retail trade systems. The use of technical methods for financial analysis in the tax examination of those registered with the Sales Tax Authority 	accountants
7	tax accounting	6	<ul style="list-style-type: none"> Features of the contemporary Egyptian tax system The general framework of the 	accountants

No	Program's name	No of Days	program content	Attendance requirements
			Income Tax Law No. (91) of 2005 <ul style="list-style-type: none"> • Tax on salaries and the like according to Law No. (91) of 2005 • Tax on profits of legal persons according to Law No. (91) of 2005 	
8	Budgetary planning	6	<ul style="list-style-type: none"> • The concept and types of budget • Applying operating budget preparation methods • budget role 	accountants
9	Invoicing quality	3	<ul style="list-style-type: none"> • Monitor data as it is exchanged between the issuing center and branches. • Quality control of readings and readers. • Quality control of averages and control of customer balances. • Monitoring the quality control of the exchange of invoices 	Meter Readers - Heads of Meter Branches – those in charge of Reviewing Bills , Scheduling and Discounting - Quality Controllers
10	Procurement and contracting procedures for tenders and auctions	7	<ul style="list-style-type: none"> • Purchase requisitions, tender preparation, practices and direct agreement • Procedures for opening the bidding box and envelopes • How to choose the best bids • Issuing contract orders and distributing them to departments • Selling discarded assets and equipment and scrap, buying and renting real estate, equipment and means of transportation 	Different specialties
Management Programs				
1	Customer service Skills	5	<ul style="list-style-type: none"> • customers service • Customer service concept • hot line 	Customer Service Specialist
2	Modern secretarial	4	<ul style="list-style-type: none"> • Definition of secretarial 	the Secretary

No	Program's name	No of Days	program content	Attendance requirements
	and office management		<ul style="list-style-type: none"> • Secretarial tasks and duties • Secretarial types • Secretarial Communication • Important Secretarial tips 	
3	Switchboard operator	1	<ul style="list-style-type: none"> • The basic characteristics that must be available in the recipient of telephone communications • The most important duties and responsibilities of a telephone operator Rules and skills to answer the phone • What do you do in these critical situations? 	Switchboard operator
4	Driver rehabilitation	3	<ul style="list-style-type: none"> • Job Ethics and Obligations • Rules of mutual respect between driver and passengers • Skills of dealing with emergencies, crises and road accidents 	drivers
5	TOT	8	<ul style="list-style-type: none"> • Principles and the life cycle of training. • Determine training need. • Effective training essentials. • adult education model. • Professional coach skills. • Dealing with different types of trainees. • Effective training methods and strategies. • Digital learning tools and strategies. • Electronic training. • presentation skills. • Designing training packages. • Training games (concept - application - contributions) • Training evaluation 	All specialties

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> The basis for measuring the return of training. 	
6	Security procedures followed in various company sites	4	<ul style="list-style-type: none"> Guarding and securing the institution from the inside security devices, types of security, and items used in security Security of people and information Types of fires and methods of combating them institution insurance plan 	Security Specialist - Inquiries Writer
7	The work of the civil defense	2	<ul style="list-style-type: none"> Definition and objectives of civil defense. Causes of fire types of fire How to use the fire extinguisher 	Civil Defense Officer
8	Develop integrated skills in legal affairs	5	<ul style="list-style-type: none"> Skills of drafting administrative decisions and legal regulations Administrative investigation skills and employee discipline Contract making skills Skills of preparing statements of lawsuits, memoranda and legal correspondence Pleading skills, defense and legal defenses 	lawyers
9	The power of thinking and change	2	<ul style="list-style-type: none"> Challenges of success Ideas control Our thoughts leads to the way our life Positive thoughts and negative thoughts 	All employees
10	The circle of excellence and career success	5	<ul style="list-style-type: none"> Are you aware of the institutional hierarchy and the nature of all jobs Do you have a file to all the information you need to perform 	All employees

No	Program's name	No of Days	program content	Attendance requirements
			<ul style="list-style-type: none"> your job Do you know the other tasks that directly affect your job performance Do you have all the required tools & instruments 	
11	NLP	5	<ul style="list-style-type: none"> Mastering new ways to communicate with others Strategies of self confidence building Effective decisions making ability 	All employees
12	Communication skills & effective communication	4	<ul style="list-style-type: none"> How to communicate with others 	All employees
13	Photography & videography basics	6	<ul style="list-style-type: none"> Photography basics Professional photography cameras Exposure triangle Formation Photography planning Different photography patterns 	Public Relations Specialist - Documentation Officer
14	Time management	3	<ul style="list-style-type: none"> Importance of time management Time management skills Time management techniques 	All employees
15	Career intelligence	3	<ul style="list-style-type: none"> How to improve the employees performance Performance evaluation suggested steps Body language Meeting elements Motivational manager characteristics The five jobs of management Motivation theories How to benefit from the motivational theory Motives that didn't show up in the motivational theories 	All employees

No	Program's name	No of Days	program content	Attendance requirements
16	Effective leader	5	<ul style="list-style-type: none"> • Problem solving & decision making • Communication & effective communication 	Performance Distinguished employees – second row
17	Human resources integrated system	6	<ul style="list-style-type: none"> • HR management definition • HR & strategic planning 	Administrative HR staff
18	Crisis Management	4	<ul style="list-style-type: none"> • Crisis analysis organized approach • General concept of crisis management • Crisis management planning • Crisis management case studies 	Second row leaders - general managers - heads of sectors
19	Soft Skills for Leadership positions (First unit)	5	<ul style="list-style-type: none"> • Effective work teams leadership skills • Effective communication skills both within the work environment and externally • Work pressure strategic management. • Effective negotiation skills. 	Second row leaders
20	Strategic management and operational plans creation (Second unit)	5	<ul style="list-style-type: none"> • What is strategic management • Strategic management operations • The factors affecting company strategy formation. • Strategic planning • Operational planning 	Second row leaders
21	Company Profile (Unit three)	5	<ul style="list-style-type: none"> • The company role in the water and sanitation organization • Company organizational hierarchy and the relations among its sectors. • Company strategic approach • Sustainable technical management • Company's financial system 	Second row leaders
22	Organizational thinking (Unit four)	3	<ul style="list-style-type: none"> • Management operation • Delegation management • Meetings management • Creative thinking 	Second row leaders

No	Program's name	No of Days	program content	Attendance requirements
23	Change management (Unit five)	5	<ul style="list-style-type: none"> • Change management definition and the supportive and obstructive parties of change. • The Urging necessity of change in dealing with external environment circumstances changes. • Change process management and leadership skills. • Change plans Creation. • Understanding the organizational mistakes disrupting the change process 	Second row leaders
24	Integrity support & risk analysis	5	<ul style="list-style-type: none"> • The integrity definition in water & sanitation sector • The integrity principles • The definition of corruption • Corruption forms & cost • Risk analysis definition • Risk analysis methods • The feedback of applying integrity support • Risk analysis model • Preparing & formulating the integrity support procedures 	Employees in Integrity Support Departments- Department Managers - Sector heads
25	Preparing the executive plans of integrity support operation	5	<ul style="list-style-type: none"> • Planning definition • Planning importance • Work plan definition & importance • Priorities specification • KPIs definition • KPIs importance • KPIs types • A work plan model of integrity support operations 	Employees in Integrity Support Departments- Department Managers - Sector heads
26	Skills of building performance	3	<ul style="list-style-type: none"> • Performance Indicators Definition • Performance Indicators Importance 	Employees in Integrity Support

No	Program's name	No of Days	program content	Attendance requirements
	indicators for the integrity support operations		<ul style="list-style-type: none"> Performance Indicators types Performance indicators writing techniques Performance indicators ways and measurement techniques 	Departments- Department Managers - Sector heads
27	Administrative digitization and the art of decision-making	6	<ul style="list-style-type: none"> The first unit: Analysis the relationship between cost - size - profit How to benefit from studying the relationship between cost - size - profit The relationship between cost-size-profit for companies and the decision-making process of the manager What is meant by break-even point - contribution limit? How important is the safety limit and how to calculate it. What are the practical methods on which administrative digitization depend in the areas of management functions? The second unit: Dimensions of digital decision making Numerical equations and their importance in making administrative decisions Practical cases. How to prepare comprehensive planning budgets (by applying to the company's data under implementation) 	Managers of executive departments and higher levels