AUSTRALIAN CENTRE
FOR ENERGY AND PROCESS
TRAINING (ACEPT)
CAPABILITY STATEMENT
2017–18
South Metropolitan TAFE

South Metropolitan TAFE (SM TAFE) has a proven track record of delivering positive student outcomes and training solutions to corporate and government enterprises across the full spectrum of industry.

We are Western Australia's most diverse registered vocational training and higher education provider. Our expertise includes a wide range of trade, technical and professional disciplines through nationally accredited higher education and vocational qualifications, apprenticeships, traineeships and short courses.

We have partnerships with employers locally, nationally and around the world. Our training prepares students for the rigours of their chosen industry and builds upon their existing skills base to improve their capabilities and value to business.

SM TAFE offers over 498 VET qualifications across a wide range of trade, technical and professional disciplines to nearly 30,000 students at 14 major campuses. This equates to 40% of all Western Australian TAFE apprentice training and 43% of all publicly funded training in the State. More than 1600 onshore international students from 70 countries choose to study with SM TAFE each year.

SM TAFE also delivers customised, demand-driven training and skills development to meet workforce requirements and industry changes. This flexible, innovative approach allows SM TAFE to create and deliver qualifications to all fast-growth, high demand industries.
Engineers Australia International Accreditation

SM TAFE is endorsed by Engineers Australia (EA) with accreditation for its PMA60116 Advanced Diploma of Process Plant Technology, and MEM60112 Advanced Diploma of Engineering - Mechanical qualification. The accreditation confirms SM TAFE consistently meets national and international benchmarks with respect to the academic rigour of these programs, including delivery and innovation in program design.

SM TAFE offers flexible training consultancy solutions in the following specialised areas:

- Australian Centre for Energy and Process Training (ACEPT)
- Defence, Mechanical and Fabrication
- Applied Engineering
- Automotive Technology (Heavy and Light)
- Refrigeration and Air Conditioning
- AeroSpace Training Centre
- Building and Construction
- Australian Centre for Applied Aquaculture Research (ACAAR)
- Electrical and Safety
- Plumbing and Gas
- Maritime and Aquaculture Studies

All qualifications are nationally recognised and specifically designed to bolster the skills of recruits, existing workers and supervisors.

Leading edge training technologies on our campuses include simulators replicating real life conditions and situations in oil and gas and minerals processing. Customised training includes on-site training and assessment, video conferencing, e-learning and remote access facilities. Ongoing consultation with industry advisory boards actively informs the planning, design and delivery of its programs, ensuring graduates are equipped to enter the current market.
The Australian Centre for Energy Process Training (ACEPT)

Established in 2006, the Australian Centre for Energy and Process Training (ACEPT) is the only training facility of its kind in the Southern Hemisphere delivering energy process training. ACEPT is a leading example of a private and public collaborative enterprise under which State Government and industry have come together to address workforce skills demand and to ensure job opportunities for graduates.

Through ACEPT, SM TAFE provides training for para-professionals, pre-apprentices, apprentices and trainees that lead to jobs in the energy (oil and gas) and resource (mining) sectors. Training is mapped to multiple career levels, ranging from process operator, to trade specialists, to site manager.

Training is delivered by lecturers with qualifications and experience across a multitude of disciplines, including process plant operations and management, instrumentation, engineering, plant maintenance, control systems and working in a high risk and highly regulated environment. ACEPT’s facilities boast an impressive range of equipment currently utilised in industry, including:

- Live three-phase separation pilot plant (oil, gas and water)
- Live binary distillation column trainer
- Control room fitted with distributed control systems (DCS) for the pilot plant and a separate DCS for the distillation column
- Static dehydration package, and pump and valve cutaways
- Process (computer based) simulators
- Pigging circuit
- Water treatment package
State Of The Art Facility

LIVE THREE PHASE SEPARATION PILOT PLANTS (OIL, GAS AND WATER)

Training Function: process plant operator, control room operator and supervisor training includes:

1. Prestart, start-up, steady state, normal shutdown, maintenance shutdown and restart, emergency shutdown
2. Permit to work (PTW), lock out tag out (LOTO); interpreting process plant schematics (P&IDs, PFDs, PEFs)
3. Hazard identification, risk analysis and control
4. Gas testing, preparation and isolation for maintenance
5. Minor maintenance
6. Fault finding and troubleshooting
7. Recordkeeping
8. Report writing
9. Water treatment

LIVE BINARY DISTILLATION TRAINER AND DCS

Training function: Separating liquid mixtures and recovering the components typically involved in the distillation process. The Live Binary Distillation Trainer is equipped with industry-typical process measurement and control devices and is controlled from a DCS or local control panel.

Training includes:

1. Continuous variable flow
2. Variable temperature and pressure conditions
3. Glass distillation column with bubble-cap trays
4. Overall dimensions – 1143 x 3660 x 3840mm high (3’9” x 12’ x 12’7”)
5. Liquid sample and temperature of each tray
6. Heat exchangers and reboiler

ACEPT also offers university pathway qualifications, providing students the opportunity to gain entry into second year engineering programs at leading universities.

Domestic clients who employ ACEPT graduates include Shell, Woodside Energy, BHP, Quadrant Energy, Rio Tinto, BP, INPEX, Citic Pacific, GE Energy, Score, Chevron and Tronox, many of which require customised training to meet their own specific training requirements.

SM TAFE domestic partnerships are complemented by ACEPT’s international collaborations, most notable of which is with the Abu Dhabi Vocational Education and Training Institute (ADVETI). Under the long-standing collaboration, ADVETI delivers qualifications on behalf of ACEPT to students in the United Arab Emirates.

In 2017, Phase 2 of the ACEPT development was completed, expanding the current facility to allow ACEPT to broaden its training focus from downstream energy processing to upstream operations. This has ensured that ACEPT is servicing the end-to-end training needs of the entire oil and gas industry.
STATIC DEHYDRATION PACKAGE AND PUMP AND VALVE CUTAWAYS
Training function: Interpreting plant schematics (P&ID’s, PFD’s, PEF’s), equipment and systems identification and process operations.

PROCESS SIMULATORS
Training functions include:

- Feed and product specifications
- Process flow and ID diagrams
- Controls and instrumentation
- Interlocks
- Normal operations
- Normal production monitoring
- Monitoring and adjusting plant operation
- Pre start-up, start-up, steady state, shut down
- Emergency operations
- Faults and trouble-shooting
- What-if exercises
- Loop tuning

The process simulators cover the following non-exhaustive list of systems and processes:

- Fluid flow and pumping systems
- Scrub column
- Compressors – centrifugal and reciprocating
- Distillation and Vacuum distillation
- Heat exchangers
- Dehydration
- Liquefaction - Joule-Thompson (JT) control valves
- Hydrotreating and hydrocracking
- Bitumen blowing
- Delayed coking

The Process Simulators are designed to emulate the following DCS: Foxboro, Yokogawa, Honeywell GUS or TDC3000 and is able to superimpose other system interfaces for students to use accordingly.
Delivery

In addition to customised training, we offer a range of other accredited courses at Munster Campus, including:

- Engineering (certificate II to advanced diploma): Technical, Instrumentation, Maintenance and Production Systems
- Process Plant Operations (certificate II and III)
- Industrial Electrician (certificate III)
- Process Plant Technology (certificate IV to advanced diploma)

We consult the industry at all stages, from planning, to design, to delivery, to ensure graduates have the skills and training to meet the demands of the workplace.

QUALITY MANAGEMENT

SM TAFE’s quality management and continuous improvement processes are developed under the Australian Quality Training Framework (AQF) and equivalent to ISO 9000 series standards, achieving:

- Consistent and high standards of education delivery and assessment
- Student capabilities and competencies to enable graduates to be work ready and meet industry skills demands
- Customised, sustainable training and consultancy solutions for institutional clients and partners – locally and internationally
- Programs which greatly improve employability of individuals and a sustainable workforce

Quality management processes include: student and employer satisfaction surveys, independent auditors, risk management processes and a dedicated quality assurance and data integrity team.

WORKFORCE DEVELOPMENT: DOMESTIC

Some of our local partnerships and clients include:

- Shell Prelude Floating LNG (Shell) - Australian territorial waters, SM TAFE has developed customised programs and delivers training to technicians to enable them to be job ready to operate the Prelude FLNG facility (under this engagement SM TAFE also undertakes delivery in South Korea)
- Chevron Australia - workforce training and work readiness programs in a variety of areas, including business, logistics and engineering and with significant customised delivery to meet indigenous training needs
- Quadrant Energy – providing on and off shore process and maintenance training to technicians

WORKFORCE DEVELOPMENT: INTERNATIONAL

Some of our international partnerships and clients include:

- ConocoPhillips, East Timor - SM TAFE and ConocoPhillips in partnership provide workforce development for the East Timorese in the oil and gas industry. Graduates acquire customised technical language to efficiently operate in the global oil and gas sector
- Oil Search, Papua New Guinea - SM TAFE and Oil Search in partnership provide local workforce development
- State University of Surabaya (UNESA), Indonesia - SM TAFE’s Australian Centre for Energy and Process Training (ACEPT) role is to improve quality and training and skills certification at Bontang Techno Park to transform Bontang into an educational hub for South East Asia
- Abu Dhabi Vocational Educational Training Institute (ADVETI), United Arab Emirates - ADVETI in partnership with SM TAFE assists to deliver though auspicing 19 quality Australian qualifications to VET students to address industry skills shortages, delivering competent, operations-ready staff to Total Oil and Gas
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