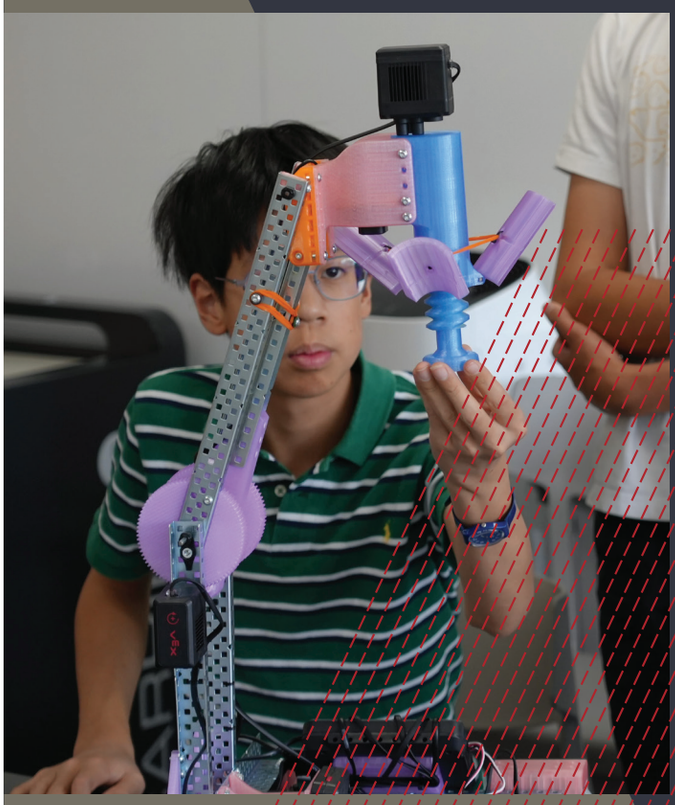
YARRA RANGES

TECH SCHOOL

2026 PROGRAMS



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YARRA RANGES
TECH
SCHOOL

ABOUT US

Yarra Ranges Tech School (YRTS), located at Box Hill Institute's Lilydale campus, provides schools with the best STEM education possible. Funded by the State of Victoria, we are part of the Victorian state government's Tech Schools initiative.

By aligning our technologically advanced programs with the Victorian and VCE curriculum, we ensure that our educational offerings are both comprehensive and relevant. Our programs are designed to promote student engagement and agency, fostering a dynamic and future-oriented learning environment.

We place strong emphasis on collaboration with partner schools to develop bespoke programs tailored to the specific learning needs of students. This personalised approach ensures educational experiences are aligned with the curriculum and cater to the unique requirements of schools and students.

We support partner schools by providing access to advanced manufacturing and printing equipment, empowering students to learn skills using the latest technology.

Facilitated by a blend of VIT-registered teachers and industry experts, our programs offer a rich combination of pedagogical excellence and practical industry insights. This unique mix of expertise ensures students receive a well-rounded education, preparing them for future challenges and opportunities in the rapidly evolving technological landscape.

HOW TO BOOK

QR code

The QR code on each page of this book links to our online booking system. Simply scan the QR code, select an available date and answer a few quick questions to secure your booking.

Phone

Please feel free to call us on 9286 9584 to discuss your booking with our staff. Our team will happily guide you through our programs, make personalised changes, and confirm your booking.

Email

For complicated bookings,
please feel free to email our team at
YRTSProgrambookings@boxhill.edu.au

We will respond within 24 hours.

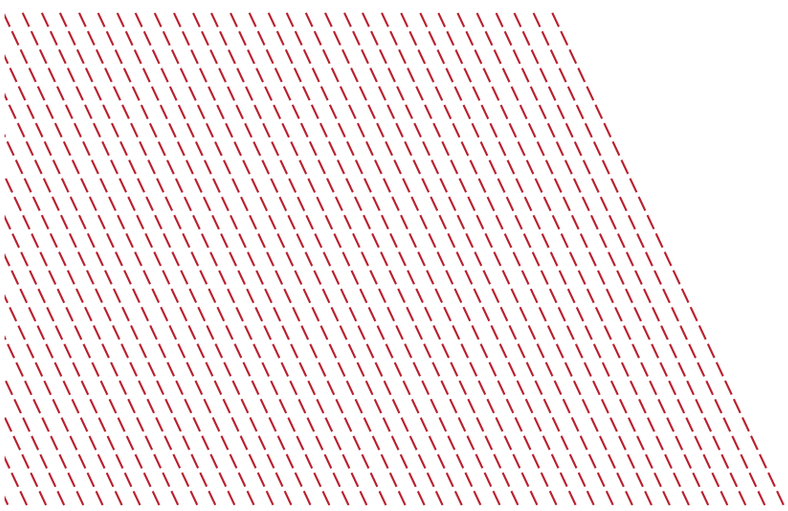
Bus bookings

We automatically book buses for your excursion. If you prefer to use your own bus, please notify us at the time of booking.

Due to our proximity to Lilydale High School and CIRE – Lilydale, we do not automatically book buses for these schools.

Costs

Our programs are delivered free to partner schools. You may be charged for materials in instances where students choose to produce items outside the normal scope of the program.



Bespoke programs

You can partner with us to create customised programs that meet the specific needs of your school. We collaborate across all subject areas to develop technology-enhanced programs that engage your students and cater to their learning requirements.

These programs can either expand on existing units of work or introduce innovative approaches to help you achieve your educational goals. Often, these tailored programs grow into larger initiatives that involve all partnering schools.

Structured workplace learning

We offer two structured work placement spots per day in areas such as IT infrastructure, smart farming, film and video, machine maintenance, and software development.

Structured work placements allow students to manage our assets and influence future endeavours and programs, giving them agency over their learning environment. Managed through OELLEN, these structured work placements provide practical, hands-on experience in various technological fields.

Industry experience

We're here to create tailored experiences that link students to valuable opportunities. We have a variety of industry partners and are happy to connect students with future employers or arrange engaging industry tours. If you have a specific organisation in mind or would like to visit one of our partners, please get in touch.

Bookings

Email yrtsprogrambookings@boxhill.edu.au

THEM IN STEM

Up to 100 Students

1 day 9:30 - 2:30

Cross-curricular

How can creativity, technology, and community come together to celebrate identity and inspire future pathways?

THEM in STEM, an inclusive, multi-school program, invites LGBTIQ+ students and their allies to come together and celebrate identity, expression, and innovation through design and technology.

Each event features inspiring talks from guest designers, artists, and industry professionals who share personal stories, empowering students to express their authentic selves in STEM and creative industries.

Students will engage in hands-on workshops exploring creative and digital technologies such as virtual reality (VR), laser cutting, 3D printing, and robotics. Alongside peers from partner schools and rainbow clubs, they will collaborate on expressive tech-based projects and explore future possibilities in design and innovation.

The program promotes confidence, creativity, and connection, providing a vibrant space where all identities are welcomed, recognised, and celebrated.

Learning goals

- Recognise and celebrate diverse identities in STEM and creative industries
- Express personal identity through creative and digital technologies
- Collaborate with diverse peers to build community and shared understanding
- Engage with role models and industry experts to envision future pathways
- Demonstrate curiosity and problem-solving through hands-on tech exploration

Dates

- February 17
- October 9

Bookings

Scan the QR code or visit theminstem.yrts.com.au

→

GIRLS IN STEM

Up to
100 Students

1 day
9:30 - 2:30

Cross-curricular

What's possible when young women and non-binary thinkers take on tomorrow's biggest challenges?

Girls in STEM is a high-energy, hands-on event inviting young women and non-binary students in Years 7–12 to discover the exciting world of science, technology, engineering, and mathematics.

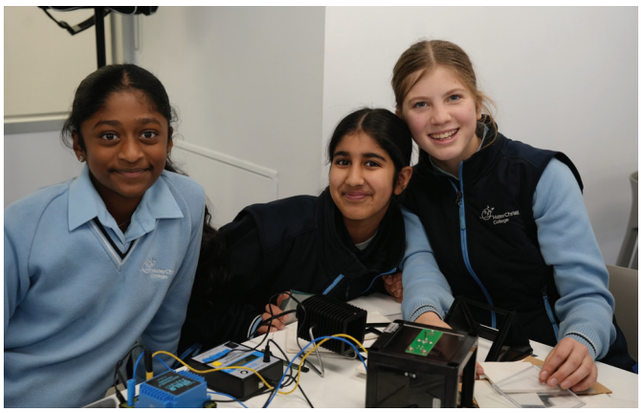
Through immersive workshops, students explore fields such as pharmacy, engineering, virtual reality, and robotics while working alongside inspiring female scientists, engineers, and industry experts.

From collaborative STEM challenges to real-world investigations, the day is designed to spark curiosity, grow confidence, and showcase future-focused opportunities in STEM careers. Students will engage in practical experimentation, meet role models, and develop critical thinking and communication skills in a vibrant, inclusive environment that celebrates diversity in innovation.

Whether students are curious about how things work or ready to change the world through tech, this event is their launchpad into the STEM possibilities of tomorrow.

Learning goals

- Explore real-world applications of STEM through hands-on investigations
- Build confidence and curiosity in STEM through collaboration and experimentation
- Connect with STEM role models to discover inspiring career pathways
- Recognise the value of diversity and inclusion in scientific innovation
- Develop critical thinking and communication skills through interactive STEM challenges



Dates

- March 5
- November 16

Bookings

Scan the QR code or visit girlsinstem.yrts.com.au

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SPOOKY STEM

Up to 100 Students

1 day 9:30 - 2:30

Cross-curricular

Can you blend science, suspense, and storytelling to bring a spooky story to life?

In this creative media production program, students will dive into the world of spooky storytelling by developing and producing short horror-themed films using industry tools.

Working behind the scenes like real film crews, students storyboard eerie scenes, apply virtual makeup, and experiment with lighting, sound design, and special effects to build suspense and atmosphere. They'll learn how to use cameras and editing software. LED wall technology will bring their haunted visions to life.

From concept to final edit, students will apply both creative and technical skills, gaining experience across the full media production pipeline. Whether they're designing soundtracks, crafting jump scares, or directing ghostly scenes, participants will reflect on the power of storytelling to engage and influence audiences.

Collaboration will be key as they work in production teams to deliver chilling short films that thrill and entertain.

Learning goals

- Develop and produce a themed multimedia story using film and digital tools
- Experiment with visual and sound elements to evoke mood and atmosphere
- Apply creative and technical skills across the media production pipeline
- Reflect on the role of storytelling and design in engaging and influencing audiences
- Collaborate effectively in a production team to bring creative visions to life

Dates

- October 30

Bookings

Scan the QR code or visit halloween.yrts.com.au

→

AI & VR ART: IN SPACE

Up to
50 Students

1 day
9:30 - 2:30

7-10 Vis Com
7-10 Visual Art
VCE VCD

What is an art space, and what could it be in the age of artificial intelligence and virtual reality?

In this innovative, future-focused program, students imagine themselves curating an art exhibition in space. Through a fusion of creative exploration, digital tools, and immersive technologies, they reimagine what art can be and how it might be experienced beyond Earth.

Using AI tools, students generate, refine, and enhance original digital artworks. They learn how to integrate their creative vision with technical design skills, producing eye-catching visuals such as posters or concept art. These activities introduce students to the role of algorithms and machine learning in creative processes.

As the day progresses, the focus shifts to immersive design. Working in pairs, students use VR software to build interactive 3D environments and virtual reality art installations. They experiment with form, colour, sound, and spatial storytelling, developing collaborative and innovative thinking skills.

The day culminates in a virtual gallery showcase, where students curate and present their work for peer feedback and audience reflection.

Learning goals

- Develop understanding and critical perspective on the advantages, challenges, and debates surrounding AI art
- Develop proficiency in AI art tools, including text-to-image and generative techniques
- Acquire graphic design skills using design templates and assets
- Experiment with form, colour, and special effects within a 3D virtual environment for artistic expressions
- Present and critique digital artworks by providing constructive feedback to peers

Career pathways

- Digital artist
- AI artist
- VR designer
- Interactive media designer
- 3D animator

Tertiary connections

- Cert IV in Design
- Cert IV in Visual Arts
- Diploma of Digital Media Technologies
- Diploma of Graphic Design
- Bachelor of Design

Bookings

Scan the QR code or visit aivr.yrts.com.au

→

FUTURE YOU

Up to 50 Students

1 day 9:30 - 2:30

7-10 Vis Com

What does your future self look like?

This dynamic program invites students to explore identity, inclusivity, and self-expression through the lens of graphics and product design. Using industry-standard tools, they bring their future-focused personas to life through creative digital storytelling and product creation.

Students begin by exploring personal narratives and identity themes, developing visual concepts that represent who they want to be in the future. Through digital illustration and generative AI, students produce logos, posters, and wearable designs. They learn to design high-quality prints and transfer digital artwork onto textiles using heat press technology.

Drawing on elements from superhero design thinking, students may choose to create alter-egos, outfits, vehicles, or hideaways using AI modelling and design software. This flexible, student-led program encourages creative choice between illustrative design, 3D construction, or product mockups.

The experience concludes with a pitch presentation, encouraging students to share their designs, reflect on their choices and showcase their entrepreneurial thinking.

Learning goals

- Explore identity and self-expression through graphic and product design techniques
- Develop design solutions using visual communication tools to represent future-focused personal narratives
- Investigate design industry trends and the role of digital media in shaping future identities
- Present a design product reflecting informed aesthetic and functional choices

Career pathways

- Graphic designer
- Product designer
- Illustrator
- Interactive media designer
- Computer aided manufacturing

Tertiary connections

- Cert IV in Design
- Bachelor of Industrial Design
- Diploma of Graphic Design
- Bachelor of Design

Bookings

Scan the QR code or visit futureyou.yrts.com.au

→

ENRICHMENT - ENGLISH STORYBOARDING

Up to 50 Students

1 day 9:30 - 2:30

7-10 English 7-10 Media

What if you could rewrite the ending?

Students take the director's seat and reimagine a familiar story with a dramatic twist. Throughout the program, students script and storyboard a reimagined story using professional tools and techniques such as graphic tablets, green screen, video editing software, and illustration programs to bring their scenes to life.

They also develop key skills in storyboarding, scripting, camera direction, voice recording, digital illustration and special effects, with a focus on translating literary elements into visual language. This allows them to strengthen their English skills in writing, planning, and purposeful communication.

The program culminates in a movie premiere, where students present their final storyboards or short film clips to an audience.

Learning goals

- Analyse narrative elements and visual conventions used in film and storytelling
- Create and refine storyboards that convey a clear sequence, mood, and character development
- Use cinematic and literary techniques to reimagine texts in visual formats
- Collaborate to pitch and critique creative concepts aligned with production roles in film/media

Career pathways

- Film director or producer
- Screenwriter
- Storyboard artist
- Videographer
- Animator
- Graphic designer
- Marketing

Tertiary connections

- Cert IV in Design
- Bachelor of Screen Production
- Bachelor of Communication
- Bachelor of Fine Arts
- Bachelor of Arts
- Bachelor of Communication Design

Bookings

Scan the QR code or visit storyboard.yrts.com.au

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SPORTS SCIENCE

Up to
25 Students

1 day
9:30 - 2:30

7-10 PE
VCE PE

Can technology make you a better athlete?

The Sports Science program dives into how cutting-edge tools and data analysis are transforming athletic performance. Students test, train, and track results, while exploring the science of sport through real-time feedback and performance-enhancing technologies.

Using the latest in sports tech, such as timing gates, force jump plates, Rox Pro, VR training systems, heart rate monitors, and CPR mannequins, students engage in sports drills designed to enhance skill and performance while collecting and analysing biometric data.

By exploring anatomy, physiology and biomechanics, students learn how to apply scientific principles to improve human movement and results in sport. They accomplish this thanks to professional-grade equipment, leaderboards and benchmarks that simulate the work of sports and health industry professionals.

This program boosts physical literacy and data skills and sparks career conversations in fields such as physiotherapy, strength and conditioning, sports analytics, and health technology.

Learning goals

- Collect and interpret biometric data to understand human movement and performance
- Apply principles of anatomy, physiology, and biomechanics to evaluate sports performance
- Use sports technologies to enhance training and rehabilitation
- Investigate careers in health and fitness by simulating professional roles in sport science

Career pathways

- Exercise physiologist
- Sports scientist
- Sports coach
- Health clinics
- Fitness technology
- Physiotherapist
- Sports medicine

Tertiary connections

- Cert IV in Fitness
- Diploma of Sport and Recreation Management
- Bachelor of Exercise and Sport Science
- Bachelor of Sport Science
- Bachelor of Physiotherapy
- Bachelor of Health Sciences

Bookings

Scan the QR code or visit sportscience.yrts.com.au

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BEST BUYS

Up to
50 Students

1 day
9:30 - 2:30

7-8 Commerce
7-8 Maths

What does it take to grow, cook, and deliver the food of the future?

This program asks students to explore the entire agricultural and food industry supply chain through hands-on learning, business thinking and creative problem-solving, to experience how technology can make the food industry smarter and more sustainable.

Students begin by designing and operating a digital urban farm, responding to real-time challenges, analysing their farm's productivity and learning to calculate profits and total yield. They then plan and operate a pop-up restaurant, before selling their products in a mock marketplace. The final challenge involves designing and programming autonomous delivery vehicles using block coding.

This end-to-end journey through agri-tech, business, sustainability, and automation mirrors challenges facing real-world industries and empowers students to think like future problem solvers.

Learning goals

- Investigate the role of innovation in sustainable agriculture and food production
- Evaluate farming practices using data and design thinking to propose improvements
- Analyse global and local food systems and their impact on environmental sustainability
- Use technologies such as robotics, drones, or Internet of Things sensors to explore agri-tech solutions

Career pathways

- Agricultural business manager
- Restaurant manager
- Food entrepreneur
- Logistics and supply chain specialist
- Culinary innovator
- Horticulturalist

Tertiary connections

- Diploma of Accounting
- Diploma of Agribusiness Management
- Diploma of Business
- Bachelor of Agricultural Science
- Bachelor of Environmental Science

Bookings

Scan the QR code or visit bestbuys.yrts.com.au

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ENRICHMENT - MATHS MAZE

Up to
50 Students

1 day
9:30 - 2:30

7-10 Maths
7-10 Digi Tech

Can you design the fastest, smartest robot to beat the maze?

Maths Maze is a high-energy robotics challenge where students apply geometry, logic, coding, and machine learning to guide their robots through intricate mazes filled with real-world obstacles, sharp turns, and strategic decision points.

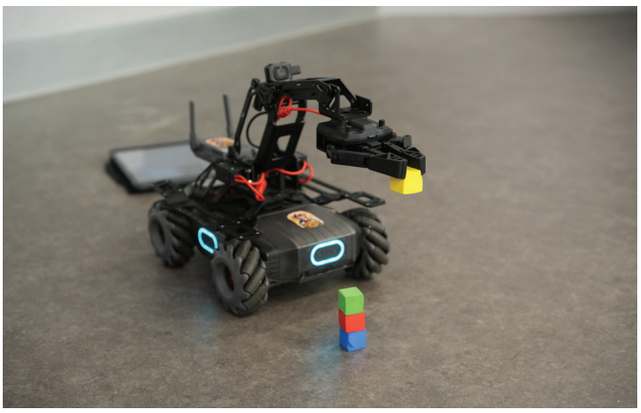
Students begin their journey by developing and refining algorithms that direct their robots to manoeuvre accurately and make decisions autonomously. Using geometric reasoning such as angles, turns, and distances, they plan efficient robot paths through physical and digital mazes environments. Students customise robots with lights, sounds, and other design elements, enhancing both functionality and creativity.

As the program progresses, students incorporate machine learning to train their robots to recognise road signs, vehicles, and pedestrians, simulating real-world applications like autonomous driving. They test and refine their robot's performance, collecting data on speed, responsiveness, and error rates to optimise their strategies.

The final challenge is a timed maze run, where teams compete to see which robot performs best under pressure, balancing logic, precision, and creativity to win the race.

Learning goals

- Use geometric reasoning to navigate robots through mazes using angles and distances
- Develop and refine algorithms to control robotic movement
- Collect and analyse performance data to optimise maze solutions
- Apply creative problem-solving to integrate design features like lights and sound



Career pathways

- Robotics engineer
- Software developer
- Mechanical engineer
- Data analyst
- Game developer
- AI and machine learning specialist

Tertiary connections

- Diploma of Engineering Technology
- Diploma of IT
- Bachelor of Engineering
- Bachelor of Robotics and Artificial Intelligence

Bookings

Scan the QR code or visit mathsmaze.yrts.com.au

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AI AND E-COMMERCE

Up to
25 Students

1 day
9:30 - 2:30

9-10 Economics
9-10 Maths

Can you design a product, market it online, and make it profitable using the power of AI?

This real-world business simulation challenges students to bring virtual products to life, blending financial literacy, creative design, and ethical decision-making in today's evolving e-commerce landscape.

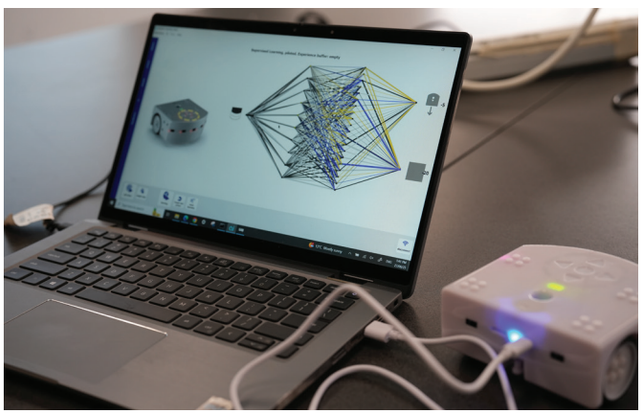
Students will simulate the full product lifecycle, from idea to income, by creating virtual products using AI-assisted tools and digital design software. They will develop brand collateral such as logos, packaging, and graphics. Using e-commerce platforms, students will build online storefronts and simulate product launches.

Working in teams to calculate profit margins and break-even points, and applying financial principles to assess product viability, students will explore the role of generative AI, pitch pricing strategies and business decisions in response to changing customer demands and market data.

This experience encourages students to build entrepreneurial confidence while preparing for technological, ethical, and financial challenges in the real world.

Learning goals

- Calculate profit margins and assess the financial viability of digital products
- Use AI and digital design tools to create product graphics, logos, and branding
- Develop and interpret basic financial documents such as invoices and profit/loss sheets
- Collaborate to develop pricing strategies and estimate financial projections
- Explore ethical considerations and the role of AI in future commerce



Career pathways

- Online retailer
- Digital marketing
- E-commerce manager
- Consumer analytics
- Product designer
- Business analyst
- Automation engineer
- AI developer

Tertiary connections

- Cert IV in Digital Marketing
- Diploma of E-Commerce
- Bachelor of Business
- Bachelor of Commerce
- Bachelor of IT

Bookings

Scan the QR code or visit ecommerce.yrts.com.au

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INTRODUCTION TO ENTREPRENEURSHIP

Up to 75 Students

1+ day 9:30 - 2:30

7-10 Economics 7-10 Digi Tech VCE Business

What makes a great idea, and how do you turn it into reality?

This immersive program gives students a real-world introduction to entrepreneurship. Designed to simulate the real-world journey of bringing a product or service to market, students work through team-based design challenges, pitch preparation, and a dynamic marketplace experience while learning to develop key enterprise, communication, and critical thinking skills.

Throughout the day, students work collaboratively to explore traits of successful entrepreneurs, analyse start-up case studies, and identify opportunities through the lens of innovation and customer needs. Using the Business Model Canvas, they structure their business ideas and identify customer needs to develop creative assets including logos, product jingles and digital mockups, to promote their product as they prepare to pitch their business ideas to a panel of guest judges or "investors".

The program culminates in a marketplace simulation, where students test their ideas, deliver final pitches, and reflect on business sustainability, financial viability, innovation, and social impact.

Learning goals

- Identify characteristics of successful entrepreneurs and start-up business models
- Apply the design thinking process to develop an original product or service
- Plan, pitch, and market a business idea to a target audience
- Reflect on business sustainability, innovation, and social impact
- Collaborate to simulate real-world business challenges and solutions

Career pathways

- Startup business
- Business analyst
- Project manager
- Marketing strategist
- Financial analyst
- Social entrepreneur
- Events coordinator
- Creative director

Tertiary connections

- Cert III in Business
- Cert IV in Marketing and Communication
- Diploma of Business
- Bachelor of Business
- Bachelor of Commerce
- Bachelor of Innovation and Entrepreneurship

Bookings

Scan the QR code or visit introentrep.yrts.com.au

→

SMART FARMING

Up to
25 Students

2 days
9:30 - 2:30

7-10 Geography
7-10 Science
VCE Agriculture

How is technology reshaping the way we grow, harvest, and deliver food?

In this two-day program, students explore the future of agriculture through emerging technologies and real-world problem-solving.

From paddock to plate, they investigate how automation, data, and environmental factors are transforming the way we farm. Through a combination of fieldwork, data analysis, and design thinking, students explore the future of farming in the Yarra Ranges and beyond.

Day 1

Students examine technologies such as smart sensors, livestock monitoring, and automated harvesting systems, where they analyse real-time data and explore case studies to understand how local environmental conditions affect farm decisions. A guided visit to a local Yarra Ranges agricultural site then brings this learning to life, connecting theory with practice.

Day 2

Students prototype solutions to agricultural challenges - such as improving irrigation systems, developing drone flight plans, or building crop monitoring tools. Using coding, data visualisation, and digital modelling, they refine and pitch their ideas, addressing both the technical and ethical implications of smart farming.

Learning goals

- Investigate current and emerging technologies in agriculture
- Analyse the role of automation in improving food sustainability and production
- Design and prototype solutions for monitoring environmental and crop data
- Apply digital technologies to map, model, and solve agricultural problems
- Evaluate the social, ethical, and environmental impacts of smart farming

Career pathways

- Agricultural scientist
- Farm management
- Farm machinery
- Agricultural engineer
- Environmental management
- Sustainability consultant
- Data analyst
- AgTech entrepreneur

Tertiary connections

- Cert III in Horticulture
- Cert IV in Agriculture
- Diploma of Agriculture
- Bachelor of Agricultural Science
- Bachelor of Environmental Science
- Bachelor of Engineering

Bookings

Scan the QR code or visit sfarm.yrts.com.au

→

RENEWABLE FUTURES

Up to
75 Students

1 - 2 days
9:30 - 2:30

9-10 Humanaties
VCE VM - WRS

How can we design energy systems that power the future without costing the planet?

Students take on the challenge of powering a sustainable future by working with miniature renewable energy systems that integrate solar panels, wind turbines, and battery storage.

Working in teams, students manage resources through a token-based economy, making financial decisions as part of the design process. Using tools such as the heliodon, they simulate solar angles to test how sun position affects energy production, collecting and analysing real-time sensor data to refine their systems for maximum efficiency.

The program culminates in a smart city design challenge, where students model sustainable energy networks and propose creative energy solutions for local or global contexts.

There is an optional Day 2 program available (delivered onsite or in-school), where students shift from designing energy systems to prototyping smart, sustainable homes. Using recycled materials and basic electronics, they build model houses that incorporate automation features such as responsive lighting, temperature control, and motion sensors.

This program builds STEM capability through systems thinking, engineering design, collaboration, and real-world application of renewable energy principles.

Learning goals

- Design and construct miniature renewable energy systems
- Optimise system performance through testing and data analysis
- Collaborate to imagine sustainable energy solutions through the creation of a smart city
- Evaluate the impact of solar angles on energy generation
- Apply systems thinking to model sustainable energy networks

Career pathways

- Environmental engineer
- Energy efficiency consultant
- Urban planner
- Renewable energy systems engineer
- Solar system designer
- Sustainability project officer

Tertiary connections

- Cert IV in Renewable Energy Technology
- Diploma of Building Design
- Bachelor of Design
- Bachelor of Engineering
- Bachelor of Industrial Design
- Bachelor of Environmental Science

Bookings

Scan the QR code or visit rfutures.yrts.com.au

→

BODY SYSTEMS

Up to 100 Students

1 day 9:30 - 2:30

7-8 Science

How can technology help us see inside the human body, and respond when something goes wrong?

This program gives students a unique opportunity to explore the human body using modern medical technologies and virtual tools.

Through the use of interactive 3D models and VR anatomy, students investigate major body systems and their functions. They compare 2D and 3D representations to better understand inter-system relationships and internal structures.

Using digital tools, students measure and interpret vital signs such as heart rate and respiration, linking these readings to physiological responses. They also participate in a CPR and emergency response challenge using the Ambulance Victoria simulation game, where they take on the role of first responders in real-world inspired medical scenarios.

By combining anatomy, health tech, and digital simulation, this program connects scientific knowledge with modern medical practice, while highlighting career pathways in healthcare, paramedicine, and biomedical science.

Learning goals

- Identify major body systems and their key structures and functions
- Use 3D and virtual models to explore internal anatomy and inter-system relationships
- Measure and analyse vital signs to understand physiological responses
- Compare 2D & 3D representations of body systems
- Operate tech to simulate emergency responses or object delivery in healthcare

Career pathways

- Healthcare professional
- Medical researcher
- Biomedical engineer
- VR/AR developer for medical training
- Public health specialist
- Paramedic
- Nurse or nurse assistant

Tertiary connections

- Cert III/IV in Pathology Collection
- Cert IV in Allied Health Assistance
- Diploma of Nursing
- Bachelor of Health Sciences
- Bachelor of Nursing
- Bachelor of Paramedicine

Bookings

Scan the QR code or visit bodysys.yrts.com.au

→

CLEAN ENERGIES

Up to
50 Students

1 or 2 days
9:30 - 2:30

9-10 Science
VCE Physics
VCE Systems

Can energy systems be redesigned to sustainably power the world?

Students are invited to tackle one of the world's most urgent challenges: clean energy. They explore a range of renewable technologies, including solar, wind, hydroelectricity, hydrogen, and biofuels, and learn how these can be integrated into efficient, sustainable systems.

Working in teams, students use Computer-Aided Design (CAD) tools, 3D printing, and electrolysers to design and construct renewable energy solutions. They analyse and refine their prototypes based on performance data, considering energy efficiency, storage, and real-world application. They also assess economic, social, and environmental impacts of their systems, linking their work to global sustainability goals.

For Years 9 and 10, the program is available in one or two-day formats. A specialised VCE Systems Engineering and VCE Physics one-day version is also available, allowing students to focus on mechanical-electrical system design, energy transfer, and evaluation techniques in line with the VCE study design.

All formats support applied learning, critical thinking, and career pathway exploration in renewable energy and engineering sectors.

Learning goals

- Explore renewable energy technologies and current projects
- Learn about the history and global aspects of energy production
- Create renewable energy systems and measure hydrogen production
- Design and test CAD wind turbine blades
- Study energy storage and efficiency, then refine designs based on data

Career pathways

- Renewable energy officer
- Sustainability consultant
- Engineer
- Data analyst
- Environmental scientist
- Engineer
- Energy policy advisor

Tertiary connections

- Cert IV in Renewable Energy Technology
- Cert IV in Large Scale Wind Generation
- Diploma of Engineering
- Bachelor of Engineering
- Bachelor of Science

Bookings

Scan the QR code or visit cleanrg.yrts.com.au

→

FORENSICS

Up to
75 Students

1 day
9:30 - 2:30

7-10 Science
7-10 Digi Tech
VCE VM - WRS

What happens when a clean energy facility is sabotaged, and how can science solve the crime?

In this immersive escape-room style investigation, students work in forensic teams to solve the sabotage of a clean energy facility. Examining the crime scene, they gather clues and evidence before applying real-world forensic techniques to crack the case.

Students perform DNA testing, chemical analysis, and digital forensics, uncovering the culprit and motive behind the attack. Along the way, they explore how technology and forensic science intersect to protect modern infrastructure and how clean energy systems can be both transformative and vulnerable.

This program connects STEM and environmental science, demonstrating the role of forensic science in sustainability, innovation, and crime-solving. It encourages teamwork, problem-solving, and critical thinking while engaging students in urgent global issues through hands-on learning.

Learning goals

- Understand the role of forensic science in environmental protection and sustainability
- Apply forensic techniques to solve a crime involving clean energy technology
- Analyse how technology impacts forensic investigations, including DNA and chemical analysis, and digital forensics
- Consider the implications of clean energy systems in society and how they can be targets of sabotage

Career pathways

- Forensic laboratory technician
- Crime scene investigator
- Environmental compliance officer
- Forensic chemist or biologist
- Cybersecurity analyst
- Data recovery specialist

Tertiary connections

- Cert IV in Lab Techniques
- Diploma of Justice
- Cert IV in Cyber Security
- Cert IV in IT
- Bachelor of Forensic Science
- Bachelor of Science
- Bachelor of Criminology / Criminal Justice

Bookings

Scan the QR code or visit forensics.yrts.com.au

→

VCE BIOLOGY: EXPLORING INHERITANCE

Up to 25 Students

1 day 9:30 - 2:30

VCE Biology

How can scientists use DNA evidence to trace the inheritance of disease through generations?

Students take on the role of genetic counsellors and researchers to diagnose a hereditary condition in a fictional family. Through the use of micropipettes, gel electrophoresis, and pedigree analysis, students simulate a real-world genetic testing investigation aligned with VCE Biology Unit 2, Outcome 1.

Students begin by analysing genetic test results and performing gel electrophoresis to compare DNA samples. They then interpret this data to identify alleles linked to a disease and use this evidence to construct and modify multi-generational pedigrees.

This activity supports a deep understanding of chromosomes, genomes, genes, alleles, karyotypes, genotypes, phenotypes, and inheritance patterns, including dominant, recessive, autosomal and sex-linked traits. It supports various School Assessed Coursework (SAC) tasks, including case study analysis, data interpretation, and model-based reasoning. It also offers a highly engaging opportunity to discuss ethical implications and the role of genetic testing in modern medicine.

Learning goals

- Investigate how genetic information is inherited across generations
- Distinguish key components of the genetic code and their role in disease expression
- Apply laboratory techniques to simulate genetic testing
- Interpret genetic data to diagnose a hereditary condition
- Communicate scientific understanding using evidence from models and simulations

Career pathways

- Genetic counsellor
- Bioethicist
- Medical laboratory scientist
- Public health researcher
- Research scientist
- Data scientist

Tertiary connections

- Cert IV in Allied Health
- Diploma of Lab Technology
- Diploma of Nursing
- Bachelor of Science
- Bachelor of Biomedical Science
- Bachelor of Biotechnology
- Bachelor of Nursing

Bookings

Scan the QR code or visit inheritance.yrts.com.au

→

VCE BIOLOGY: UNLOCKING CRISPR

Up to 25 Students

1 day 9:30 - 2:30

VCE Biology

Can we edit DNA to cure disease - and should we?

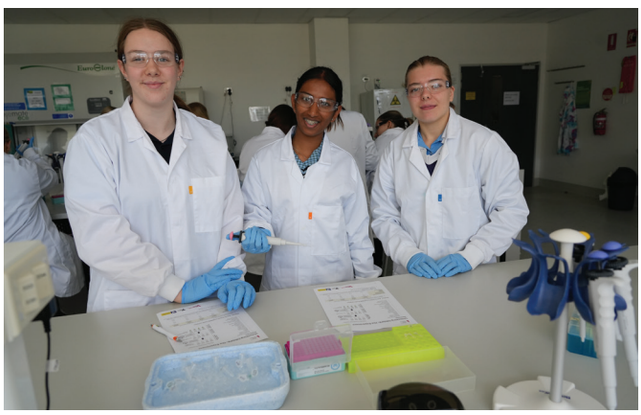
Step into the world of genome editing and experience the science behind CRISPR/Cas9 firsthand. In this cutting-edge VCE Biology workshop, students simulate gene editing by programming Cas9 to target specific DNA sequences, then analyse the results using gel electrophoresis.

They explore how CRISPR works at a molecular level, gain hands-on experience with micropipettes, restriction enzymes, and DNA analysis techniques, and investigate real-world applications and limitations of gene editing - from curing inherited diseases to modifying crops.

Ethical implications are also explored through discussion and evidence-based reasoning, supporting key learning outcomes from VCE Biology Unit 2 and Unit 4.

Learning goals

- Explain how CRISPR-Cas9 functions as a gene-editing tool
- Apply laboratory techniques to model DNA manipulation using restriction enzymes, micropipettes, and gel electrophoresis
- Evaluate the potential applications and limitations of gene editing technologies
- Communicate scientific ideas using evidence from models and experiments



Career pathways

- Genetic counsellor
- Bioethicist
- Medical laboratory scientist
- Research scientist
- Data scientist
- Forensic scientist
- Educator

Tertiary connections

- Cert IV in Allied Health
- Diploma of Lab Technology
- Diploma of Nursing
- Diploma of Health Science
- Bachelor of Science
- Bachelor of Biotechnology
- Bachelor of Paramedicine
- Bachelor of Health Sciences

Bookings

Scan the QR code or visit crispr.yrts.com.au →

VCE BIOLOGY: EXPLORING EVOLUTION

Up to 25 Students

1 day 9:30 - 2:30

VCE Biology

How can DNA reveal the story of evolution and survival in the Leadbeater possum?

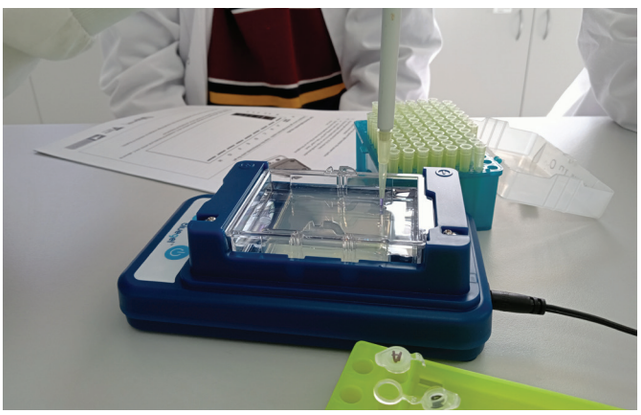
In this program, students work in partnership with Healesville Sanctuary to investigate genetic diversity and evolutionary relationships in local Leadbeater possum populations in the Yarra Ranges region. They explore how molecular evidence can uncover the evolutionary history and survival strategies of species.

Using micropipettes and gel electrophoresis to analyse DNA samples, students identify genetic variation within and between populations. They explore molecular and structural homology and use this data to construct and interpret phylogenetic trees. These activities develop core scientific skills while connecting evolutionary biology to local conservation efforts.

This session aligns with VCE Biology Unit 4, Outcome 2, supporting potential SACs through practical evidence collection, comparative analysis, and data interpretation. It provides a rich opportunity to explore the mechanisms of evolution, the consequences of changing allele frequencies, and the value of biodiversity for species survival.

Learning goals

- Investigate genetic diversity in local populations using molecular evidence
- Explain how changes in allele frequencies occur within populations over time
- Interpret molecular homology as evidence for relatedness between species
- Construct and interpret phylogenetic trees to represent species relatedness
- Evaluate the biological consequences of genetic diversity for species survival



Career pathways

- Biotechnology
- Bioinformatics
- Research scientist
- Wildlife ecologist
- Conservation geneticist
- Zookeeper
- Educator

Tertiary connections

- Cert III in Animal Care Services
- Cert IV in Veterinary Nursing
- Diploma of Laboratory Technology
- Diploma of Animal Technology
- Bachelor of Science

Bookings

Scan the QR code or visit evolution.yrts.com.au

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VCE CHEMISTRY: ANALYSING CAFFEINE

Up to 25 Students

1 day 9:30 - 2:30

VCE Chemistry

How can science precisely measure what's in your coffee - and why does it matter?

In this hands-on laboratory program, students explore the chemical structure and physiological effects of caffeine while learning how to analyse its concentration using HPLC. Using industry-standard equipment and scientific processes, they investigate a range of drinks - including energy drinks, instant coffee, and decaf varieties, to uncover their caffeine content.

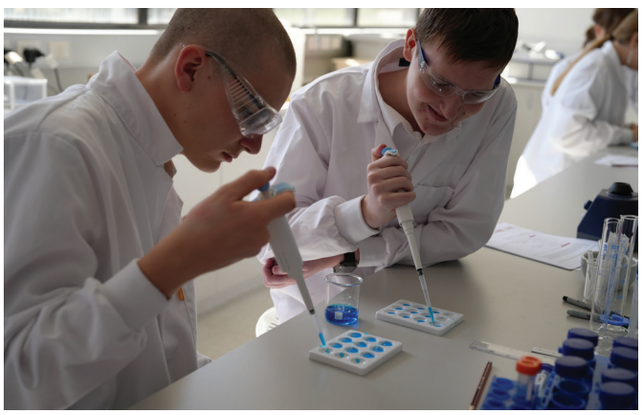
Students begin by using micropipettes to prepare chemical standards and practice precision in measurement. They then run these standards and unknown samples through the HPLC, learning to operate the instrument, interpret chromatograms, and calculate caffeine concentrations using Excel to construct calibration curves.

Through this immersive experience, students learn the principles of chromatography, the importance of accuracy versus precision, and how analytical chemistry applies across industries such as food science, pharmaceuticals, and environmental testing.

By the end of the program, students will have gained valuable lab skills, analytical techniques, and insight into future scientific pathways.

Learning goals

- Understand the molecular structure and properties of caffeine
- Learn and apply the principles of chromatography
- Use micropipettes to accurately prepare chemical standards
- Operate and comprehend the function of HPLC instruments
- Interpret chromatographic data to construct calibration curves and determine concentrations



Career pathways

- Analytical chemist
- Pharmaceutical chemist
- Laboratory technician
- Formulation chemist
- Environmental chemist
- Quality assurance officer
- Food technologist

Tertiary connections

- Cert IV in Lab Techniques
- Diploma of Lab Technology
- Bachelor of Pharmaceutical Science
- Bachelor of Science
- Bachelor of Food Science
- Bachelor of Biotechnology

Bookings

Scan the QR code or visit caffeine.yrts.com.au

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VCE CHEMISTRY : MEDICINAL CHEMISTRY

Up to 25 Students

1 day 9:30 - 2:30

VCE Chemistry

What's really in your painkillers?

Students step into the role of analytical chemists to explore the chemical world of pain relief medications. Using High-Performance Liquid Chromatography (HPLC), they investigate the composition and purity of over-the-counter medications and determine the amount of active ingredients in their samples.

Students learn how medicinal compounds are synthesised and analysed, and interpret real-world data to make decisions relevant to human health and pharmaceutical chemistry.

This program integrates instrumental analysis with medicinal chemistry, giving students direct experience with advanced laboratory techniques used in research, industry, and forensic applications.

Learning goals

- Explain the structure and function of paracetamol and identify key functional groups
- Describe the principles of HPLC and its role in analytical chemistry
- Prepare and analyse samples of commercial paracetamol using HPLC
- Interpret chromatograms to determine the identity and purity of organic compounds
- Reflect on the real-world applications of analytical chemistry in medicine and pharmacology

Career pathways

- Medicinal chemist
- Pharmacologist
- Quality control chemist
- Regulatory affairs officer
- Toxicologist
- Laboratory technician

Tertiary connections

- Cert III in Community Pharmacy
- Cert IV in Allied Health
- Bachelor of Science
- Bachelor of Biomedical Science
- Bachelor of Pharmaceutical Science

Bookings

Scan the QR code or visit medchem.yrts.com.au

→

VCE CHEMISTRY: DETECTING PARABENS

Up to 25 Students

1 day 9:30 - 2:30

VCE Chemistry

Are paraben-free cosmetics really safer, or is it just clever marketing?

Parabens are a group of chemicals commonly used in various commercial cosmetic products, serving to inhibit the growth of bacteria and mould. Many cosmetic products are now marketed as paraben-free. Why is this and are these products necessarily safer or better?

In this exciting and increasingly relevant program, students have firsthand access to state-of-the-art analytical equipment used in industry – a HPLC instrument. They use micropipettes to prepare paraben standards of known concentrations and run these in the HPLC instrument, then construct a calibration curve and determine the quantity and type of paraben found in various cosmetics.

Students will learn about the chemistry of cosmetics and how common scientific misconceptions may influence consumer behaviour.

Learning goals

- Understand the role of parabens as preservatives in cosmetics and their associated chemical structures
- Explain how functional groups influence solubility, polarity, and retention time in chromatography
- Describe the basic principles of chromatography and HPLC
- Identify the relationship between structure and function in molecules used in cosmetic chemistry

Career pathways

- Medicinal chemist
- Pharmacologist
- Quality control chemist
- Regulatory affairs officer
- Toxicologist
- Laboratory technician

Tertiary connections

- Cert III in Community Pharmacy
- Cert IV in Allied Health
- Bachelor of Science
- Bachelor of Biomedical Science
- Bachelor of Pharmaceutical Science

Bookings

Scan the QR code or visit parabens.yrts.com.au

→

SMART ENERGY SYSTEMS & ROBOTICS

Up to 25 Students

1+ day 9:30 - 2:30

7-10 Digi Tech
7-10 Design Tech
VCE Systems

Can we use robotics to power a cleaner energy future?

This program explores the intersection of clean energy and automation.

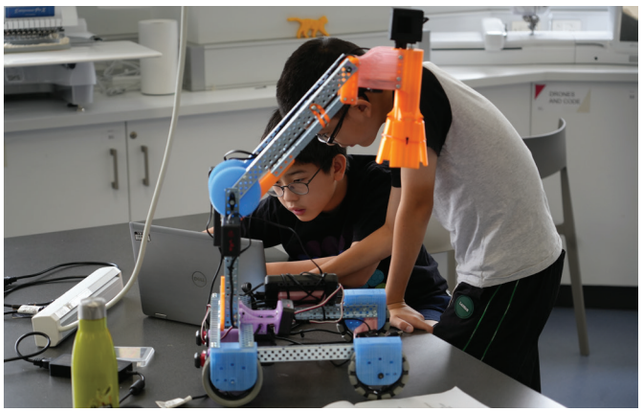
Students design, build, and program a solar tracking system, integrating robotics, sensors, and control algorithms to optimise solar energy collection. They gain real-world skills in robotics, sensor technology, and systems thinking while taking on challenges like a solar-tracking robot competition.

Through practical application, students learn how to program sensors, manage energy data, and develop automated responses to real-world energy problems.

The program provides a strong foundation for careers in renewable energy, robotics, and systems engineering, empowering students to innovate for a sustainable future.

Learning goals

- Design and construct a solar tracking system
- Program sensors for data collection and energy management
- Develop control algorithms for automated systems
- Program robots to perform specific energy-related tasks
- Use systems thinking to solve complex problems in clean energy



Career pathways

- Forensic laboratory technician
- Data recovery specialist
- Environmental compliance officer
- Crime scene investigator
- Forensic chemist or biologist
- Cybersecurity analyst

Tertiary connections

- Diploma of Electronics and Communications Engineering
- Advanced Diploma of Engineering Technology
- Bachelor of Engineering
- Bachelor of Robotics and Artificial Intelligence

Bookings

Scan the QR code or visit smartnrg.yrts.com.au

→

3D PRINTING AND FUSION 360

Up to
25 Students

1+ day
9:30 - 2:30

7-10 Digi Tech
7-10 Design Tech
VCE Systems

How can digital design turn your ideas into real-world objects?

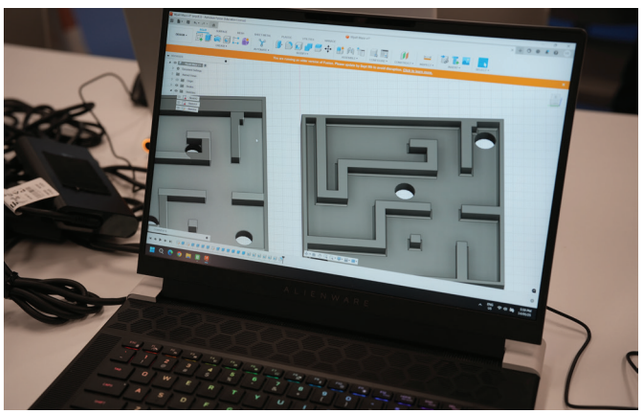
Students are invited to step into the world of computer-aided design as they explore the creative and technical capabilities of Fusion 360.

In this hands-on program, students transform product ideas into digital models, mastering core skills like sketching, projection, extrusion, lofting, and revolving. Whether creating functional pencil holders or sleek decorative items, they develop confidence in using digital tools to design practical solutions.

Before the program, teachers assist with setting up student Fusion 360 accounts and provide basic navigation tutorials to ensure students are ready to dive in. Throughout the workshop, students apply design thinking, test their prototypes, and reflect on ways to improve both form and function - bridging engineering principles with creative thinking.

Learning goals

- Apply design thinking to propose product concepts
- Use manual and digital technologies to create representations using computer-aided design
- Test materials and evaluate prototypes for improvement



Career pathways

- Industrial designer
- CAD technician
- Design drafter
- Mechanical engineer
- Product developer
- 3D printing technician
- Design engineer

Tertiary connections

- Cert III in Engineering
- Cert IV in Industrial Design
- Cert IV in Engineering
- Diploma of Product Design and Development
- Bachelor of Industrial Design
- Bachelor of Engineering
- Bachelor of Product Design

Bookings

Scan the QR code or visit 3dprint.yrts.com.au

→

FLIPPED ROBOTICS

Up to
25 Students

3+ days
9:30 - 2:30

7-10 Digi Tech
7-10 Design Tech
VCE Systems

What does it take to build a competition-ready robot?

This program invites students to explore the exciting world of competitive robotics through a hands-on, team-based design challenge.

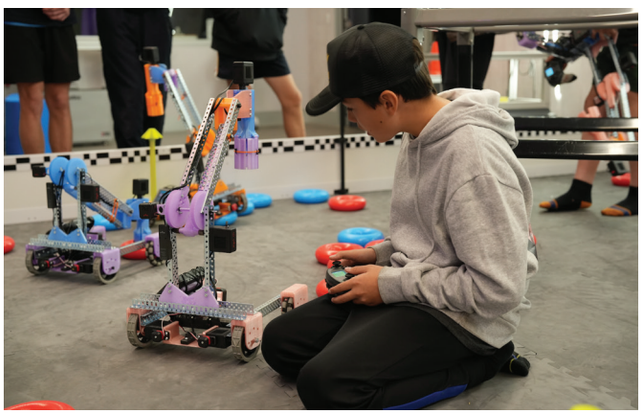
Participating schools receive a robotics kit and attend three immersive sessions at YRTS, where students collaborate with industry mentors to refine their robot designs and test them on official VEX Robotics competition fields.

Throughout the program, students learn the fundamentals of integrated systems, develop solutions for real-world challenges, and incorporate sensor data into decision-making processes. They break down complex engineering problems into manageable parts, and work collaboratively to design, prototype, and improve their robots.

This program develops critical STEM and enterprise skills, including collaboration, systems thinking, and iterative design. It also provides a launchpad for students interested in further robotics learning, offering a strong foundation for future participation in robotics competitions or specialised technology electives.

Learning goals

- Learn fundamentals of integrated systems
- Break down complex problems into components
- Design and develop robots for specific tasks
- Incorporate sensor data into decision-making
- Collaborate effectively in teams
- Document and report on the engineering design process



Career pathways

- Software development
- Robotics engineer
- Electrical engineer
- Systems engineer
- Data scientist

Tertiary connections

- Cert IV in Engineering
- Diploma of Engineering
- Diploma of IT
- Bachelor of Engineering
- Bachelor of Robotics and Artificial Intelligence

Bookings

Scan the QR code or visit flipr.yrts.com.au

→

ENERGY SCOUT

Up to 25 Students

1 day 9:30 - 2:30

VCE VM - WRS

How can robots and virtual reality help us monitor and maintain the future of clean energy?

Students step into the future of sustainability by exploring how cutting-edge technologies are transforming clean energy.

Through a VR experience, students tour either Yarra Valley Water's Food Waste to Energy or Yarra Ranges Council's Biochar facility, learning about alternative clean energy processes. Students then apply their knowledge in a real-world context, using Unitree GO2 robot dogs to survey local renewable energy sites.

Working collaboratively, they explore how these tools help maintain infrastructure and address environmental challenges. This hands-on, tech-enabled program builds critical problem-solving and teamwork skills while deepening student understanding of the systems powering a cleaner future.

Learning goals

- Understand the conversion of food waste to energy
- Explore technologies addressing environmental challenges
- Use VR and robotic tools for surveying infrastructure
- Apply collaborative problem-solving in sustainability contexts
- Reflect on the broader impacts of clean energy innovation

Career pathways

- Renewable energy technician
- Energy systems designer
- Robotics technician
- Remote sensing technician
- VR technician
- Simulation developer

Tertiary connections

- Cert III in Electronics and Communications
- Cert IV in Cyber Security
- Diploma of Renewable Energy Engineering
- Advanced Diploma of Engineering Technology
- Bachelor of IT

Bookings

Scan the QR code or visit energyscout.yrts.com.au

→

GAME DESIGN

Up to 50 Students

1+ day 9:30 - 2:30

7-10 Digi Tech

How do game developers turn a simple idea into an immersive world?

Step into the gaming industry and explore the tools, skills, and creativity behind interactive game development. Students take on the role of game developers as they transform a base template into a customised 2D platformer or first-person experience using Unreal Engine. They explore key aspects of professional game development, including level design, environment and props creation, character creation, and storytelling.

Students are introduced to real-world examples from professional game designers, analysing gameplay elements and drawing inspiration to fuel their projects. Through guided exploration and hands-on practice, they build, test, and refine their game levels using industry-standard tools, and work collaboratively to debug code, apply design principles, and bring their game ideas to life.

This program builds critical skills in creativity, logic, and digital design, offering students an exciting glimpse into the world of game development and potential career pathways in the gaming industry.

Learning goals

- Use development software to create interactive game elements
- Apply problem-solving to refine game mechanics
- Customise templates and game logic using design principles
- Test and debug code collaboratively
- Work as a team to develop and present final game builds

Career pathways

- Gaming designer
- Level designer
- Programmer
- 3D modeller or animator
- Software development
- Sound designer

Tertiary connections

- Cert III in IT
- Diploma of Digital Media Technologies
- Bachelor of Computer Science
- Bachelor of IT
- Bachelor of Games Design
- Bachelor of Engineering

Bookings

Scan the QR code or visit gdesign.yrts.com.au

→

FUTURE TRANSPORT

Up to
100 Students

1 day
9:30 - 2:30

7-10 Digi Tech
7-10 Math
7-10 Design Tech

How will drones, driverless vehicles, and AI shape the future of how we move people and goods?

In this cutting-edge program, students investigate how emerging transport technologies are reshaping the world around us.

Through interactive simulations and real-world challenges, students design and program autonomous vehicles, plan drone delivery routes, and experiment with AI-driven decision-making to improve safety and efficiency. They explore the forces acting on vehicles, analyse energy use, and apply systems thinking and design thinking to prototype smart transport solutions.

Students are encouraged to consider environmental sustainability, ethical dilemmas, and the societal impacts of innovation. The program concludes with a pitch presentation, allowing students to showcase their transport concepts to an audience.

This hands-on experience connects STEM learning with future-focused inquiry, preparing students to think critically and creatively about the future of mobility.

Learning goals

- Explore how drones, AI, and autonomous vehicles are transforming transport
- Prototype sustainable transport solutions using digital tools
- Investigate the forces acting on vehicles and how they affect motion and energy use
- Analyse environmental, ethical, and social transport impacts
- Collaborate to design and present future-focused transport ideas
- Apply systems thinking and design thinking to real-world transport challenges

Career pathways

- Autonomous vehicle programmer
- Drone pilot
- Smart mobility systems engineer
- Robotics engineer
- Traffic data analyst
- Infrastructure planner

Tertiary connections

- Cert IV in Programming or Applied Technologies
- Cert IV in Robotics and Mechatronics
- Cert III in Aviation
- Cert IV in IT
- Diploma of Engineering
- Bachelor of Engineering

Bookings

Scan the QR code or visit ft.yrts.com.au

→

VM WORK SKILLS: AGRICULTURE

Between 12–25 students

3 - 6 days 9:30 - 2:30

VCE VM Work Related Skills

What does it take to build a smart, safe, and sustainable business in agriculture?

This hands-on program is designed for VCE VM students and explores innovation in agriculture, clean energy, and enterprise.

Through industry engagement, practical activities, and collaborative design challenges, students gain insights into real workplace expectations while building technical and employability skills.

Available as a 3-6 day program, VM Work Skills (Agriculture) immerses students in the Yarra Valley's agricultural industry, exploring safety protocols, emerging technologies (including AI), soil science, financial management, and product development.

Students take part in industry tours, complete workplace documentation such as risk assessments and journals, and develop a marketable agri-tourism solution, which they prototype and pitch to an audience.

The program explicitly supports Work Related Skills outcomes, including planning, safe work practices, collaboration, technology use, and presentation of solutions in work-like contexts.

Learning goals

- Develop understanding and critical perspective on the advantages, challenges, and debates surrounding AI art
- Develop proficiency in AI art tools, including text-to-image and generative techniques
- Acquire graphic design skills by utilising design templates and assets
- Experiment with form, colour, and special effects within a 3D virtual environment for artistic expressions
- Present and critique digital artworks by providing constructive feedback to peers

Day 1: Introduction and industry tours

Students visit two Yarra Ranges agricultural sites to explore innovative technologies in action, including current uses of AI and machine learning. Through reflective journaling, they begin to understand the structure, opportunities, and challenges in agri-business.

Day 2: Safe workplaces and soil testing

Focusing on the role of AI and occupational health and safety, students explore risk prevention in both indoor and outdoor agricultural environments. They collect and test samples using field kits, record their findings, and explore the importance of soil health in long-term agricultural planning.

Day 3: Farming and financial literacy

Students run a virtual rooftop farm, managing resources and interpreting yield data to make financially sound decisions. Through analysis and group discussion, they explore how economic choices shape the future of farming.

Day 4: Sustainability in marketing and branding

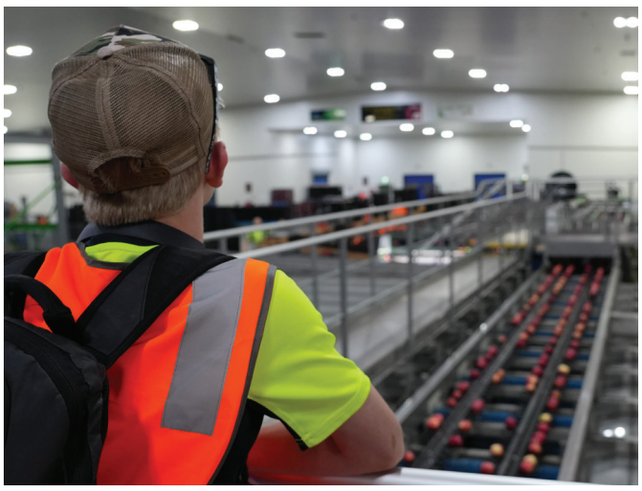
With a focus on sustainable practices, students explore the UN sustainable goals within their projects and delve into marketing and branding techniques using design software.

Day 5:
Branding, prototyping, and product design

Students bring together everything they've learned to begin prototyping their farm concept - from agri-tourism innovations to packaging, services, or technologies. Branding, visual communication, and entrepreneurial thinking are emphasised.

Day 6:
Pitch presentation

Students practise public speaking and presentation techniques before delivering a final pitch of their marketable farm or product idea. Using a pitch deck and peer feedback, they present to an audience and reflect on the journey from idea to enterprise.



Career pathways

- Digital artist
- AI artist
- Virtual reality designer
- Interactive media designer
- 3D animator

BHI connections

- Cert III in Horticulture
- Diploma of Conservation and Ecosystem Management
- Diploma of Business
- Bachelor of Commerce (Applied)

Bookings

Scan the QR code or visit vmagri.yrts.com.au

→

VM WORK SKILLS: MANUFACTURING

Between 12–25 students

3 - 6 days 9:30 - 2:30

VCE VM Work Related Skills

How do safety, creativity and technology work together in modern manufacturing?

This VCE Vocational Major (VM) program helps students learn about modern manufacturing. Over 3-6 days, they experience the industry firsthand through factory tours, hands-on digital design (CAD) and 3D printing, and activities involving AI and automation. They also practice workplace safety using VR, explore career paths and entrepreneurship, and branding.

The program culminates in students pitching their product ideas, boosting their teamwork, innovation, and problem-solving skills for future manufacturing roles.

Learning goals

- Apply safe work practices in real and simulated manufacturing environments
- Operate and interact with manufacturing technologies and tools in a safe and responsible manner
- Work collaboratively to develop and refine a design project from concept to pitch
- Use verbal and non-verbal communication techniques to professionally present ideas
- Plan a manufacturing project using design tools, prototyping, and iterative thinking
- Apply AI tools and programming logic to solve real-world manufacturing needs
- Explore entrepreneurial pathways in manufacturing and branding

Day 1: Industry tours & introduction to manufacturing

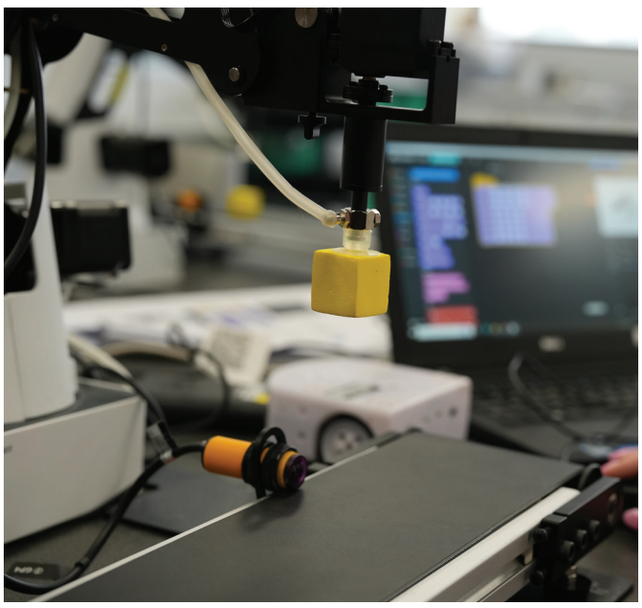
Students visit two manufacturing sites in the Yarra Valley to explore technologies, job roles, and industry structures. Through reflective journaling, they document expectations and opportunities.

Day 2: Workplace safety & VR simulation

Students participate in VR workplace scenarios to identify hazards and complete a risk assessment. They debate the role of AI in workplace safety and begin brainstorming product ideas.

Day 3: 3D design and printing

Using 2D/3D CAD software, students model and print a prototype using different materials. They consider tolerances, safety, and user needs and document the design process in journals.



Day 4:
AI & programming in manufacturing

Students explore how AI is shaping automation. They apply basic programming logic or use AI tools to support design optimisation or production line simulation.

Day 5:
Future you & entrepreneurial thinking

Students create a tangible product, such as a shirt, sticker, or poster, to reflect their future self in industry. They explore branding, visual communication, and pitch preparation.

Day 6:
Final pitch & communication skills

Students learn how to use body language, tone, and visuals to present with impact. They practise and deliver a professional pitch showcasing the product and journey.

Career pathways

- Production facilities
- Industrial fabrication
- Industrial designer
- Manufacturing worker
- OHS officer
- Workplace trainer or assessor

BHI connections

- Cert III in Electronics and Communications
- Cert III in Electrotechnology Electrician
- Cert IV in Process Plant Technology

Bookings

Scan the QR code or visit vmanu.yrts.com.au

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2026 PROGRAM MAP

YEAR 7	YEAR 8	YEAR 9	YEAR 10
THE ARTS			
AI & VR Art: In Space			
Future You			
ENGLISH			
Enrichment - English Storyboarding			
HEALTH & PHYSICAL EDUCATION			
Sports Science			
MATHEMATICS			
Best Buys		AI and E-Commerce	
Enrichment - Maths Maze			
THE HUMANITIES			
Smart Farming			
Introduction to Entrepreneurship			
		Renewable Futures	
SCIENCE			
Body Systems		Forensics	
		Clean Energies	
DESIGN & TECHNOLOGIES			
		Smart Energy Systems & Robotics	
3D Printing and Fusion 360			
Flipped Robotics			
DIGITAL TECHNOLOGIES			
Game Design			
Future Transport			

VCE VM	VCE UNIT 1 & 2	VCE UNIT 3 & 4
THE ARTS		
AI & VR Art: In Space		
Future You		
ENGLISH		
VM Lit - Storyboarding		
HEALTH & PHYSICAL EDUCATION		
VM PDS - Sports Science	PE - Sports Science	
MATHEMATICS		
THE HUMANITIES		
Smart Farming		
Introduction to Entrepreneurship	Business - Introduction to Entrepreneurship	
VM PDS - Renewable Futures		
SCIENCE		
VM WRS - Agriculture	Chemistry - Analysing Caffeine	Chemistry - Medicinal Chemistry
Clean Energies	Physics - Clean Energies	Biology - Unlocking CRISPR
	Biology - Exploring Inheritance	Biology - Exploring Evolution
DESIGN & TECHNOLOGIES		
VM WRS - Manufacturing	Systems - Smart Energy Systems & Robotics	
VM WRS - 3D Printing and CAD	Systems - 3D Printing and Fusion 360	
VM PDS - Energy Scout		
DIGITAL TECHNOLOGIES		
Game Design		
Future Transport		

YARRA RANGES

TECH SCHOOL

VISION

To empower all learners to become catalysts for innovation, equipping them with the skills to shape a transformative and sustainable future.

BOX HILL INSTITUTE

VICTORIA State Government | Department of Education

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