

CAREER NEWSLETTER

Week 7 - Term 2, 2020.

MATHS, SCIENCE AND ENGINEERING CAREERS

Do you enjoy mathematics, science and engineering subjects at school? Have you considered pursuing a career in these areas? Mathematics, science and engineering shape our day-to-day lives.

For example:

- Who produces your breakfast? Farmers, food scientists and technologists, nutritionists
- Who takes you to school? Design & development engineers, petrochemical engineers, automotive engineers, automotive electricians, environmental scientists, mechanics, materials scientists.
- Who built your school? Architects, surveyors, structural engineers, electricians, plumbers, carpenters.
- Who assists your learning? Teachers, journalists, film producers, software designers, publishers, writers.
- Who helps you exercise? Exercise scientists, physiotherapists, sports psychologists
- Who keeps you healthy? Doctors, nurses, pharmacists, biomedical scientists.
- Who contributes to your spare time? Computer game developers, music technologists, product designers, sound and lighting technicians.

MATHEMATICS

If you are a logical and analytical person who enjoys solving problems with numbers, you may like to explore a career in mathematics, statistics and actuarial studies. Employment for actuaries, mathematicians and statisticians is expected to grow strongly over the next three years. Go to <https://bit.ly/2VNyjLK> to find out more.

For information about maths careers, download the Careers With Science – Maths guide, <http://bit.ly/39SxV6r>

SCIENCE

There are several broad disciplines in science. The following are examples-

- Physical science is for people who like to ask questions about why things are the way they are in the world around us. School subjects include chemistry and physics.
- Computer science is for people who like to understand how computers work and to learn how develop new programs and systems.
- Life sciences is for people who like to ask questions and think about living things and covers areas such as medicine, biology and ecology.
- Astrophysics is for people who are fascinated with the universe, stars and space exploration.
- Earth science is for people who are interested in soil, rocks, weather and the natural environment.

Thousands of new jobs for science professionals will be created over the next 5 years. Demand for health science graduates in areas such as audiology, dietetics, nursing, and podiatry will be high. For more information about science careers, download the Careers With Science Guide - <http://bit.ly/39SxV6r>

ENGINEERING

If you are practical, like to know how things work and enjoy analysing and solving problems using mathematics and science, you should explore careers in engineering. For more information about engineering careers, and engineering specialisations such as civil and mechanical, download the Careers With Science - Engineering Guide - <http://bit.ly/39SxV6r>

To find out what type of engineering you would be suited to, take the following quiz - <http://bit.ly/1PVPOU4>

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VOCATIONAL AND HIGHER EDUCATION NEWS

The Good Careers Guide

The 2020 Good Careers Guide has just been launched! The Guide will assist students in their career planning. Key features include:

- over 400 job descriptions connected to Job Outlook data
- how to choose courses
- how to find a job
- how to make a resume and prepare for an interview.

You can access the Guide at <https://bit.ly/3cDLQhE>

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The Good Universities Guide

The Good Universities Guide connects 400 job descriptions from The Good Careers Guide with every accredited course in Australia. Select a field of work and start exploring.

You can access the Guide at <https://bit.ly/3c5gmQQ>

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Skills shortage area: oral health

Are you interested in health and science? Have you thought about dentistry but concerned you won't receive the required ATAR? You may be interested in exploring the following occupations:

- Dental Nurse/Assistant: assists dental team, supports patient, sterilisation of equipment, prepares dental materials, maintains client records etc.
- Dental Hygienist: educates patients about prevention of disease, treats oral diseases, and provides dental treatments.
- Dental Therapist: examines and treats diseases of the teeth in children and adolescents under the supervision of dentists.
- Dental Technician: designs and constructs dentures, crowns, impression trays, oral splints etc.

For information on these career areas, go to the Australian Dental Association- www.ada.org.au/

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Federation University

New course offerings in 2021:

- Bachelor of Nursing / Bachelor of Midwifery, <https://bit.ly/2ZwQCKC>
- Bachelor of Physiotherapy, <https://bit.ly/2THsK3n>
- Bachelor of International Sport Management, <https://bit.ly/3gh5PFA>

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Australian Defence Force Academy (ADFA)

Have you considered studying at ADFA? The following information has been copied from a Defence Force Recruiting Newsletter.

ADFA is situated in Canberra and is a university like no other, offering combined military and leadership training, with a world-class degree from the University of New South Wales (UNSW). It has the best university student-to-teacher ratio in the country, amazing sports and recreational facilities and is one of Australia's most respected universities.

Why ADFA?

- The education and experiences of ADFA will equip you to deal with the professional and personal challenges of your chosen career
- Be trained in the art of leadership by experienced military professionals
- Access exceptional sporting and recreational facilities and be a part of a wide variety of sports and special-interest clubs
- Earn your degree from UNSW
- Choose from a range of degrees - Arts, Business, Engineering, Information Technology, Science and Technology
- Enjoy free medical and dental, subsidised food and accommodation
- Receive a starting salary of over \$40,000 plus super while studying and no Higher Education Loan Program (HELP) fees.

For more information on ADFA call 13 19 01 or visit <http://bit.ly/1d0fil6>

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Apprenticeships and Traineeships

What maths skills does a professional tradie need? Here, we look at how algebra, trig and basic area skills are just as important to a successful tradie's toolkit as a fancy drill, <https://bit.ly/2LHdSh4>

Tradies 2.0: the tech tools taking over. With the modern day tradie's toolbox packed with more tech than tools, they're now more reliant on STEM smarts than ever. Here, we unpack the new gear shaking things up, <https://bit.ly/2Xfh3lw>

Other – trade career websites

- Plumbing, <https://bit.ly/3cK82qT>
- Defence Force, <https://bit.ly/368y4Sm>
- Bricklaying, <https://bit.ly/2AHmthp>
- Rail, <https://bit.ly/3cISjZp>
- Marine & boating, <https://bit.ly/2ZfXGLz>

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Planning on studying teaching in the future?

If you are planning on applying for an undergraduate education degree in the future, you will need to be aware of selection criteria for each state.

Victorian teaching courses

- Achieve a minimum ATAR of 70: Some universities will require a higher ATAR. You may be able to access entry into courses with a lower ATAR if you are eligible for ATAR adjustment factors.
- Complete the CASPer test: this is an online video-based situational judgment test. The test is designed to measure ethics, empathy and communication (selected universities will require this), <http://bit.ly/2qjlaGt>
- Achieve prerequisites: meet the requirements for prerequisite subjects.

NSW teaching courses

- Achieve minimum study scores: Achieve a Band 5 in a minimum of three subjects (must include an English).
- Teaching Questionnaire: You may need to complete a Teaching Questionnaire via the Universities Admissions Centre.
- Motivation to Teach: You may need to complete a Motivation to Teach statement direct to the university.
- Achieve prerequisites: meet the requirements for prerequisite subjects.

Please contact the universities you will be applying to for specific information.

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UPCOMING EVENTS

Federation University – Your Fed Future

Federation University is running the following online information sessions for prospective students:

June

- 1 Study community & human services
- 4 Turn your passion for science into a career
- 9 Study sport, physical education or outdoor education
- 11 Study teaching and education
- 12 Criminal Justice & Criminology

Information and RSVP - <https://bit.ly/2WfWfLo>

Access recordings of previous webinars on careers, pathways, scholarships and visual arts etc., at <https://bit.ly/3bKOlsq>

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Australian Catholic University – Talk with Industry series

Australian Catholic University is running the following online sessions for prospective students:

June

- 2 Talk with IT and business professionals
- 3 Talk with lawyers
- 17 Talk with occupational therapists and speech pathologists

July

- 2 Talk with exercise scientists and physiotherapists

Information and RSVP - <https://bit.ly/2XwbkYr>

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RMIT University – Discover What's Next series

RMIT University is running the following online sessions for prospective students:

June

- 9 All you need to know about RMIT
- 11 Art, Design & Architecture
- 18 Communications, Journalism & Media
- 23 Business & Law
- 25 Engineering
- 30 Flight Training & Aviation

July

- 2 Science
- 9 Computer Science & Information Technology
- 16 Fashion
- 23 Health & Biomedical Sciences
- 28 Education & Social Sciences
- 30 Building & Construction

Information and RSVP - <https://bit.ly/2M0UGeq>

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HSC & Beyond Virtual Careers Expo, 25-28 June

In partnership with leading universities and higher education providers, students and parents will be able to:

- Live chat with major NSW universities and Higher Education providers.
- Schedule an appointment with a university advisor or ambassador.
- Participate in live Q&A sessions with expert HSC teachers, careers advisors and counsellors.
- Participate in exclusive webinars, view recordings, and download resources to help ACE the HSC across all major subjects.

InspirED are working directly with university partners to deliver an amazing experience for students.

For more information and to register click here: <https://bit.ly/2Kyfo4c>.

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VCE & Beyond Virtual Careers Expo, 10-14 June

This expo follows a similar format to the one above, with a particular focus on Victorian universities. The VCE information may not be relevant, so you might want to select the HSC information from the above expo and the tertiary information from this expo.

Connect with Universities

- Visit virtual booths from over 80 University and Higher Education providers!
- Access faculty-specific information
- Ask live questions or book a video chat with student advisors
- Early admission information, scholarship applications and other relevant topics

For more information and to register click here: <https://bit.ly/2XMrz5r>

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JOB SPOTLIGHT

Construction Careers from [StudyWorkGrow](#)

Careers in the construction industry offer plenty of choices. Depending on your qualifications and experience you could get a hands-on trade like plumbing, joinery or carpentry, or you could be a site supervisor or project manager. Construction is a relatively safe bet in terms of job security offering plenty of opportunities to grow your salary and find jobs suited to your skillset.

What type of person would this job suit?

- You'll need to be very **practical** minded, specifically in relation to building and mechanical knowledge
- Have the required physical **strength** and **stamina** necessary to fulfil many roles
- Be adept at **coordinating** in order to make sure jobs go to plan
- Comfortable with **technology** to use suitable equipment for the job and be **dexterous** enough to use the right tools in any setting
- Good **organisational** and **problem solving** skills
- Ability to **work well with others**, as construction projects are mostly team-based

Related industries where you might find construction workers:

- Maintenance, Repairs and Renovations
- Residential, Commercial and Industrial Construction
- Civil and Environmental Construction
- Mining
- Town Planning
- Infrastructure e.g. road, rail, airport

Pathways

Apprenticeships and traineeships are the main entry pathways to careers in the construction industry. Which means that any additional qualifications and skills that you gain will stand you in great stead.

You could also elect to study construction-based degrees at University and begin working in one of the more professional roles available in the industry.

Successfully complete a [Bachelor of Construction at USQ](#) and you could be applying for jobs including building or construction supervisor, site manager, facilities manager, property developer, or even running your own business.

Alternatively, you could apply for a traineeship or apprenticeship, and gain a Cert III or IV, as well as paid work experience while you learn a trade, before deciding if you'd like to get more qualifications later in life.

The [Certificate II in Building and Construction \(Carpentry\) Pre-Apprenticeship offered at the Builders Academy](#), is an example of an introductory course that could get you started, even if you've haven't completed high school (you do need to be 16 or over).

Levels

Carpenter / Joiner

Apprenticeship

Working with timber, Joiners are usually based in a workshop, whereas Carpenters work mostly on work-sites.

You could be creating furniture, cabinetry or features like staircases, or be responsible for putting up timber building frames and trusses, or installing windows and doors.

The average salary for a qualified and experienced carpenter or joiner is \$70,000 per year. (As an apprentice you'll be earning at least the national minimum wage as well as getting nationally recognised qualifications and learning skills for life).

Plumber

Certificate IV in Plumbing and Services

Plumbers install, repair and maintain heating, cooling, gas, and water supplies, and ventilation systems. As well as the obvious installing, maintaining, fault finding and repairing of pipework, sewerage, drainage, stormwater and other plumbing fixtures and fittings.

You could be working in residential to industrial settings and working on small scale to enormous projects.

The average salary for a qualified and experienced plumber is listed as \$75,000 per year – but will depend on where you work and the type of specialisation you end up doing.

Project Manager

Diploma in Building and Construction

Construction project managers plan and run construction projects, including managing budgets, staff, contractors and services.

A Diploma could get you in to this career, with plenty of industry experience under your belt. Although additional qualifications in project management, or a bachelor's degree in Applied Science, Civil Engineering or Construction Management could make you a more desirable candidate.

The average listed salary at this level is \$97,000 per year.

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