



## Industrial Engineering INEN-SA-05

<b>INEN-SA-05-01</b>	<b>PLANNING OF MAINTENANCE OPERATIONS</b>
<b>INEN-SA-05-17</b>	<b>RELIABILITY CENTERED MAINTENANCE IMPLEMENTATION</b>
<b>INEN-SA-05-18</b>	<b>PLANNING FOR ENGINEERS</b>
<b>INEN-SA-05-19</b>	<b>PROJRAMMABLE LOGIC CONTROLLER "PLC" (ADVANCED COURSE)</b>
<b>INEN-SA-05-20</b>	<b>MARKETING SKILLS FOR ENGINEERS</b>



**COEN-SA-05-01**

**PLANNING OF MAINTENANCE OPERATIONS**

**This course exposes the engineers, managers, and maintenance department personnel to the theories and modern techniques of planning maintenance operations**

*Course Outline*

- **Maintenance concepts: preventive, corrective and diagnostic maintenance**
- **Reliability and failure**
- **Trouble shooting and diagnosis**
- **Group vs. individual replacement policies**
- **Maintenance organization and staffing**
- **Planning plant shutdowns**
- **Spare parts requirements planning**
- **Maintenance records and reports**
- **Applications in various industries: construction, mechanical, electrical**
- **Case studies**

**COEN-SA-05-17**

**RELIABILITY CENTERED MAINTENANCE  
IMPLEMENTATION**

**This course to provide the participants with the modern concepts and techniques in reliability centered maintenance. To train the participants on how to use and apply these techniques in practice. To enhance the participants experience by discussing some maintenance management problems and how to deal with them.**

*Course Outline*

- **Maintenance management overview**
- **Design of Maintenance Performance Evaluation System**
- **System Selection & Information Analysis**
- **System Description & Process Analysis**
- **EQUIPMENT Classification (critical & non-critical)**
- **Maintenance Information Analysis**
- **Failure Mode & Effect Analysis(FMEA)**
- **Risk Analysis**
- **Logic(Decision) Tree Analysis**
- **Task Selection and Job Plan**
- **Maintenance Program & Planning**
- **RCM Performance Evaluation**



**COEN-SA-05-18**

**PLANNING FOR ENGINEERS**

This course focuses on upgrading and developing the managerial skills from Planning techniques, controlling, decision making to managing organization change and career advancement.

*Course Outline*

- Overview
- Planning-quantitative and qualitative approaches
- Information technology and decision making system
- Staffing and human resources management
- Managing organizational change
- Marketing planning
- Production planning
- Resource planning , Cost planning
- Material requirements planning
- Maintenance planning
- Case studies.

**COEN-SA-05-19**

**PROJRAMMABLE LOGIC CONTROLLER "PLC" (ADVANCED COURSE)**

In today's competitive world, a company must be efficient, cost effective and flexible if it wishes to survive. In manufacturing and process industries, this has resulted in greatly increased demaned for industrial control systems in order to streamline operations in terms of speed, reliability, versatility and material throughput.

*Course Outline*

- Case studies.
- PLC digital bit functions band applications
- Advanced features of programmable controllers
- PLC communications and automation
- Choosing, installation and commissioning of PLC systems.



**Consumption is the sole end and purpose of production. This is achieved through marketing. It is the objective of this course, to introduce the engineers to the principles of marketing technique and to upgrade their skills in identifying customer needs, managing the changing balance between sellers and buyers, and having a considerable market share as compared to competitors.**

***Course Outline***

- **Selling and sales management**
- **Measurement of marketing effectiveness**
- **E-Marketing**
- **Case Studies.**
- **Organization and planning for marketing**
- **The basics of marketing strategy**
- **Marketing research**
- **Demand forecasting**
- **Pricing**