

DIPLOMA IN OIL AND GAS – INSTRUMENTATION MAINTENANCE (INSTRUMENTATION TECHNICIAN)

I. OVERVIEW

The **Diploma in Oil and Gas – Instrumentation Maintenance** focuses on the development of the underlying principles and practical skills required for careers in the oil and gas industry. The qualification is designed to deliver a high level of occupational capability. The qualification meets the needs of learners who work or desire to work in the oil and gas industry and provides a broad background of understanding of the oil and gas industry and the practical skills and knowledge required.

II. ENTRY REQUIREMENTS

Candidates who require entry to the Diploma programmes **MUST** possess five (5) CSEC subjects, inclusive of Mathematics and Science (Chemistry, Physics or Integrated Science) **OR** a postsecondary Technician's Diploma from an ACTT registered or accredited post-secondary institution.

If the candidate does not have the required entry requirements of five (5) CSEC subjects, KSPTL offers the Kenson Diploma Pre-qualification Certificate to ensure students attain the necessary academic requiem to gain entry to the Diploma programme.

OR

Mature Entry Route: Candidates are required to be 21 years or older and have two or more years of relevant work experience. The candidate should demonstrate academic potential and work experience through the provision of a résumé and a current job letter. The candidate should possess CXC/CSEC passes in Mathematics and Science (Chemistry, Physics, or Integrated Science) or evidence of an equivalent or higher qualification.

III. AIM

The aim of this programme is to provide an extensive background and understanding of the oil and gas industry and the practical skills and knowledge required to operate in the industry.

IV. COURSE CONTENT

Some of the units to be delivered include:

- **KIMT 110 – Instrumentation Theory Fundamentals**
This unit gives learners an understanding and appreciation of basic Instrumentation including the function of basic devices for measuring and controlling different kinds of variables in process control. This unit delves into open-loop and closed-loop control; controllers and control elements.
- **KIMT 120 – Hand Over Processes**
This unit gives learners the competences needed to hand over maintained and/or installed equipment, and to confirm that the equipment is now ready to run. Following the maintenance and/or installation activity, learners will be required to ensure that the equipment is in a safe and operable condition.
- **KIMT 130 - Workplace Restoration**
This unit gives learners the competences needed to enable the candidate to restore the workplace to a safe state before returning to operations. This must include the need to check and separate waste materials for disposal and identify and divide materials suitable for storage and future use.
- **KIMT 140 – Risk Minimization and Reduction**
This unit gives learners the competences needed to execute thorough safety policies, practices and procedures to ensure no harm comes to life, no destruction to plant, equipment and environment. The candidate will execute hazards recognition, assessments the risks involved, and minimization of risks prior to work execution. The candidate will understand how to implement measures to control and provide ongoing monitoring.
- **KIMT 150 – HSE Practices and Procedures**
This unit gives learners the competences needed to execute safe work practices in keeping with company standards, policies procedures. Comply with the laws and regulations within their own responsibilities and execute emergency procedures and protocol as necessary.
- **KIMT 210 – Instrumentation Maintenance Procedures**
This unit gives learners the competences needed to perform and complete maintenance procedures in a timely manner, follow procedures and complete the relevant documentation on completion. The equipment required to complete this unit includes Instrumentation equipment/plant for maintenance activities.

- **KIMT 230 - Fault Finding Analysis on Instrumentation Equipment**

This unit gives learners the competences needed to enable the candidate to examine, unearth and troubleshoot faults within Instrumentation plant and equipment. Subsequently, the candidate will evaluate the most effective fault-finding technique and tools. Further within their own limitation of authority the candidate will then complete reporting documentation to finalize the process of fault finding.

- **KIMT 260 - Analyse and Improve Maintenance Procedures**

This unit gives learners the competences needed to analyze data and trends and subsequently utilize established organizational procedures to improve working practices and procedures.

V. INSTRUCTIONAL TECHNIQUES

The Diploma in Oil and Gas – Instrumentation Maintenance will be delivered using blended modalities. The following teaching strategies will be used to promote individual and group-based learning: case studies, collaborative learning activities, debates, group-based online discussions, group projects, individual assignments, individual projects, lectures, reading and research, presentations and weekly discussions.

V1. ASSESSMENT METHODS

All units will be assessed through a combination of demonstration of practical skills, product evidence, simulations, projects, observation, and written examinations.