

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

**Course Name: Technical Calculations**

**Reference Code: PLOP 121**

### Course Overview:

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

This program is designed to teach the basic technical calculations which could face technical staff in petrochemical plants. Chemical, petrochemical, gas & oil industries involve a lot of formulae & calculations. It is vital to perform these calculations in the correct way. It is true that computers & software programs are helping a lot by performing most of the core calculations. Nevertheless, quite often technical staff find themselves faced with manual calculations tasks.

All the information in this program are necessary and very basic & important, so they have to be remembered & adhered to when performing job tasks inside industrial plants.

### Course Objectives:

**By the end of the program participants are expected to:**

1. Understand the techniques of scientific calculations
2. Understand how to perform scientific calculations using simple calculators.
3. Practice the techniques of scientific calculations
4. Answer to real life examples

### 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
- Tutorials & Exercises

#### United Arab Emirates

Emirates Towers, Level 41 Sheikh Zayed Road  
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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?

Operations technicians

Operators

Maintenance technicians

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

## Training Outline:

### Day 1:

Course Introduction

Lesson 1: Numbers:

- Round Off
- Directed Number
- Significant Figures

Lesson 2: Measurements

- Units and Conversion
- Perimeter
- Area
- Volume

### Day 2:

Lesson 3: Percentages

- Meaning of Percentage
- Everyday Used Percentages
- Calculators Use for Percentages
- Percentage Error

Lesson 4: Fractions

- Comparing Fractions
- Addition

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- Subtraction

**Day 3:**

Lesson 5: Decimals

- Decimal to Fractions  
 Multiplying  
 Dividing Decimals

Lesson 6: Algebra

- Transposition  
 Like & Unlike Term

**Day 4:**

Lesson 7: Indices

- Index Law  
 Surds

Lesson 8: Graphs

- Basic Graph Terms  
 Liner Graphs  
 Quadratics

**Day 5:**

Lesson 9: Geometry

- Working with Angles  
 Triangles

Lesson 10: Trigonometry

- Pythagoras' Theorem  
 Radians and Degrees  
 Sine, Cosine and Tan

Course Conclusion

**Duration: 5 Days**

**Venue:**

**Numbers of hours: 30 Hours**

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

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