



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

MODULE DETAILS	<p>MODULE 22: Wellhead and Flowline Control Systems</p> <p>Nominal duration: 2 weeks (16 hours total time commitment)</p> <p>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.</p>
MODULE PURPOSE	This module covers the essentials of instrumentation and control relating to wellhead and flowline control systems.
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	<p>1. Explain well control methods and related issues [22.1]</p> <p>2. Describe well control equipment and related issues [22.2]</p>
Learning Outcome 1	Explain well control methods and related issues [22.1]
Assessment Criteria	<p>1. Discuss basic well control methods [22.1.1]</p> <p>2. Discuss the causes and prevention of kicks [22.1.2]</p> <p>3. Discuss pressures related to wells and the calculation thereof [22.1.3]</p> <p>4. Describe the properties of gases and fluids relevant to well control [22.1.4]</p>



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Learning Outcome 2 **Describe well control equipment and related issues** **[22.2]**

- Assessment Criteria**
1. Discuss the configuration and operation of a Blow-out Preventer (BOP) [22.2.1]
 2. Describe the manifolds and piping for well control equipment [22.2.2]
 3. Describe the functionality of well control equipment and related instrumentation [22.2.3]
 4. Discuss the test procedures for testing well control equipment [22.2.4]
 5. Discuss standards applicable to wells [22.2.5]

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).