



INSPIRING TECHNICAL EXCELLENCE



TPO
تکاتف پتروفاک عُمان
TAKATUF PETROFAC OMAN

A new world-class training facility for Oman

Takatuf Petrofac Oman (TPO) is a new joint venture founded by Takatuf, the Human Capital solutions provider, and Petrofac, a world leading oilfield services provider with almost four decades of experience in the development of training and competence programmes and facilities.

TPO combines this international track record and local capability within a new purpose built facility, the Takatuf Petrofac Training Institute, in Muscat at the heart of the Oman oil and gas industry.



Petrofac 

 تَكَاتُف
TAKATUF

PETROFAC

Petrofac has extensive technical training experience and digital capabilities. We are at the forefront of the design and management of technical training plants to accelerate the route to competency. We have trained over one million delegates and have a strong track record in delivering technical training to achieve nationalisation and in-country value creation through the development of efficient, safe and technically competent workforces. In Oman, our experience dates back to 1988, during which time we have delivered EPC and EPCm projects, operations and maintenance support, and training and competency development.

TAKATUF LLC

Takatuf LLC provides human capital services to support long-term personal, organisational and national growth strategies. At Takatuf we understand the importance of actively supporting local capability workforce development to the oil and gas industry, and we play a role in the Sultanate's wider efforts to promote private sector investment.

Introducing TPO



It is my pleasure to introduce you to Takatuf Petrofac Oman – TPO.

TPO is an exciting centre of technical excellence in Oman that welcomed its first students in May 2018. The centre provides world-class, internationally accredited learning pathways that promote the growth and development of future (and existing) personnel supporting the energy sector. We work collaboratively with industry to deliver the highest levels of training for young Omanis, providing organisations with highly qualified, competent and job-ready graduates.

I am proud to lead a team of training professionals committed to the delivery of modern training programmes, utilising TPO's state-of-the-art training facilities featuring live plants as training environments which replicate real oil and gas facilities. Our programmes provide a strong focus on work ethics and industry health and safety practices to ensure students have all the necessary personal attributes to add value to their respective companies from day one.

This is a unique proposition, where we blend interactive workshop, classroom, augmented reality (AR) and experiential training to provide students and organisations with a fast-track training solution that meets the workforce demands of the oil and gas sector.

We look forward to welcoming your new recruits and existing teams to TPO.

Glenn Harding
General Manager, TPO

We are TPO

Oman’s newest vocational training organisation with world leading capability.


From new and bespoke facilities in Muscat, TPO delivers a range of world-class, internationally accredited technical training programmes, tailored to meet the needs of the oil and gas industry.

At TPO we offer a suite of industry-standard, competence-based training programmes which accelerate the development of skilled and competent technicians and upskill existing employees. We provide immersive learning through digitally-enabled theoretical classroom facilities and curriculum, state-of-the-art workshops, actual production facilities and cutting-edge AR technology.

This extensive, practical and immersive learning experience is a first of its kind in Oman. Our innovative approach allows us to fast-track the development of competent graduates, resulting in a significant reduction in time to work-site autonomy.

Our team of multinational industry training professionals have extensive oil and gas experience, having worked with some of the world’s largest energy companies.

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	Capacity	Sector	Programmes	Students	Focus	Facility
 <p>TPO تَكَاتُف بَتْرُوفَاك عُومَان TAKATUF PETROFAC OMAN</p>	320 Students	Energy sector in general	National Vocational Qualification (NVQ) Levels 1, 2 and 3	Secondary School Graduates	Foundation level English, HSE, Technical Maths	Dedicated workshops for each discipline
	16,000 sqm	Upstream, Midstream and Downstream Oil and Gas		Short-term Technical Programmes	Technical Diploma Holders	Performing Engineering Operations (PEO)
	Located in Knowledge Oasis Muscat (KOM)	Utilities			Upskilling of existing employees	Mechanical
				Electrical		
				Process Operations		
					Instrumentation	

Site capabilities



Four live process training plants



Training, learning and competency management software system



320 max capacity per shift



Dedicated multi discipline workshop facilities



On-site counselling support



Experienced academic and technical instructors, assessors and verifiers



15 classrooms with interactive capabilities and digital curriculum



Augmented reality simulations



Computer based training suites



Developing your workforce

TPO trains your workforce through a combination of engaging interactive, digitally-enabled theoretical curriculum and intensive, hands-on practical sessions. This approach facilitates efficient and cost-effective development of personnel to recognised competence standards.

Our programmes equip Omani nationals and international students with the necessary skills and qualifications needed to make an immediate and valuable contribution in the workplace, and offer a vastly accelerated route to autonomy.

Our training programmes enable students to achieve:

- NVQ level 1 – Foundation level skills, including language skills, technical maths, health and safety and business behaviours
- NVQ Level 2 – Performing Engineering Operations (PEO)
- NVQ/IVQ Level 3 – Diploma in either:
 - Processing Operations
 - Electrical Maintenance
 - Mechanical Maintenance
 - Instrumentation Maintenance

We can also develop and adapt our resources to meet almost any training need quickly and efficiently, including leadership and management training.

At the core of our programmes are the themes of work ethics, safety and teamwork – themes that are reinforced daily through bespoke training strategies and methodologies. This includes:

- Self-centred learning and accountability
- Respect for individuals and adhering to the highest ethical standards
- An understanding of the values of teamwork and integrity through open communication, the sharing of ideas, resources and technologies
- Empowerment in decision making and unparalleled levels of autonomy



Our course structure

YEAR 1			YEAR 2		
Foundation training			NVQ Level 2	NVQ Level 3	
Students placed at level 2:					
First Trimester	Second Trimester	Third Trimester	Fourth Trimester	Fifth Trimester	Sixth Trimester
English level 2 Technical Maths 1	English level 3 Health and Safety Technical Maths 2	English level 4 Technical Maths 3	Performing Engineering Operations (PEO)	Specialised training in either: <ul style="list-style-type: none"> • Processing Operations • Electrical Maintenance • Mechanical Maintenance • Instrumentation Maintenance 	



7 hours a day

70 day trimesters

5 days a week (35 hours)

3 trimesters a year

TPO delivers comprehensive, industry relevant training solutions. This includes a variety of streams for high school leavers, diploma holders and upskilling for existing employees.

Our programmes offer maximum flexibility and alignment to our clients' individual requirements. Programme durations run from 12, 18 and 24 months aligned to existing experience and capability. We also offer short courses on request to meet company-specific requirements.



An immersive and interactive curriculum

TPO provides an enhanced learning experience supported by new digital technologies.

We combine this with immersive technical training and our extensive industry and training experience to create a truly differentiated approach to learning. As a result, after graduation our students can join any modern oil and gas facility anywhere in the world fully prepared to start work.



Competence and learning management software

1 Classroom

Students start their journey in our classrooms, where they learn the foundation elements of our curriculum, including core language; maths; health and safety and business behaviours.

During this stage we capture imaginations from the outset through the use of interactive digital curriculum. Our facilities include interactive whiteboards, tablet computers and dedicated computer-based training suites. Our courses are delivered up to NVQ level 3, in line with NVQ, and ISO standards.

Our lessons are interactive and we provide a mixture of different learning styles to keep things varied and provide maximum opportunities for learning. Computer based training gives students further research materials and learning opportunities.

Once the foundation programme is complete, students progress to technical training.

2 Competence and learning management software

At the heart of every student's journey, is our **Competence Management System**.

At TPO we use this system to track the learning development of each student. It provides a visual overview of their progress towards agreed learning goals, and a method of tracking completed elements of the curriculum. Our trainers get an at-a-glance overview of every student and can identify specific learning requirements and follow up individually to bridge any gaps.

The centre's **Learning Management System**, contains a wide range of digital, easy to follow and engaging computer based courses. These lessons use the latest technology and advanced 3D animation to bring specialist equipment to life, along with tests to check on progress. This visual and interactive approach to learning helps aid the retention of information.

4 Process plants

Our dedicated technical training infrastructure has been designed and built to replicate full-scale and true to life production facilities.

These process plants replicate real-world scenarios, and our training is delivered by practitioners who have a depth of real-world experience as well as the requisite training qualifications. Students work through a range of typical on-the-job scenarios, like

a start-up, or a shut-down, or an emergency shut-down, using the same equipment they will use in the field.

By taking the technical training curriculum outside the classroom we accelerate learning by providing real experiences in a safe environment.

3 Workshop

In our workshops, students get to experience hands-on work. They learn about and use the tools they will need in their day-to-day activities along with the details of the oil and gas components.

We use the latest AR technology; using a bar code system on our equipment, students can access a wealth of information including the component elements and how to operate and maintain the equipment.

This approach helps us engage more effectively with today's students, whilst making the language and the learning as accessible as possible. Through AR we are teaching new concepts in a very engaging, visual way.

The TPO training journey



NVQ level 1: Foundation programme

Our base entry level foundation programme provides key underpinning knowledge and skills which supports students through their learning journey. This phase is focused on embedding language skills, technical maths; health and safety; and business behaviours before progressing to the technical elements of the programme.

As English is the universal language of the oil and gas industry, we ensure all students have sufficient understanding to speak and understand English. This includes increased fluency in the English language to a minimum TPO EL level 4, which equates to approximately IELT level 4 to 4.5. This aspect of our training is taught using work-specific materials, for example standard operating procedures (SOP), HSSE materials and TPO training manuals.

The foundation programme lasts for approximately six months, but is tailored specifically to ensure the student reaches the desired level of English Language proficiency before progressing. This programme focuses on the delivery of English Language within a technical context and the curriculum is built around a series of published technical English texts, including 'Tech Talk' and 'English for the Energy Industries'.





NVQ Level 2: Performing Engineering Operations (PEO)

PEO is our introductory technical engineering programme for students starting out on their engineering career.

It covers the basic concepts and hand-skills students will need to acquire to become competent engineering technicians within the oil and gas sector. This element of the programme consists of the following core and specialist units:

CORE UNITS:

- Working safely in an engineering environment
- Working efficiently and effectively in engineering
- Using and communicating technical information
- Producing components using hand fitting techniques

SPECIALISED UNITS (EXAMPLES):

- Producing mechanical assemblies
- Forming and assembling pipework systems
- Maintaining mechanical devices and equipment
- Wiring and testing electrical equipment and circuits
- Maintaining operated valves
- Assembling and testing electronic circuits

Level 3: Diploma / IVQ-NVQ

Production Training

Our training for production technicians gives the student a theoretical understanding of the full range of plant equipment associated with the oil and gas industry. This is further enhanced by the delivery of practical training in a replicated and simulated environment across our four process training plants; each simulating operations associated with:

- Oil Separation
- Gas Sweetening
- Crude Distillation
- Utilities

As a result, students gain hands-on experience of operating actual plant equipment within a safe and controlled training environment. This combines their theoretical and practical skills with working knowledge of an operating environment, developing confidence and competence.

Discipline Specific Training

Students designated to be maintenance technicians will receive a combination of training in mechanical, electrical and instrumentation workshops, classroom learning and practical experiential training on the process plants.

Our technical training modules are comprehensive and aligned to the specific needs of each discipline.

The journey continued...

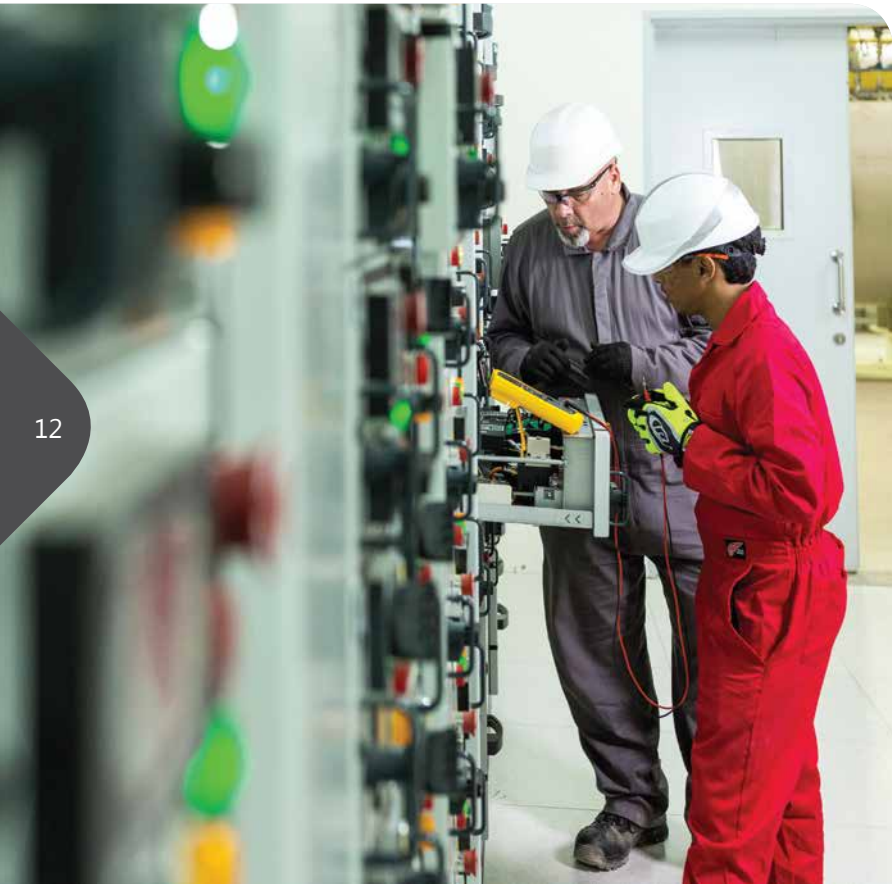


Production Training and Discipline Specific Training – Level 3: Diploma / IVQ Level 3 / NVQ Level 3

As students progress from Level 2 to Level 3 they will specialise in their chosen discipline pathways:

- Processing Operations
- Electrical Maintenance
- Mechanical Maintenance
- Instrumentation Maintenance

At this level learning becomes more scenario based with the aim of building the student's levels of independent thinking. As capability builds, students will operate as teams and the plants will run as operating assets with regular work routines, monitoring schedules, scheduled maintenance activities and more. All interventions with the live plants will be under the safe systems of work and permit system. This work based approach will build their Level 3 portfolio of evidence and accelerate their route to becoming independent operators once their on-job learning is evidenced at the asset.



All successful graduates will leave TPO with an NVQ Level 1 in HSE, NVQ Level 2 in Performing Engineering Operations (PEO), Level 3 Diploma, IVQ Level 3 and all the underpinning knowledge and skills acquisition needed for the NVQ Level 3. This will only require workplace task evidence from the employer following graduation from TPO in order for students to gain the NVQ Level 3 qualification award.



Some examples of content for each discipline include:

Process Operations Programme	Electrical Programme	Instrumentation Programme	Mechanical Programme
Safety for Maintenance Technicians	Safety for Maintenance Technicians	Safety for Maintenance Technicians	Safety for Maintenance Technicians
Chemistry for Petrochemical Operators	Electrical and Electronic Principles	Electrical and Electronic Principles	Valves, pipework and associated fittings
Petroleum Technology	Electrical Instrument Drawings	Safe and Correct use of Test Equipment	Pumps – Design, Classification, Uses and Maintenance
Equipment – Static and Measuring	Electrical Power, Distribution, Transmission and Storage	Instrument Drawings	Transmission Systems
Equipment – Rotating, Valves and Piping	Low Voltage Electrical Installations	Pressure Measuring Devices – Maintaining and Calibration	Bearings, Oils and Lubrication Systems
Technical Information, Drawings, P&IDs, PFDs, etc	Electrical Control Systems and Rotating Machinery	Level Measuring Devices – Maintaining and Calibration	Shafts and associated drive mechanisms
Utilities – Fundamentals and Operation	Troubleshooting and Maintaining Electrical Equipment	Temperature Measuring Devices – Maintaining and Calibration	Hydraulics
Separation – Fundamentals and Operation	Hazardous Awareness, COMPEX, etc	Control Valves – Maintaining and Calibration	Pneumatics
Gas Treatment and Gas Plants – Fundamentals and Operation	Power Supply, Analogue and Digital Circuits	Basic Process Control Theory	Basic Electronics
Gas Compression – Fundamentals and Operation	Electrical testing and Protection	Safety and Shutdown Systems	Basic Instruments
Crude Oil – Treatment and Distillation		Hazardous Area Awareness	
		Pneumatic Systems	
		Mechatronics	
		Power Supply, Analogue and Digital Circuits and Fault Finding	

Experiential learning. Fast track outcomes.

TPO combines leading edge, interactive digital curriculum, training and competence management software and practical, immersive technical training facilities and techniques. As a result we deliver a truly differentiated learning experience with fast track outcomes.

Our four bespoke process training plants replicate operational scenarios encountered on live plants, and equip students with the necessary knowledge and skills in a realistic yet safe environment.

The training plants are built to exactly the same industrial standards as the facilities they are designed to replicate. This allows us to offer a much more realistic training programme than computer based systems alone. In this way we provide the most accurate and immersive learning environment possible.

We help students prepare for any scenario, by replicating routine activities as well as a wide range of faults in real-time – without any of the repercussions of doing so on a live facility. This approach helps to quickly identify any gaps in competence and avoids exposing personnel or assets to operational risks.

Students gain experience and knowledge in:

- Pre-commissioning
- Commissioning
- Start-up
- Shutdown
- Routine operations
- Emergencies
- Troubleshooting
- Maintenance

When learning on process training plants, students generally require less supervision compared to a live plant, which creates a safe environment for them to make mistakes. This type of learning encourages students to put in to practice the training they have received and resolve the issues themselves.

Using a process training plant also provides an ideal opportunity for all disciplines to work together – electrical, mechanical, instrumentation and control, HSE, process operations – aiding the development of teamwork skills alongside the acquisition of technical expertise.

Process plant highlights

- Upstream, midstream and downstream specific equipment and processes
- Distributed control system/programmable logic controllers
- Foundation Fieldbus/Hart/Modbus/wireless instrumentation
- Customised process and operator interface to match with the current installations
- Provision to practice measurements such as pressure, level, temperature and flow controls
- Process hook up close to real plant
- Certified pressure vessels ('U' stamp)
- Dedicated control room for each plant



Why choose us:

- ◆ A new, highly interactive and immersive learning facility
- ◆ Providing competent and capable oil and gas technicians within two years
- ◆ Blends industry best practice with highly effective learning techniques and interactive facilities and methodologies
- ◆ Principles and facilities based on real oil and gas operations and process plant
- ◆ Capable and experienced academic and technical trainers, assessors and verifiers
- ◆ State-of-the-art facilities using the latest digital technology and equipment
- ◆ Providing training to NVQ Level 3

For further information on pricing, packages and company specific programmes please contact:

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