

DEFENCE INDUSTRY TRAINING CAPABILITY STATEMENT



Meeting the workforce needs of Western Australia's Defence sector

South Metropolitan TAFE (SM TAFE) is working with Western Australia's world-leading Defence industry to deliver a pipeline of skilled workers to meet the future needs of the sector.

SM TAFE's Defence industry training can be customised to employers' needs or conducted within our framework of existing nationally accredited courses and utilising world-class facilities. Pathway programs are in place to bring together schools, TAFE, higher education and the Defence sector to attract, train, retain and re-train sector personnel.

SM TAFE training staff consult extensively with key industry stakeholders to ensure a whole-of-workforce development approach is adopted to deliver the right skills at the right time.

DEFENCE INDUSTRY TRAINING



APPLIED ENGINEERING



AUTOMATION



AVIATION



COMPOSITES TRADE



CYBER SECURITY



DEFENCE INDUSTRY TRADES (INCLUDING FABRICATION, PLUMBING AND MECHANICAL ENGINEERING)



DRONE TECHNOLOGY



INDUSTRY 4.0 (see page 5)



LOGISTICS, WAREHOUSING AND CATERING



MARITIME STUDIES



REFRIGERATION AND AIR CONDITIONING



SHIPBUILDING



SUBMARINE MAINTENANCE



CONSTRUCTION (ELECTROTECHNOLOGY)



SM TAFE Naval Base campus

The campus provides students and apprentices with hands-on experience in a real-life industry setting.

The Naval Base campus houses delivery for heavy fabrication, marine fabrication, welding and composite apprenticeship training, with a large focus on Western Australia's growing shipbuilding industry and the anticipated growth in student numbers.

The campus is equipped with state of the art fabrication and welding equipment. There are 45 augmented reality welding bays that have been constructed and equipped for multi-use, allowing MIG, TIG, Stick and Flux-cored Arc Welding, which caters for ferrous and non-ferrous material. This technology allows students to build muscle memory utilising all welding processes and positions.

The welding bay layout enables students to select the correct welding process for the job and allows trainers to provide a greater level of supervision to multiple groups.

Demonstration welding bays and augmented reality simulators allow lecturers to safely demonstrate welding techniques to students. Our computer numerical control (CNC) machines (CNC Plasma Cutter, CNC Guillotine and CNC Bender) are also an emerging technology of increasing importance in manufacturing.



Technology, collaboration, flexibility

Maritime Simulators

SM TAFE's ship, bridge and engineering simulator training suite is used in advanced maritime operations and engineering training such as navigation, cargo handling, vessel and engine room operations, and maintenance. The Kongsberg and Wärtsilä simulators assist in training future shipmasters, officers and engineers. Using simulated port and ship databases, trainees acquire skills in navigating and operating in varied environments. The technology features the most advanced mathematical modelling and shipping databases in the world and the hardware replicates the current equipment installed on seagoing ships.

Cyber Security

SM TAFE's Training Cyber Security Operations Centre (TCSOC) enables the college to be the first in the State to deliver a para-professional qualification in cyber security, tapping into the nationwide cyber security skills shortage. The TCSOC also has nodes to the SM TAFE Rockingham and Thornlie campuses, allowing all students to work in the safe environment. The centre is available for industry to hire to perform their own simulated scenarios, allowing investigations to test security posture in an office-scale development environment and train staff on potentially hazardous IT scenarios in a safe and controlled space. This facility is currently utilised by the Australian Army to conduct cyber security training sessions.

Industry 4.0

Industry 4.0 is known as the fourth industrial revolution and the next stage in manufacturing, while autonomous technology allows tasks to be performed without the control of a human. SM TAFE offers 22460VIC Diploma of Applied Technologies which prepares individuals to undertake paraprofessional technical roles within the industry 4.0 manufacturing and/or engineering environments. The program is also currently available as an existing worker traineeship. SM TAFE, as part of a collaboration with the University of Western Australia, is also seeking to identify where gaps may exist in national vocational education training products.

Automation and Autonomous Operation

SM TAFE has developed and launched Australia's first nationally recognised autonomous operation courses. Curriculum package for 52851WA Certificate IV in Autonomous Control and Remote operations has been developed, with input from the mining and resources sector, to support the industry's shift towards greater safety, productivity and remote operations. Participants develop skills in autonomous remote workplace and remote control room operations. Automating processes is another one of the Industry 4.0 trends boosting the efficiency of organisation's for the future.

Future Battery Industries

SM TAFE is collaborating with the national Future Battery Industries Cooperative Research Centre at Curtin University. SM TAFE is also fostering innovations in training with local employers and analysing future workforce capability needs and skills requirements.

BRITTANY-LEIGH WRAGG

Australian Trainee of the Year,
2022 Australian Training Awards and WA
Trainee of the Year, 2022 WA Training Awards

Brittany-Leigh Wragg is a graduate from the 52864WA Certificate III in Defence Industry Pathways Program. Employed by Programmed Training Services her training program allowed her to sample different job roles while undertaking work placement rotations, build a network of industry contacts and gain real-life experience.



ZOE GILLARD

Finalist WA Trainee of the Year 2022,
WA Training Awards Training Awards

Zoe Gillard is a graduate from the 52864WA Certificate III in Defence Industry Pathways Program and worked at Programmed Training Services and BAE Systems Australia. Since graduating from the program, she has become a Trainee Draftsperson at BAE Systems Australia.

Training delivery

Full-time and part-time, online and on site – SM TAFE’s workforce development and training options can be designed to meet the demands of its industry partners. Project-based learning and the use of state-of-the-art simulators is integrated into training that can also be customised to address specific skill sets within broader qualifications.



Training

- RPL
- Verification of competency
- Auspicing



Capability Development

- Twinning programs
- Embedded staff
- Corporate training



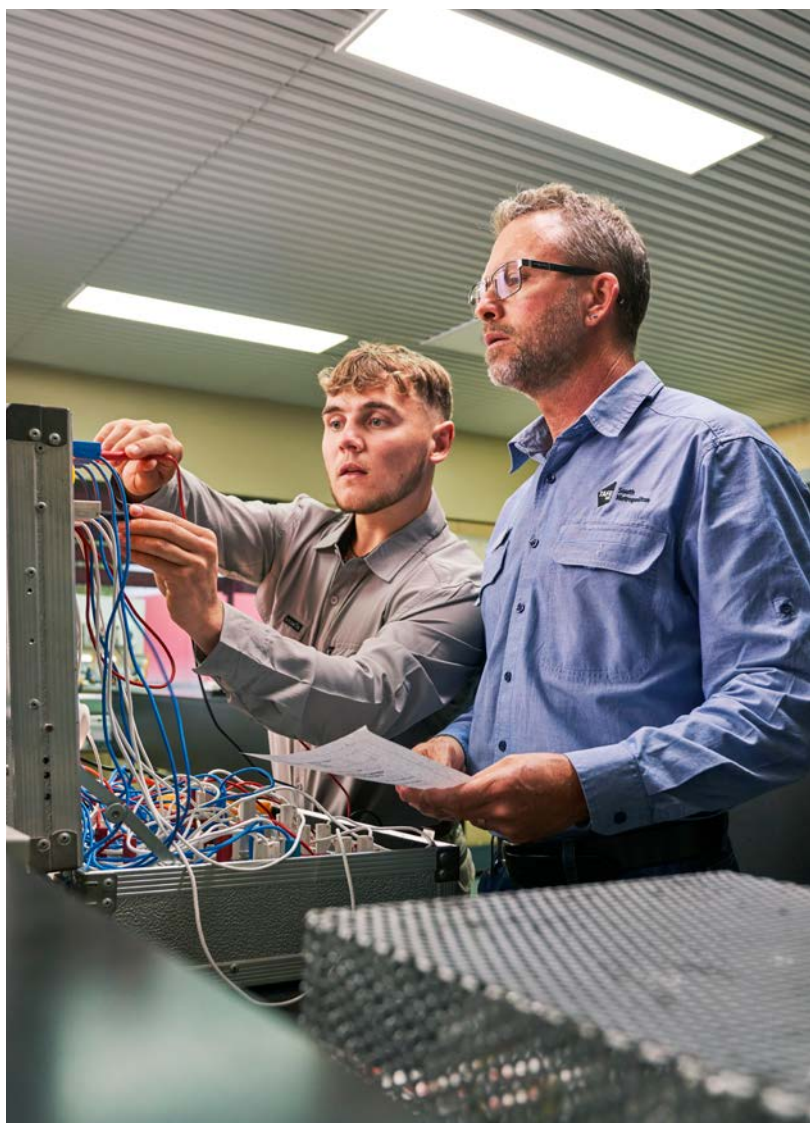
Consultancy

- Curriculum development
- Design of teaching materials
- Program evaluation



Co-design

- Curriculum co-designed with industry



Major partnerships

SM TAFE is the training provider of choice for the Defence industry in Western Australia with its long-established Defence industry relationships playing a key role in ensure a pipeline of skilled tradespeople.

Defence Industry

As Western Australia's largest trainer of apprentices and trainees, SM TAFE has a proven track record of collaborating with many major partners in the Defence sector, among them Austal, Babcock, BAE Systems, BRE Engineering, Civmec, Hofmann Engineering, L3Harris, Luerksen, Marine Technicians Australia, Raytheon, and Thales. We are providing trade and technical training for apprentices and trainees as well as contextualised GAP training for industry partners.

The 13th Brigade of the Australian Army

SM TAFE is partnering with the 13th Brigade to achieve a number of objectives related to workforce development and employment for students and soldiers.

Defence Trade Training

SM TAFE has a longstanding relationship with Defence to deliver a wide range of short skilling courses, trade and post-trade training programs for the Royal Australian Navy (RAN). These include specialist Navy courses encompassing hull, propulsion and diesel maintenance, electrical systems, maritime operations, instrumentation and control systems.

TAFECyber

Led by SM TAFE, TAFECyber is a national consortium of eleven TAFE providers. The Australian Cyber Security Centre (ACSC) which forms part of the Australian Signals Directorate (ASD), is working with TAFECyber as a delivery partner to grow a pool of Essential Eight Assessors nationwide who can assist government and industry better apply the Essential Eight Assessment Guidance Package. In time, this training course will become a stepping stone course for prospective Infosec Registered Assessors Program (IRAP) assessors to complete their professional pathway to full IRAP endorsement and form a key part of the Australian cyber security training ecosystem.

ASC

Since 2002, SM TAFE has partnered with ASC to provide a dedicated team of training system specialists, curriculum development consultants and training technology experts at the Submarine Training and Systems Centre at HMAS Stirling on Garden Island. Working closely with ASC and the Royal Australian Navy (RAN), SM TAFE provides training and support services to assist in the training of submariners. SM TAFE has also trained more than 45 apprentices indentured to ASC over the past ten years.

This partnership has seen SM TAFE develop leading edge training technology solutions including virtual reality, augmented reality, and virtual digital twin training environments. SM TAFE have also been instrumental in maintaining and creating all submarine training curriculum of the Collins Class Submarine and provides world-leading Collins Class training systems specialists in power systems, combat systems, platform operations and diesel maintenance and operation.

The future of Defence: educational pathways and partnerships

SM TAFE offers numerous dedicated Defence programs that create a seamless pathway between schools, TAFE, higher education and the Defence sector. High school students in years 11 and 12 can begin their Defence industry career journey via a range of study areas through SM TAFE's VET Delivered to Secondary Students (VETDSS) programs.

VETDSS Defence career programs encompass:

- Shipbuilding
- Defence trades
- Logistics and warehousing
- Engineering
- Submarine maintenance
- Maritime studies

Defence Industry Pathways Program

The award winning Defence Industry Pathways Program (DIPP) is a pilot program designed to bolster the State's Defence industry workforce. Trainees have been funded by the Department of Defence and Royal Australian Navy (RAN) where they undergo a combination of off-the-job training at SM TAFE and four work placement rotations with Host Employers within the maritime Defence industry.

With the increasing demand for workers in the shipbuilding industry in Western Australia, SM TAFE has been working with Defence to develop a bespoke training program aimed to attract and support new entrants to the industry. The Defence Industry Pathways Program (DIPP) developed in partnership with WA's maritime Defence industry, offers participants a 'taster' of the Defence industry to assist in the selection of a career pathway into the Defence industry. The nationally recognised Certificate III in Defence Industry Pathways qualification will be delivered as part of this 12-month traineeship.

STEM pathways

SM TAFE has partnered with Cecil Andrews Senior High School in a program that brings together high schools and industry to promote career options that arise from the study of STEM subjects (science, technology, engineering and mathematics).

SM TAFE manages delivery components within the P-TECH (Pathways in Technology) program, helping students transition from school to employment or further training and post-school qualifications. Work experience, industry mentoring, Defence career advice and STEM subject study support are among the benefits enjoyed by participating students.

Industry partners include Austal, Civmec, Thales, Deloitte and Datacom.

Women in Defence

SM TAFE is partnering with industry to deliver the Women in Defence Industry scholarship in 2023 to encourage women to take up a career in the Defence industry and fund six months of electronics and technical engineering training at SM TAFE. The scholarship has been designed to meet the needs of women who are returning to work, seeking a career change, recently completed high school or as an alternative pathway to university. The learning environment is structured to provide a high level of support for students returning to formal education.

The Women in the Defence Industry program provides scholarship to encourage women to take up a career in the growing Defence industry. It provides the valuable foundation skills for gaining employment in the Defence industry sector and is designed to meet the needs of women who are returning to work, seeking a career change or an alternative pathway to further study in qualifications that relate to the Defence industry. Participants gain relevant skills and knowledge targeting three sectors – supply chain management, trade, and technical occupations in the Defence industry.

Defence Industry Veterans Employment Scheme (DIVES)

The DIVES program offers 20 scholarships (per year over four years) to encourage veterans to take up a career in the Defence industry. The program is delivered by Defence West with recruitment for SM TAFE Defence industry courses through the Jobs and Skills Centre.

Snapshot

South Metropolitan TAFE is one of Western Australia's most diverse training providers, with 12 campuses across the southern suburbs of the metropolitan area. SM TAFE delivers more than 300 qualifications to around 25,000 students. SM TAFE also works with industry and businesses across the State, providing tailored workforce solutions to support and enable business growth.



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