



FUNDAMENTALS OF WASTEWATER

COURSE DESCRIPTION: This is an introductory course on wastewater, with an overview of the operation and maintenance of wastewater plants and different treatment processes.

MAJOR TOPICS:

- Wastewater Mathematics
- Activated Sludge Process
- Natural Treatment Systems
- Disinfection
- Solids Handling

TARGET AUDIENCE: New employees preparing for their Class III Wastewater exam or for employees needing a refresher course.

PREREQUISITES: Basic Math and Biology skills are essential for successful completion of this course.

COURSE LENGTH: This course is a 40 hour (5-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.



INTRODUCTORY WASTEWATER MATHEMATICS

COURSE DESCRIPTION: This is an introductory course on wastewater math with an overview of basic arithmetical skills to include some elementary algebra and geometry.

MAJOR TOPICS:

- Solve for Area
- Solve for Volume
- Basic Conversions
- Interpretation of Written Problems
- Process Control Application

TARGET AUDIENCE: Employees currently working in wastewater who are preparing for their class III certification exam or who need basic math refresher course.

PREREQUISITES: Basic math knowledge on a high school level is essential for successful completion of this course.

COURSE LENGTH: This course is a 6 hour (1-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 6 certification renewal points.

COMPREHENSIVE WASTEWATER TREATMENT OPERATIONS

COURSE DESCRIPTION: This course builds on “Fundamentals of Wastewater Treatment”. It includes more in-depth review of wastewater processes and operations.

MAJOR TOPICS:

- Suspended Media Treatment
- Mathematical Calculations
- Secondary Treatment
- Sludge Treatment
- Disinfection

TARGET AUDIENCE: Existing employees currently certified as a Class III Wastewater Operator and are preparing for higher certifications or for employees needing a refresher course or re-certification points.

PREREQUISITES: Basic Math and Biology skills are essential for successful completion of this course. In addition student should have at least attended the Fundamentals of Wastewater Treatment course.

COURSE LENGTH: This course is a 24 hour (5-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.



APPLIED WASTEWATER MATHEMATICS

COURSE DESCRIPTION: This course is designed to teach students to apply basic math skills to calculations used in operating wastewater treatment plants.

MAJOR TOPICS:

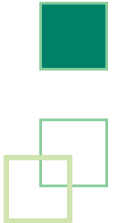
- Activated Sludge Math
- Trickling Filter Math
- Digestion & Dewatering Math
- Collection System Math
- Pumping Math

TARGET AUDIENCE: Employees currently working in wastewater who need a more advanced math training course for further certification and job performance.

PREREQUISITES: Basic math knowledge on a high school level is essential for successful completion of this course along with attending at least the Introductory Wastewater Math course as well as Fundamentals of Wastewater Treatment course.

COURSE LENGTH: This course is a 12 hour (2-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 6 certification renewal points.



INTRODUCTION TO ACTIVATED SLUDGE PROCESSES

COURSE DESCRIPTION: This is an advanced course for operators of activated sludge plants. It is designed to help operators understand the basic operations and control of activated sludge processes.

MAJOR TOPICS:

- Overview of Suspended Media Treatment
- Modifications of Activated Sludge Processes
- Unit Processes & Their Functions
- Long Term Process Control
- Math Application to System Operation

TARGET AUDIENCE: Existing operators of activated sludge plants with a desire for a more in depth review of activated sludge process. Also for those operators who are applying for further certification requiring advanced training.

PREREQUISITES: Fundamentals of Wastewater Treatment as a minimum possibly with the addition of Introductory Wastewater Mathematics and Applied Wastewater Mathematics.

COURSE LENGTH: This course is a 15 hour (2 1/2-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.



ACTIVATED SLUDGE PROCESS CONTROL

COURSE DESCRIPTION: This is an advanced course for operators of activated sludge plants. It is designed to build on the Introduction to Activated Sludge Processes course and give more in depth detail on process control methods.

MAJOR TOPICS:

- Short Term Process Control
- Oxygen Uptake Rate
- Sludge Quality
- Practical Application of Data

TARGET AUDIENCE: Existing operators of activated sludge plants with a desire for a more in depth review of activated sludge process. Also for those operators who are applying for further certification requiring advanced training.

PREREQUISITES: Introduction to Activated Sludge Processes.

COURSE LENGTH: This course is a 15 hour (2 1/2-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.



INTRODUCTION TO ANAEROBIC SLUDGE DIGESTION

COURSE DESCRIPTION: This is an advanced course for operators needing a more in-depth study on Anaerobic Digestion for higher certification or for operational assistance.

MAJOR TOPICS:

- Overview of Anaerobic Digestion
- Anaerobic Digester Components
- Operating Controls
- Safety

TARGET AUDIENCE: Existing operators with anaerobic digesters or operators requiring further knowledge for certification purposes.

PREREQUISITES: Comprehensive Wastewater Treatment Operations as a minimum along with Applied Wastewater Mathematics is suggested.

COURSE LENGTH: This course is a 12 hour (2-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.



INDUSTRIAL WASTEWATER TREATMENT

COURSE DESCRIPTION: This is an introductory course on industrial wastewater treatment, with an overview of basic and advanced treatment technologies and operations.

MAJOR TOPICS:

- Wastewater Mathematics
- Pretreatment Standards
- Chemical Treatment
- Metals Removal
- Safety

TARGET AUDIENCE: New employees preparing for their Industrial Wastewater exam or for employees needing a refresher course.

PREREQUISITES: Basic Math and Biology skills are essential for successful completion of this course.

COURSE LENGTH: This course is a 27 hour (5-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.





COLLECTION SYSTEMS OPERATIONS & MAINTENANCE

COURSE DESCRIPTION: This is an entry level course designed to teach the student about various aspects of operating a wastewater collection system.

MAJOR TOPICS:

- Collection System Math
- Collection System Components
- System Maintenance
- Safety
- Pumps & Pumping

TARGET AUDIENCE: New employees in the wastewater collection industry and other employees who need refresher course. This course is necessary in preparation for the Wastewater Collection System Operator certification.

PREREQUISITES: Basic Math and Biology skills are essential for successful completion of this course, along with a good mechanical aptitude.

COURSE LENGTH: This course is a 27 hour (5-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.

NATURAL TREATMENT SYSTEMS (CLASS IV PONDS)

COURSE DESCRIPTION: This is an introductory course on wastewater, with an emphasis on biological pond systems.

MAJOR TOPICS:

- Wastewater Characteristics
- Pond Life (Bacteria/Algae)
- Pond Sampling
- Pond Operation & Maintenance
- Troubleshooting

TARGET AUDIENCE: Individuals who are currently working at a Biological Pond system and want to become a certified Class IV Operator.

PREREQUISITES: Basic Math and Biology skills are essential for successful completion of this course.

COURSE LENGTH: This course is a 6 hour (1-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 2 certification renewal points.

