

## **Online Course on Petrochemical&refinery waste water treatment**

The focus of this course is on management of wastewater in refineries and petrochemical plants

### **For whom**

Mid-career professionals dealing with the technical, environmental, and management aspects pertaining to industrial pollution control, wastewater treatment, residuals/waste minimization, and disposal and reuse.

### **Dates, Fee, ECTS**

200 euros

### **Learning objectives**

Upon completion, the participant should be able to:

1. Define industrial effluent characteristics and identify problems associated with industrial effluents from refineries and petrochemical plants
2. Define the most commonly applied wastewater treatment technologies for refineries and petrochemical industrial wastes and classify the technologies based on the conventional series of primary, secondary, tertiary, and in-plant treatment.
3. Design a complete wastewater treatment plant to treat the effluents from a refinery& petrochemical plant.

### **Course structure**

Participants will receive training documentation once the alumn has enrolled into the course, and the course should be completed in two weeks with an extra period of week. The course will be a self –taught course will complete support from trainer during course period . A different number of assignments will be submitted ( 1 or 2 every week ) for completion. Upon successful completion of the course, participants will receive a Course Certificate .

### **Course content**

- Design basis
- Characterization of refineries&petrochemical wastewater.
- Oil&hydrocarbons removal.
- Physical Chemical Processes: i) Contaminants/classes and process selection; ii) Physical-chemical transformation processes; iii) Physical-chemical separation processes; and iv) Coagulation/flocculation. v) DAF...
- Aerobic treatment technologies.
- Wastewater reuse.technologies.
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- Sludge Management: i) Sludge conditioning; ii) Sludge thickening; iii) Sludge stabilization; and iv) Sludge dewatering.
- Case studies .