

Capability Statement Clean Economy

Skills for the future workforce

A hand is shown holding a glowing globe of the Earth. The globe is illuminated from below, creating a bright orange and yellow glow. Overlaid on the globe is the text 'CO2' in large, white, sans-serif font. Below the 'CO2' text are five small, blue, downward-pointing arrows. The background is a dark, greenish-blue gradient with some faint, glowing particles.

CO₂

Training the local workforce since 1887



Commercial Business - Capabilities Statement

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... and into the future.

Quality Vocational Education and Training in Geelong

- Victoria's second largest city

The Gordon Institute of TAFE grew out of the need for technical training in the brave new world of the 1800s industrial age. From its origins as a mechanics institute, The Gordon Institute of TAFE has become the embodiment of quality vocational education and training in Geelong and beyond.

Transformation of traditional industrial practices to modern smart technology across rapidly advancing industries such as manufacturing and engineering has required The Gordon to adapt its training delivery to meet the skills and knowledge of the future workforce. This includes supporting the Victorian Government's 10-year clean economy plan to create the training and skills opportunities for workers, businesses, and industry.

Our Mission

The Gordon Institute of TAFE's mission is to provide an enriching student experience that promotes pathways for employment or further study and lead the skilling of industries and communities.

Our Awards

At the Victorian International Education Awards held in Melbourne in October 2022, The Gordon was awarded:

- Excellence in International Education - TAFE
- Excellence in International Student Experience
- Premiers Award for International Education Provider of the Year.

At the 2022 Victorian Training Awards, The Gordon was a finalist in the Inclusive Training Provider of the Year category.

In 2023 The Gordon was shortlisted for the Victorian Multicultural Awards for Excellence.



4

campuses. The Gordon is one of Victoria's largest vocational education and training (VET) institutes.

650+

full-time staff members.

14,000+

students studying amongst The Gordon's four campuses.



75+

international students
from 75+ countries.

1887

The Gordon has been a
leading Industry Training
Provider Since 1887.

60%

of students reside in
the wider Geelong
catchment region.

The location of The Gordon

The Gordon Institute of TAFE has been providing quality education for more than 135 years.

With multiple campuses servicing the Geelong, Wyndham, Ballarat and Colac regions, The Gordon delivers an extensive range of study options, with qualifications ranging from Certificate I to the Advanced Diploma level as well as apprenticeships and traineeships.

For organisations looking to provide training for their staff, the institute offers a diverse range of courses that can be customised to meet client needs, including flexible accredited and non-accredited training, such as micro credentials or short courses. These can be delivered to clients on campus or in the workplace, entirely online, or blended (mix of face-to-face and online delivery), adhering to the qualification and unit framework created.

Our extensive infrastructure and facilities provide a reliable platform and depth of capability to deliver high quality training and skill development solutions to meet the needs of industry – now and into the future.

World-class Culinary Training

The city campus is home to a world-class \$23.5m culinary school that was re-developed and officially opened in September 2022. The redevelopment has transformed the facilities into a world-class hospitality and cookery training centre capable of competing locally, nationally and internationally.

The Gordon currently delivers all manufacturing, engineering, automotive and mechanical courses, from its East Geelong Campus, just 10 minutes' drive from the Geelong City Campus. This site is home to ultra-modern training facilities including the Advance Manufacturing Program Area (AMTECH) and Advanced Manufacturing and Composites Centre (AMACC).

The East Campus Geelong also houses the Hybrid Vehicle Training and Simulated Automotive Workshop, funded by the State Government, to enhance the overall training experience for Automotive Mechanical Diagnosis students through the provision of a new hybrid vehicle, a Tesla, and state-of-the-art hybrid technologies, in line with future industry settings, needs and standards.

Study Areas:

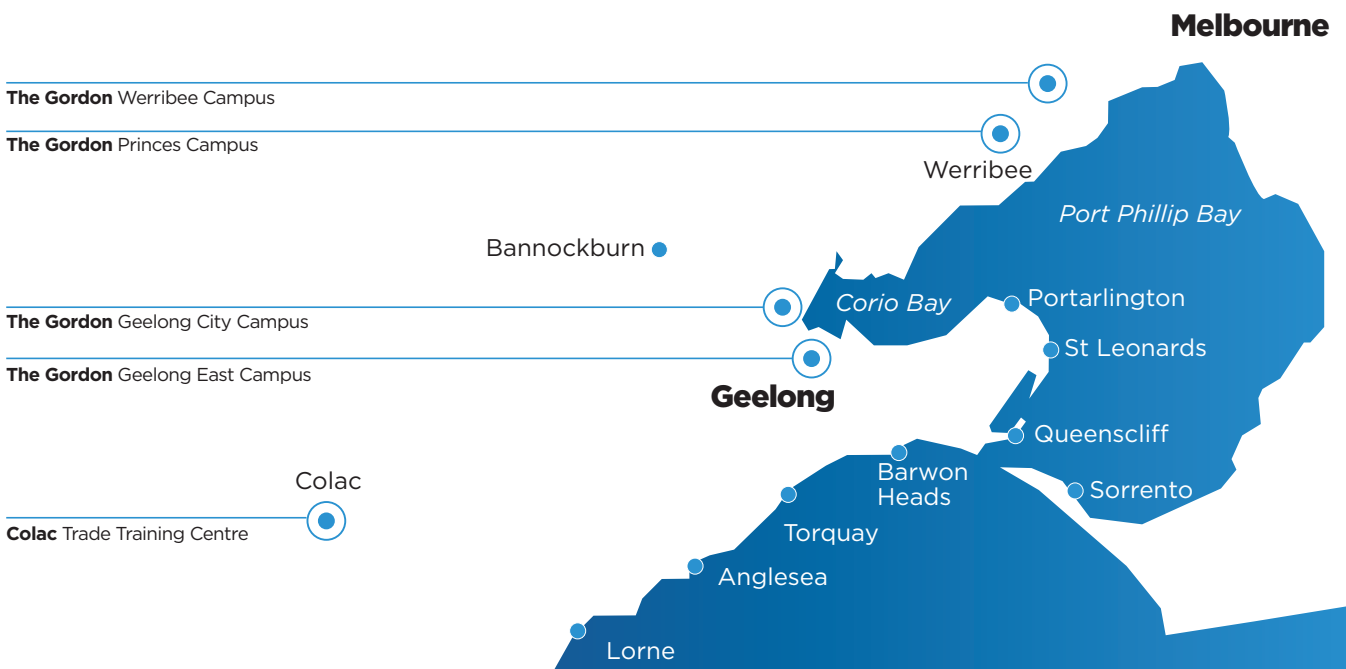
- Accounting
- Aged Care
- Building Design and Construction
- Clean Economy
- Community and Social Welfare Services
- Commercial Cookery and Patisserie
- Early Childhood Education
- English for Academic Purposes (EAP)
- Engineering
- Graphic Design
- Hairdressing
- Horticulture, Land Management and Conservation
- Information Technology and Computing
- Interior Design
- Laboratory Technology
- Nursing Remedial Massage
- Science and Technology.

The Gordon Institute of TAFE is located on the beautiful Port Phillip Bay in Geelong, the second largest city in Victoria only 1 hour from Melbourne and 30 minutes from the Great Ocean Road. Our enviable coastal location creates harmony for industry and tourism.

The Western Growth Corridor between Melbourne and Geelong will see an increase in population to 400,000+, with an industrial and logistics centre focused around the

Avalon Airport that will expand to include new international and air freight terminals. Geelong has a deep water port and special cargo facilities and has been a major manufacturing and shipping hub for over 150 years.

This location also offers a safe and affordable coastal lifestyle in a vibrant university town with a strong tourism industry due to the birth of the surfing industry and the proximity to many cultural and nature based tourist attractions.



What is the Clean Economy

The clean economy encompasses initiatives, practices and products which address climate change mitigation and adaptation, encourage renewables, and compliment the transition to a circular economy.



Climate change mitigation and adaption

Activities to prevent or reduce emissions, and processes to adjust to the current and future effects of climate change.

Climate mitigation

- The efforts and actions taken to reduce greenhouse gas emissions or remove them from the atmosphere
- Reduces the extent of climate change.

Climate adaptation

- Adjustments societies and ecosystems implement to cope with the impacts of climate change
- Involves proactive measures to minimise vulnerabilities and build resilience.
 - » Moving away from fossil fuel
 - » Adopting alternative fuels
 - » Designing infrastructure with climate resilience
 - » Conserving water used for manufacturing.



Renewable energy

Transition from fossil fuels to renewable energy sources, including solar, wind, tides and geothermal heat.

Renewable energy

- Biomass energy, hydro energy, solar energy, wind energy, geothermal energy and ocean energy.
 - » Biomass energy conversion technologies
 - » Geothermal heat
 - » Electricity production
 - » Wind conversion.



Circular economy

An economic system that focuses on the sustainable use of resources, including reuse, repair, remanufacture and recycling.

Circular or regenerative economy

- Economic system that is restorative and regenerative by design
- The goal is to design products, components and materials to regenerate to their highest utility and value, and this is done through consciously designing resource pathways in advance
- Product design for durability and reusability:
 - » initiatives to reduce waste and conserve materials
 - » implementing product hiring and subscription business models.

Into the Future

Skilling the Clean Economy Workforce

The Gordon is an icon in Geelong, and continues on this history of success, with the vision to be the first choice in our markets and the leader in our field. This includes leading the skills development of the Victorian workforce to support the state's transition to a clean economy.

The institute is focused on building the foundations needed for training pathways and the growing demand for skills as the state moves towards net-zero emissions by 2045.

The institute is positioned to support the Victorian Government in its ambitious goals to reduce the impacts of climate change through investment in innovative technologies and creating new training and development systems that expand as organisational operations in the industry grow, including the development of new training solutions, skilling, re-skilling and up-skilling pathways for new and developing workforce entrants.

This will ensure the emerging industry has access to a skilled and capable workforce with the institute developing and delivering a "world-class model" of training and development to create and sustain a pipeline of workers and build regional capability and capacity for the clean economy and renewable energy sector.

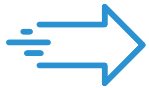
'The clean energy sector is now preparing for a period of extraordinary growth and development as Australia accelerates towards a fully clean energy power system and positions itself as a global clean energy superpower.' - 'Skilling the Energy Transition' Report, Australian Clean Energy Council

Almost 500,000 existing Victorian jobs will be adapted for the clean economy.



Clean Economy Opportunities

Australia's clean energy workforce contains higher proportions of VET-qualified workers than the broader labour force. Projected workforce demand and shortfalls:



Two million workers in building and engineering trades by 2050, an increase of around 40%.



Occupations with the highest growth rates (2023-2030) - Telecommunications Trades Workers, Electronics Trades Workers, Electrical Engineering Draftspersons and Technicians, Structural Steel Construction Workers, Construction Managers, Plumbers and Electricians.



Approx 26,000 to 42,000 more electricians will be needed in the next seven years.



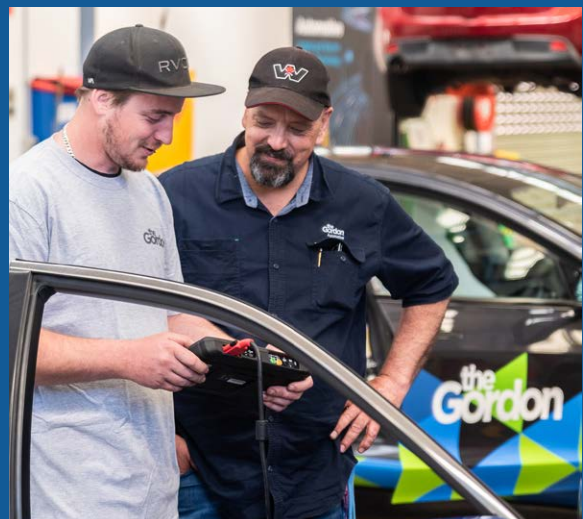
Clean energy supply workforce will likely need to grow from approximately 53,000 workers today to 84,000 by 2050.

There is strong growth in trades and technical occupations, particularly for occupations that are critical to clean energy such as Electricians, Metal Fitters and Machinists, and Plant Operators.

Resource: Jobs and Skills Australia, *'The Clean Energy Generation – Workforce Needs for a Net Zero Economy report'*, published October 2023



2023 Automotive students.



2023 Automotive student and teacher electric vehicle training.

Addressing future skills needs



Transitioning to a clean economy has enormous opportunities for industry — sustainable practices not only mitigate environmental impacts but also drive economic growth, job creation, competitive advantage, and innovation. A Training Needs Analysis recently conducted by The Gordon to identify and examine current and future training needs across the region found several opportunities:

Key Findings and Recommendations

1

Technology and Infrastructure

Opportunities

- Physical facilities for experimentation
 - » Adopt clean economy practices and reconfigure manufacturing processes and integrate new technologies.
- Access to infrastructure and specialised tools/ equipment/ machines
 - » Increase access to such tools to support the adoption of clean technologies.
 - » Train employees to operate specialised tools effectively, may require additional investment.

2

Development of business cases for clean economy initiatives

Opportunities

- Clarify ways to create a competitive edge to transition to the clean economy
 - » Identify competitive advantages of clean economy practices.
 - » Strategic marketing highlighting the environmental and social benefits or improved product quality could help justify the business case.
 - » Incentives to adopt clean economy changes and technologies varies across industries and markets, therefore a focused effort on each sector could showcase the advantages more effectively.

3

Promotion of the clean economy transition

Opportunities

- Provide further industry specific information for organisations about the need for and benefits of transitioning to a clean economy.
- Support the embedding of sustainability into an organisation's values, decision-making processes and day-to-day operations.
- Foster a culture of innovation, adaptability and open-mindedness.
- Support leadership commitment, consistent messaging and alignment of incentives and rewards with sustainable practices and transition opportunities.
- Communicate benefits of aligning to the clean economy through a long-term vision for the organisation to alleviate fears and uncertainties
- Highlight successful industry-specific clean economy initiatives and their positive impacts to inspire confidence in the transition and showcase the organisation's commitment to positive change.

Partnering with The Gordon

Changing technologies and work practices as the region transitions to renewable energy, circular resource use and climate resilient practices will create new jobs, increase demand for existing occupations and provide opportunities to upskill existing workforces. Education and training will have an integral role in preparing industry for a clean economy workforce.

The Gordon is a trusted partner of many organisations, both locally and internationally, delivering bespoke education and employment programs that meet business goals and objectives. The institute builds collaborative partnerships to ensure ongoing successful outcomes through open and clear communications and a thorough understanding of the requirements expected.

The Gordon has a range of clean economy-related offerings to support local organisations in their transition to a clean economy. These can be customised to meet specific needs, such as

Micro credentials and short courses

Short, sharp courses targeting specific industry needs, designed to upskill or reskill the workforce.

Standard training

Enrol students and/or employees into The Gordon's public courses.

Industry-relevant specialised courses

Customised courses to suit specific industries and sectors.

Training models & career pathways

Traineeship and work placement models supported by pathways into further training or employment.

Workshops and webinars

Focussed on clean economy literacy and communication to ensure both technical and non-technical staff understand and utilise a shared language and awareness of clean economy principles.

Customised offerings

Work with The Gordon to develop training, and determine if the training can be accredited.







International Partnerships

The Gordon can develop non-accredited training mapped to Australian qualifications to allow pathways to onshore qualification.













Course development and mentoring

Assist with developing internal training and provide delivery and quality guidance.

Key Clean Economy occupations already in high demand

	Data analysts
	Electricians
	Engineers
	Labourers
	Plumbers
	Project managers

Clean Economy Impacts on Key Sectors

	Buildings and energy efficiency
	Construction and infrastructure
	Emergency services
	Energy generation and storage
	Energy transmission and distribution
	Food and agriculture
H₂	Renewables e.g. solar, wind, green hydrogen
	Land and marine management
	Manufacturing / remanufacturing
	Private transport
	Public transport
	Textiles
	Waste management and resource recovery

Spotlight on The Gordon teachers



Andy Heath
Electrotechnology Teacher
*Post trade/ Photovoltaic Battery
Storage Coordinator*

Electrotechnology teacher Andy Heath has been involved with the renewable energy industry for 15 years, initially attracted to its rapidly evolving nature as a field that was then considered 'new' and 'emerging'. An A-grade electrician by trade, his background in automation and electronics suited the design elements associated with the programming and commissioning of inverters and battery charging systems.

Andy began teaching at The Gordon in 2008, delivering Photovoltaic (PV) Grid Connect training to electricians so they could learn how to install solar panels onto residential homes. Today, he focuses on battery storage training and delivering the solar units within the Certificate III in Electrotechnology to apprentice electricians. "I love working with people to enable them to build upon their skills and knowledge and to then see them take this into the workplace where they can use this to advance their careers," says Andy. "Seeing and talking to past students at conferences and workshops to hear what they are doing now is always a buzz."

Andy is keen to build and expand upon the renewable training offered at The Gordon. "I believe our facilities are the best regional training setup in the state and we are committed to providing our students with high quality outcomes in what we deliver," he says.

Andy currently sits on the Solar Energy Installers Association of Victoria (SEIA Vic) committee to provide support and the latest information to members on the constantly changing world of solar, battery storage and home electrification through renewable energy. He was also recently involved with the development and trial of the New Energy Technology Systems (NETS) program that was introduced in Victoria to design and install battery storage systems for PV Grid connected systems.

Andy says the constantly evolving industry makes it "tough", however it is a "very rewarding industry" to be part of. "We are dealing with a variety of different consumers that pursue renewable options for many different reasons, and because of this, they also need it to work," he says. "Seeing Australia continue to move towards a more sustainable future is always a good thing - and every little step counts."

Spotlight on The Gordon teachers



Ollie Buckley
Teacher – Mechanical Technology

Ollie Buckley has enjoyed a rewarding career that began and continues with The Gordon – first as an engineering student and now as a Mechanical Technology teacher. This unique career progression is testament to the training delivered at The Gordon, an institute Ollie describes as a “great launching pad for commencing studies that lead into higher learning or into industry”.

Ollie was an engineering student in 1999, completing Certificate III, Diploma and Advanced Diploma in Engineering before embarking on the Bachelor of Engineering (Mechanical) at Deakin University. Since then, he has undertaken numerous roles in the industry, including work on the recently opened Geelong Arts Centre which he describes as an experience that was challenging, amazing and one of his career highlights.

After completing Certificate IV in Training and Assessment, Ollie is now proudly “developing the next generation of engineers” as the Diploma of Engineering teacher, a role he commenced in March 2023. “I enjoy connecting with the students and passing on the knowledge that I have gathered throughout my time in the industry,” Ollie says. “I also enjoy watching the students develop their own skills and pushing themselves to achieve a high level with their results.”

He says the engineering sector has a “huge responsibility” to keep advancing. “The industry should maintain the highest standards when it comes to the way we look after the environment,” he says. “I’m interested in how our industry can look to the future and change some previous methods to make sure we leave our planet in a better place.”

Ollie continually reviews new technologies and loves discussing these with the next generation of engineers. “I believe that they will be the ones that will drive these changes for years to come,” he says. “Now is a great time to commence in the industry as there is a high demand for people in many different areas. There are several developing areas that need qualified people to assist and progress these projects.”

‘By undertaking The Diploma of Engineering at The Gordon you will gain a great variety of skills. We offer a collaborative classroom learning space and an Engineering workshop. You will have a hands-on learning space to gain valuable skills to set up your knowledge base for your future years within the industry.’



Projects supporting the Clean Economy transition

The Gordon understands the rapid adoption of hybrid, electric and hydrogen/fuel cell vehicles in Australia is placing enormous strain on the skills capacity of the automotive workforce. The institute has been working with the automotive industry, including two of the biggest and popular car brands, to upskill employees through hybrid electric and battery electric vehicle training. A range of elective units on offer ensure participants receive the training needed by their employer within the accredited program. The training provided, to further develop their diagnostic and technical skills, is transferrable across all zero emission vehicle (ZEV) systems now and into the future, which improves workforce capability and skills needs



Above: On completion of training at the East Campus, automotive technicians have the skills and knowledge needed for the specialist field of zero emission vehicles

Targeting future training needs

The Gordon secured a Victorian Government grant to work with the advanced manufacturing industry to identify the sector's future clean economy training needs.

The grant facilitated The Gordon's partnership with Geelong Manufacturing Council (GMC), the City of Greater Geelong, Skilling the Bay and Geelong Tech School to deliver a suite of projects that would help to understand and prepare the local advanced manufacturing industry and education providers for new jobs and training to achieve a net zero emissions economy. This includes increased 'circular economy' and 'clean economy' understanding of the workforce skill gaps that can be translated into education programs that will produce job-ready students for the innovations emerging across the manufacturing and construction industries.

The Project includes: Advanced Manufacturing Training Needs Analysis, a Student Industry Project, and a Teacher Immersion Program.



Creating flexibility within the delivery of ElectroTechnology programs

This project aims to enhance the overall training experience for up to 800 electrotechnology apprentice electricians in line with current and evolving industry settings. The shift to greater digitalisation and a clean economy focus means the program area needs to respond and adapt with this change to best meet future needs and standards.

AgTech Skill Builders

Funded by the Agriculture TAFE and Training Fund, AgTech Skill Builders addresses and develops the skills needed for the 'tech-minded' local agribusiness sector to bolster the region's capabilities and economic competitiveness, to become the advanced 'AgriTech' hub of the future. Careers in local agriculture have moved beyond traditional farming to incorporate varied professions from food innovation, agri-tourism, sustainable agriculture, engineering, Internet of Things (IoT), entrepreneurialism and finance. This project provides flexible training options by collaborating with industry to develop a series of microcredentials (non-accredited and accredited) to meet current and future skill gaps identified around the Geelong region. Regional skills profiles and round table events involving The Gordon identified the need for collaborative design thinking skills using emerging technologies to address challenges.

Industry 4.0 - Simulated Engineering Workspace

This project develops the skills of Industry 4.0 and its increasing use of automation and modern smart technology. With the growth of manufacturing, engineering and defence opportunities in the Geelong region, it is important for The Gordon to develop these skills. Provision of new state-of-the-art classroom equipment — in line with future industry settings, needs and standards — has enhanced the overall training experience for engineering and manufacturing students. Having new specialist equipment available for student use in a simulated training environment ensures job readiness and the skills developed will meet future workforce demands. Exposing students to real-world environments assists to bring skills and practice-based understanding into modern workplaces.

“Working with industry to identify and understand the jobs of the future — and the training of those jobs — that will prepare Geelong’s growing advanced manufacturing sector for the future, improve partnerships between education and industry, and identify strategic opportunities.” - Kerry Lester-Smith, Project Manager, Clean Economy Training Needs for the Advanced Manufacturing Sector



Established Partnerships and Industry Connections

The Gordon is proud of its extensive partnerships and connections across the region, working with industry, peak bodies, key stakeholder groups, advocacy organisations, and local and national organisations in the endeavour to increase educational and skills outcomes for industry to grow and advance, particularly in the transition to a clean economy.

The institute has established relationships with a diverse range of employers across the Geelong region and has a demonstrated capacity to leverage relationships across the education, community, government and business sectors.

Geelong Manufacturing Council (GMC)

The institute has partnered with Geelong Manufacturing Council (GMC), a non-political, not-for-profit organisation funded by industry partners, for more than two decades. The long-term collaboration is underpinned by the shared vision to ensuring the changing needs of manufacturing in the region can be met. The Gordon and GMC also work at a grass roots level supporting socio-disadvantaged community members to undertake foundations skills training that has direct connect to employment opportunities.

Advanced Fibre Cluster Geelong (AFCG)

The Gordon has a key role in the Advanced Fibre Cluster Geelong (AFCG), a group formed in 2018 by highly innovative Geelong companies with the goal of establishing the region as a global centre of excellence for advanced fibre and composites innovation. The Gordon is supporting the AFCG with developing a deeper understanding of the current skills and training needs and future requirements of the industry in order to further build capability in the region. Significant opportunities exist to develop materials and products which are lightweight, highly durable and adaptable, and more environmentally sustainable.

Skilling the Bay

Skilling the Bay (STB) is a unique regional job creation initiative established in 2011 and led by The Gordon in partnership with the State Government and Deakin University. STB supports clients by highlighting the career pathways, traineeship and apprenticeship opportunities that can be offered, and contributing to the creation of a pipeline of workers.

Key stakeholders

- Advanced Fibre Cluster Geelong
- Andritz
- Austeng
- Backwell IXL
- Carbon Nexus
- Carbon Revolution
- Confidence Company
- Ford Australia
- Geelong Manufacturing Council
- Kempe
- Quickstep
- Sykes Racing
- Tasweld Engineering
- Thornton Engineering
- Viva Energy.

The Gordon supports new and growing industry groups and organisations to define their clean economy workforce skill needs and determine the required skill level of their current and future workforce. Our capability in this area can enable effective progress towards high quality training to improve performance, safety and excellence, and provide career pathways and opportunities to upskill, cross-skill and re-skill thanks to a wide range of consistent training packages on offer.

Key Capabilities and Priorities

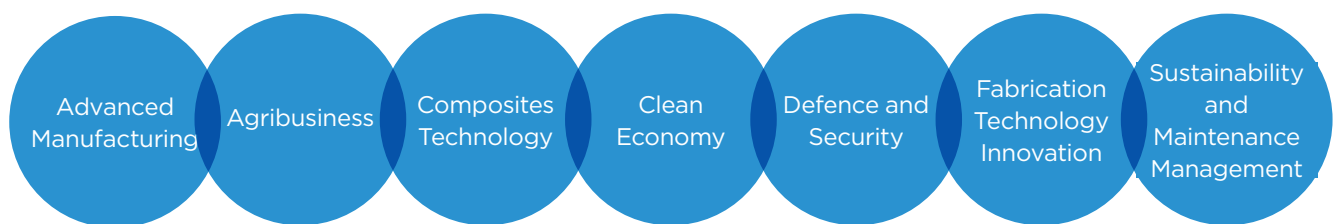
Key capabilities

- Advanced Manufacturing and Composites Centre (AMACC) for delivery of Australia's first course dedicated to using carbon fibre in composite manufacturing
- Advance Manufacturing Program Area (AMTECH) featuring state-of-the-art facilities
- Close connections with major industries in Australia and Asia
- Continuous review of programs to ensure they are Australian Skills Quality Authority (ASQA) compliant and reflect current industry practices
- Highly experienced and professional teaching staff
- Modern and engaging e-learning delivery to support practical training
- Nationally recognised programs with pathways to higher education
- Specialist facilities, equipment and resources
- Supporting advanced skills and the transition to a clean economy.

Innovation priorities

- Advanced cognitive skills will be important in an Industry 4.0-enabled environment
- Attracting, supporting and advancing women in non-traditional roles
- Australia's first course dedicated to carbon fibre in composite manufacturing
- Committed to emerging industry of composite manufacturing and new materials
- Creating industry-led training
- Creating pathways into the manufacturing sector for new entrants
- Digital literacy – preparing workers for technology-rich environments
- Intelligent data analytics skills – Industry 4.0 technologies
- Ongoing support and advice to Advanced Fibre Cluster Geelong (AFCG)
- Upskilling – complementing existing skills base through pathways into advanced manufacturing industries, and shorter training such as micro-credentials.

Key focus areas



Real skills.

Real experience.

Real outcomes.

Committed to Inclusivity, Equality and Diversity

The Gordon is a diverse organisation that is committed to respecting and celebrating the region's Aboriginal and Torres Strait Islander heritage.

In 2020 The Gordon launched its inaugural Reconciliation Action Plan (RAP), an important element of ongoing engagement with Aboriginal and Torres Strait Islander people. In 2021, the \$450,000 Kitjarra Centre was officially opened by Minister for Training and Skills and Higher Education, Gayle Tierney. The Centre, developed as part of the \$23.5 million refurbishment and modernisation of The Gordon's culinary school at the City Campus, houses the Aboriginal Education Unit and is an important part of the Victorian Government's Marrung: Aboriginal Education Plan 2016-2026 designed to increase engagement and participation of Aboriginal students in vocational education and training.

Overall, the institute aims to ensure everyone at the institute, including the International community, feels included valued and respected and has access to equal opportunity, which supports full participation at work and in the broader community. The Gordon strives to retain the diverse workforce talent and support staff to maintain a long and productive working career.

The Gordon complies with the Gender Equality Act 2020 and is committed to reflecting the region's diverse community across the workforce and to creating an inclusive work environment. The Institute also recognises that valuing the individual skills, perspectives and experiences women bring to the workplace contributes to a high performing organisation and improved service delivery.

The Gordon

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