

**Learning Topic: Technical (Plant Processes & Operations).**

**Course Name: Process Physics**

**Reference Code: PLOP 113**

### Course Overview:

This course is one of the basic training courses for any operation staff member.

This course is a basic introduction to the laws of physics that apply to the oil & gas and chemical plant industries. These plants use many of these laws every day. Laws that are very commonly used concern properties of liquids & gases, energy, work, fluid flow, and heat.

Training in this field is important because it allows understanding of these laws and how they apply to the operation of the plant, it gives a better understanding of the equipment, processes, and dangers. This knowledge is relevant to almost every procedure, reading, or operation performed in the plant.

This course covers the rules of physics and how they apply to the operation of oil & gas or a chemical plant. The course explains the three states of matter and common properties of these three states. It also covers rules of energy, work, fluid flow and thermodynamics.

### Course Objectives:

**Applying the concepts taught in this training course, delegates will be able to:**

1. Identify the basic units, systematically deduce derived units and make all types of unit conversions.
2. Identify the properties of the three states of matter.
3. Describe energy and work.
4. Describe fluid behavior and flow.
5. Describe heat and heat transfer.

### Training Methodologies:

The training methodology is interactive and is suitable for all employees involved in maintenance and operations management enhancing the following:

- Pre-test and Post-test
- Variety of Learning Methods & examples
- Presentation
- Lectures
- Group Work

#### United Arab Emirates

Emirates Towers, Level 41 Sheikh Zayed Road  
Dubai-UAE. P.O Box 3103

Tel.:0097143132317

#### Kingdom of Saudi Arabia

Khobar Gate Tower  
King Fahad Street , Khobar 31952

Tel.: 00966133308334

#### Kingdom of Saudi Arabia

101 Business Tower, 8th Floor  
Al Jubail 35513, Bldg# 9278 ,KSA

Tel.: +966 13 361 5552

## Who should attend?

Operation engineers

Operations technicians

Operators

Maintenance technicians

Any interested plant personnel in stores, warehouse, safety, procurement, logistics...etc.

## Training Outline:

### Day 1:

Course Introduction & Lesson 1: Basic Units, Derived Units, Conversions

### Day 2:

Lesson 2: States of Matter

### Day 3:

Lesson 3: Energy and Work

### Day 4:

Lesson 4: Fluid Behavior and Flow

### Day 5:

Lesson 5: Heat and Heat Transfer & Course Conclusion

**Duration: 5 Days**

**Venue:**

**Numbers of hours: 30 Hours**

**Time: 08:00 AM -02:00 PM**

#### United Arab Emirates

Emirates Towers, Level 41 Sheikh Zayed Road  
Dubai-UAE. P.O Box 3103

Tel.:0097143132317

#### Kingdom of Saudi Arabia

Khobar Gate Tower  
King Fahad Street , Khobar 31952

Tel.: 00966133308334

#### Kingdom of Saudi Arabia

101 Business Tower, 8th Floor  
Al Jubail 35513, Bldg# 9278 ,KSA

Tel.: +966 13 361 5552