



**Petroleum, Oil & Gas**



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# Course: Asset Integrity Management of Onshore and Offshore Petroleum Production and Process Systems

Code	City	hotel	Start	End	price	Hours
684	Zurich (Switzerland)	Hotel Meeting Room	2024-05-06	2024-05-10	5450 €	25

## Why Choose this Course?

An Asset Integrity Management (AIM) program provides a backbone and incorporates design, maintenance, inspection, process, operations, and management concepts, making optimal return on investments.

This course initiates with the concept of Asset Management (AM) in the offshore and onshore industry (ISO 55000). Then, it focuses on the concept of AIM (i.e. design, technical and operation integrity) in the safeguarding of operational system. The approaches to reliability centered maintenance (RCM), failure mode effect and criticality analysis (FMECA), risk based maintenance (RBI), inspection of static process equipment, maintenance planning of rotating equipment, mitigate the challenges due to human factor, effective project management strategies, etc. are delivered.

## What are the Goals?

- Manage assets in petroleum industry in sustainable and safe manner.
- Assess & control Asset Integrity of operational assets in production & process systems.
- Perform integrity management on topside and sub-sea systems.
- Realize overall asset process in a systems engineering perspective.
- Use of adaptive technologies and techniques in engineering projects.

## Who is this Course for?

- Engineering Asset Management & Asset Integrity Management personnel



- Technical Safety personnel
- Engineers involved in maintenance and modification projects
- Inspection and maintenance analysis and planning personnel
- Project managers and project engineers
- Technical discipline responsible personnel

### How will this be Presented?

The course is presented with the support of industrial case studies to deliver the main concepts. Apart from that basic theory, concepts and related standards/regulations/guidelines are explained briefly to point out the AIM related applications in the real life projects. Power point presentations, group discussions, and sharing of project experiences are formally harmonized during the sessions.

### The Course Content

#### **Day One : Moving from Asset Management to Integrity Management**

##### **Session 1:** Offshore Asset Management

- Introduction to concept of offshore AM
- Role of ISO 55000 (or PAS 55 1&2)

##### **Session 2:** Offshore Integrity Management

- Introduction to concept of offshore IM
- Role of human factor and integrity

##### **Session 3:** Offshore Asset Integrity Management



- Introduction to concept of offshore AI (i.e. design, operational and technical integrity) management
- Relationship of human factor and technology in asset integrity control

## **Day Two : Asset Integrity Management & Tools to Maintain Rotating Equipment**

### **Session 1:** Approaches Used for Asset Integrity Management

- Introduction to approaches used for AIM
- Current trends towards asset IM

### **Session 2:** Reliability Centered Maintenance & Failure Mode Criticality & Effects Analysis

- Introduction to RCM, regulatory requirements and standards
- Running RCM projects

### **Session 3:** Maintenance Planning of Rotating Equipment: Topside

- Introduction to standards
- Functional failure analysis and consequence classification

## **Day Three : Risk Based Integrity Management & Role of KPIs**

### **Session 1:** Integrity Management (Risk Based Approach) of Static Process Equipment: Topside

- Standards and regulatory requirements for IM: risk based inspections
- Integrity assessment and control of topside systems: challenges in inspection planning and execution

### **Session 2:** Integrity Management (Risk Based Approach) of Subsea Systems



- Standards and regulatory requirements for subsea systems' IM
- Integrity assessment and control of subsea systems

### **Session 3: Asset Integrity Measures/Key Performance Indicators (KPI's)**

- Introduction to performance measurement and performance measures
- Performance indicator prioritization approach(s) for asset integrity assurance

### **Day Four : Maintenance Performance Indicators & Barrier Management**

#### **Session 1: Maintenance Performance Indicators & Measures**

- Introduction to guidelines and standards
- Traditional measures used in the oil and gas industry vs. future challenges in remote and harsh environments

#### **Session 2: Smarter Maintenance Recording**

- Introduction to safety critical equipment and barrier management
- Prioritization of safety critical equipment maintenance and assigning safety critical status vs. current challenges

#### **Session 3: Recent Developments on Asset Integrity**

- Documentation and standard work practices: lean approach
- Managing the change: continuous improvement for sustainable performance and organizational alignment



## **Day Five : Technology Qualification & Managing Engineering Projects**

### **Session 1:** Role of Technology Qualification in the Petroleum Industry

- Introduction to regulatory requirements and standards
- Technology qualification case from remote operations

### **Session 2:** Managing Engineering Projects with Variable Activity Durations

- Introduction to project management and standards
- Role of planning, scheduling and crashing

### **Session 3:** Engineering Project Crashing

- Introduction to project crashing approaches
- How to accelerate projects optimized resource allocation



**The Scandinavian Academy employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:**

- **Theoretical Lectures:**
  - We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.
- **Scientific Assessment:**
  - We evaluate trainees skills before and after the course to ensure their progress.
- **Brainstorming and Interaction:**
  - We encourage active participation through brainstorming sessions and applying concepts through role play.
- **Practical Cases:**
  - We provide practical cases that align with the scientific content and the participants specific needs.
- **Examinations:**
  - Tests are conducted at the end of the program to assess knowledge retention.
- **Educational Materials:**
  - We provide both printed and digital scientific and practical materials to participants.
- **Attendance and Final Result Reports:**
  - We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- **Professionals and Experts:**
  - The programs scientific content is prepared by the best professors and trainers in various fields.
- **Professional Completion Certificate:**
  - Participants receive a professional completion certificate issued by the Scandinavian Academy for Training and Development in the Kingdom of Sweden, with the option for international authentication.
- **Program Timings:**
  - Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.