

Transforming Learning Experience



A Progressive Solutions Partner Enriching Energy Workforce for A Sustainable Future

Winning Formula

Over
40 years
of oil and gas technical
training experience



Accelerated Competency Development through Experiential Learning
to generate job-ready engineers & technicians

More than
130,000
technical workforce trained
since 1981



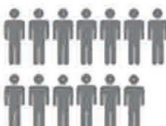
Industry & Technology Driven Technical Learning Solution
to prepare global workforce of tomorrow

Serving clients from
over **35**
countries



Customised Learning Solution
address different learning needs

Training Capacity
1,700
trainees per year



International Certification
internationally accredited
oil and gas centre

Instructor/Learners Ratio
of **1 : 15**
18 principal instructors
and 33 instructors



Capability Caretaker
to strengthen and close learner's
competency gap

Accreditation & Certification



Award & Recognition



Learning Portfolios

1 Bridging Programme

Full time training to bridge technicians' and engineers' existing knowledge & skills with the required competencies by the industry

- **Technical Energy Enrichment Programme (TEP)**
(formerly known as Petroleum Technology Programme-PTP)
10-month pre-employment programme comprising of hybrid Competency Based Assessment modules based on PETRONAS Occupational Skill Standard (POSS) and experiential learning at UDTP.
- **Customised Programme (Engineers & Technicians)**
Programme customised to clients' learning requirements and needs to develop job-ready engineers & technicians
- **Upstream Operation Induction Programme (UOIP)**
8-month programme that bridges new engineers with in-depth skill and knowledge in upstream operations

2 Professional Development Programme

Short term programme to enhance and upskill technical competencies

- **Skill Group Training**
Upskill engineers' technical competencies
- **Upgrading Training**
Upskill technicians' technical competencies
- **Customised Programme (Engineers & Technicians)**
Programme customised to clients' learning requirements and needs to upskill technical competencies
- **Health, Safety & Environment (HSE) Programme**
Provides a wide range of HSE training services to oil and gas industry

3 Assessment & Certification Services

Certify competency of technical workforce based on statutory bodies, professional bodies or company own standard

- **PETRONAS Competency-Based Assessment System (PECAS)**
A competency-based assessment system to develop competent technicians and operators
- **Competency Training (Statutory & Others)**
INSTEP is the approved training and assessment centre for Department of Occupational Safety & Health, Department of Environment, and Energy Commission
- **Base-Line Assessment**
Provides consultancy services to clients who wish to gauge the competency level of their staff

EXPLORATION & PRODUCTION

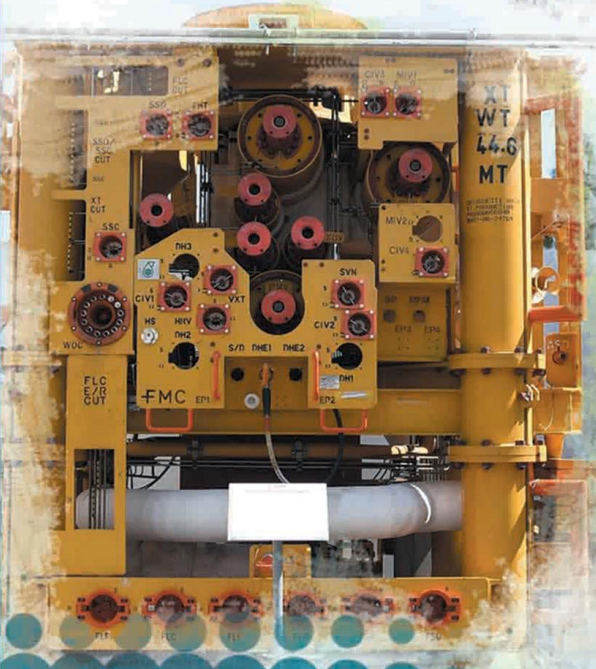
Focuses on exploitation and processing of oil and gas, and provides actual offshore rig environments at UDTF

PROFESSIONAL DEVELOPMENT PROGRAMMES*

- Gaslift Operations and Optimisation
- Introduction to Petroleum Technology
- Introduction to Upstream Petroleum Technology

ASSESSMENT & CERTIFICATION PROGRAMMES*

- Advanced Pigging Operation Certification Scheme
- Upstream Panel Operator Certification Programme



Deepwater Subsea Christmas Tree



Wellhead



Pigging Test Loop

* Popular offerings among others

PROCESS & ANALYTICAL

Provides training in process, utilities, refinery, gas processing, petrochemical, LNG processing, and crude, water, and petroleum products testing

PROFESSIONAL DEVELOPMENT PROGRAMMES*

- Water and Wastewater Analysis
- Filter and Strainer: Operation and Care
- Reactor: Operation and Care

ASSESSMENT & CERTIFICATION PROGRAMMES*

- Certified Environmental Professional in the Operation of Industrial Effluent Treatment Systems - Biological Processes
- Panel Operator Training & Competency Programme



Waste Water Treatment System



Analytical Laboratory



Distillation Column

ELECTRICAL

Offers fundamental principles of electrical engineering to high-level programmes, which focus on operation & maintenance of electrical equipment

PROFESSIONAL DEVELOPMENT PROGRAMMES*

- High Voltage Switching and Generator Synchronising
- Low Voltage & High Voltage Overhead Transmission Lines
- Selection, Installation and Inspection of Ex Equipment in Hazardous Area

ASSESSMENT & CERTIFICATION PROGRAMMES*

- Chargeman A0, A4, B0 & B4
- IECEx Certification of Personnel Competence



** Popular offerings among others*

MECHANICAL & INSPECTION

Provides training, certification and consultancy services, and focuses on module development and delivery of long and short term training programmes

PROFESSIONAL DEVELOPMENT PROGRAMMES*

- Diesel Engine: Operation & Maintenance
- Positive Displacement Pump
- Single Stage Centrifugal Pump

ASSESSMENT & CERTIFICATION PROGRAMMES*

- Internal Combustion Engine Engineer Grade 1 & 2
- Steam Boiler Driver Grade 1 & 2
- Steam Boiler Engineer Grade 1 & 2



INSTRUMENTATION

Offers well-structured training programmes covering Field Instrumentation, Quality Measuring Instrument, and other industries for technicians and engineers

PROFESSIONAL DEVELOPMENT PROGRAMMES*

- Control Valve
- Distributed Control System Operation
- Fundamental of Process Measurement

ASSESSMENT & CERTIFICATION PROGRAMMES*

- Tank Gauging & Calibration
- Instrument Fitter
- Metering Calibration & Validation



Liquid Metering Training Skid

Distributed Control System

Analyser Lab

** Popular offerings among others*

HEALTH, SAFETY & ENVIRONMENT

Delivers theoretical and practical training sessions for pre-employment, short courses & long term programmes to fulfill requirements for skilled and competent manpower

PROFESSIONAL DEVELOPMENT PROGRAMMES*

- Risk Assessment Tools (BowTie, HAZID, HAZOP and PASR Application)
- Tripod Beta Incident Investigation
- Working at Height

ASSESSMENT & CERTIFICATION PROGRAMMES*

- Authorised Entrant and Standby Person for Confined Space
- Certified Environmental Professional in Scheduled Waste Management



Confined Space

Working at Height

Fire Training Ground

FUTURISTIC LEARNING

As a Digitally Enabled Learning Organisation, INSTEP is committed to continuously prepare the global workforce of tomorrow.



Virtual Reality

Augmented Reality

Drilling Simulator

GAME CHANGER

Upstream Downstream Training Plant (UDTP)

Provides real plant experiential learning

Plant Facilities

Upstream Facilities

Central Control Room
Well System (Production & Injection)
Well Testing
Separation System
Crude Stabilisation System
Gas Compression System
Gas Dehydration System
Produced Water Treatment System
Pumping System
Pigging System
Flare/Vent System
Drain System

Downstream Facilities

Central Control Room
Crude Distillation System
Hydrocarbon Treatment System
Water Treatment System
Boiler System
Furnace System
Cooling Water System
Flare System
Drain System

Common Facilities

Air System (Instrument and Service Air)
Nitrogen System
Fire Water System
Emergency Power Generation
Storage System (Water, Diesel, Base Oil and MEG)

Upstream Flow Medium & Process Parameters

Flow Medium
Nitrogen
Non-volatile mineral oil
Water
Design Basis
Pressure: 7 - 12 bar
Temperature: 15 - 120 degrees Celsius
Process Parameters
Oil flowrate: 1,500 bpd
Water-cut: 50% (max)
Gas flowrate: 0.5 MMscf/d
Gas oil ratio: 333.33 scf/bbl

Downstream Flow Medium & Process Parameters

Flow Medium
Mono-Ethylene Glycol (MEG)
Nitrogen
Water
Design Basis
Pressure: 7 - 12 bar
Temperature: 15 - 160 degrees Celsius
Process Parameters
Crude Distillation Unit (CDU): 1,500 bpd
Hydro Treating Unit (HTU): 750 bpd
Gas flowrate (CDU): 0.5 MMscf/d
Gas flowrate (HTU): 0.5 MMscf/d

HSE Facility

Emergency Suite

Popular Offerings

Exploration & Production

- Overview of Petroleum Industry & Upstream Plant Familiarisation
- Plant Monitoring & Optimisation
- Plant Process Troubleshooting (L2)
- Plant Start Up & Shutdown
- PNID & Schematic Diagram

Electrical

- Fundamental of E-House Substation Maintenance
- Power Outage System Start Up

Process Operation

- Overview of Petroleum Industry & Downstream Plant Familiarisation
- Plant Monitoring & Optimisation
- Plant Process Troubleshooting
- Plant Start Up & Shutdown
- PNID & Schematic Diagram

Instrumentation

- Fundamental of Integrated Control Safety System
- Plant Process Control & DCS Operation

Health, Safety & Environment

- Managing Major Emergency (Upstream)
- Plant HSE Practices



SUCCESS STORIES

ExxonMobil

ExxonMobil has been with us for over the last 10 years because of their continual trust and belief in our competent technical learning solutions.

They continuously supported us even during the downturn in the oil & gas industry when most companies chose not to proceed with their human capital development.

To fulfil their requirements, we customised an intensive training programme to reskill their IT personnel to become production operators by capitalising our training plant and practical workshops to accelerate their competencies through experiential and hands-on learning.



For ORPIC experienced engineers, we designed a wholesome programme to progressively strengthen their competencies; starting with classrooms and practical workshops, On-the-Job Training at INSTEP training plant, and finally attachment to PETRONAS operating plants.

Being a part of PETRONAS, we managed to get the buy-in from the operating plants to accommodate ORPIC's request for a 6-week attachment of their learners; and assuring them that there will be minimum disruption to their plant operations, as we will be using our own experienced instructors, and complying to the plants' safety requirements. This provides simulation to real case scenarios.

CONTACT US NOW!

DOMESTIC

W Edani Bt W Rashid | +6012 965 8500 | edani_rashid@petronas.com.my
M Ayub B Hassan | +6019 987 2774 | mohdayub@petronas.com.my

INTERNATIONAL

Lim Kian Chuan | +6010 918 6328 | kianchuan.lim@petronas.com.my
Aisah Bt Ali | +6013 903 0350 | aisah_ali@petronas.com.my

Institut Teknologi Petroleum PETRONAS (INSTEP) PETRONAS Technical Training Sdn Bhd (956097-W)

Lot 9764, Batu Rakit, 21020 Kuala Nerus,
Terengganu Darul Iman, Malaysia

Email: instep@petronas.com.my
Tel.: +609 668 6000
www.instep.my



Instep



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INSTEP



INSTEP MY

"Although there are training centres in Oman, the wholesome learning experience here at INSTEP is different, because not only we gain technical knowledge, but we can apply this knowledge through rounds and rounds of simulation and hands-on activities."

Ali Massoud Mohammed Al-Harrasi

**Head of Mechanical Engineer
Oman Gas Company**

"The instructors strived hard to deliver the right materials and tools. We had group discussion every day and presentation at the end of every week which improved our personal development skills."

Ruwayia Al Mogbali Engineer

**Oman Oil Refineries and
Petroleum Industries Company**

"Throughout this one-year programme, I have learnt a lot and able to get an overview of the whole oil & gas industry, from how hydrocarbon was formed until field development. It's an end-to-end training programme with state-of-the-art facilities, especially the Christmas Tree, where I was able to examine its internal structure, which I could not have done this in the real world."

**Goshen Kili Reliability Engineer
Oil Search Limited**

"Simulations at training facilities allowed me to have rooms for errors, and from these errors, I understood how to correct those errors, giving me confidence in performing the necessary tasks in operations."

**Katherine Manus Maintenance Unit
Oil Search Limited**

"Throughout this training, we gained a lot of experiences, not only learning occupational safety at a global standard, but also touring around Malaysia, playing with sea turtles and enjoying sports."

**Naohiro Matsuda Electrical Engineer,
INPEX Corporation**

"It was a great and interesting experience. Malaysian people are very polite, and friendly, putting us at ease throughout our stay here."

Aloise Ngor Mak DIAGNE INPG Masters Programme



Scan QR code above
for INSTEP Virtual Tour