



**ADVANCED DIPLOMA OF ELECTRICAL AND INSTRUMENTATION (E&I)
ENGINEERING FOR OIL AND GAS FACILITIES**

MODULE DETAILS	MODULE 23: Oil and Gas Specific Applications for Floating Production, Storage and Offloading (FPSO) Facilities Nominal duration: 2 weeks (16 hours total time commitment) This time commitment includes the preparation reading, attendance at each webinar (1 hour plus 15-30 minutes for discussion), and the time necessary to complete the assignments and further study.
MODULE PURPOSE	This module covers some miscellaneous systems that are applicable to the oil and gas industry, yet not covered in the core engineering parts of this course.
PRE-REQUISITE MODULES/UNIT(S)	None
ASSESSMENT STRATEGY	To evaluate the achievement of the learning outcomes; written assignments, group projects and practical exercises are set.
SUMMARY OF LEARNING OUTCOMES	<ol style="list-style-type: none">1. Describe smart maintenance techniques and key platform systems for FPSO facilities [23.1]2. Describe process safety and emergency response systems for FPSO facilities [23.2]
Learning Outcome 1	Describe smart maintenance techniques and key platform systems for FPSO facilities [23.1]
Assessment Criteria	<ol style="list-style-type: none">1. Discuss smart maintenance techniques [23.1.1]2. Describe instrumentation and safety systems for cranes [23.1.2]3. Describe platform navigational audible warnings/signals [23.1.3]4. Discuss the basic considerations for compressor surge control [23.1.4]



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Learning Outcome 2	Describe process safety and emergency response systems for FSPO facilities [23.2]
Assessment Criteria	<ol style="list-style-type: none">1. Describe the operation of a flare flame front generator and ignition monitoring system [23.2.1]2. Examine and discuss communication and alarm systems viz.: [23.2.2]<ol style="list-style-type: none">(a) Public address systems(b) Audible and visual alarms(c) Status lights

Delivery Mode

A combination of asynchronous and synchronous e-learning delivery comprising a judicious mix of interactive online web conferencing, simulation (virtual labs) software, remote online labs, online videos, Power Points, notes, reading and study materials (in pdf, html and word format) accessed through the Moodle Learning Management System (LMS).