



Australian
Space Agency

Careers in space

Be part of Australia's
space workforce



Developed in partnership with

tafesa



Government of
South Australia

Where could your interests take you?

Do you enjoy problem solving and collaborating? Are you passionate about improving life on Earth or curious about how the universe works?

A space career could be for you!

This booklet will help you explore the many different types of careers that Australia's space industry has to offer.

Discover the skills and study pathways that can get you where you want to go.

Engineers

I want to...

be part of teams that design,
build and test spacecraft
and systems.

Space Systems Engineers

Design, build and test spacecraft, launches and ground-based systems.

Specialty areas include **Analysts, System and Subsystem Leads** and **Subsystem Architects** for:

- Mechanical, structures and mechanisms
- Thermal
- Propulsion
- Guidance, navigation and control
- Operations, Fault Detection Isolation and Recovery (FDIR) and Software
- Assembly, Integration and Test
- Systems
- Mission systems

Further specialty areas include:

- Aerothermodynamics
- Operations
- Payload types such as radar and optical

Study pathways

At Australian Universities, study:

Bachelor of Engineering
(Honours) (Mechanical)

Bachelor of Engineering Honours
(Mechanical and Mechatronic)

Bachelor of Engineering
(Mechanical and Advanced Manufacturing)

For higher level industry and research jobs, postgraduate aerospace engineering study at Masters and/or PhD level is recommended.

**MEDIAN
AUSTRALIAN
SALARY:**

**Entry Level
\$72,000**

**Experienced
\$140,000**

Electrical, Electronics and Avionics Engineers

Design, construct, install and maintain electronic and electrical systems including communications, navigation and control.

This can include:

- Satellite Electronics Engineer
- Avionics Engineer

**MEDIAN
AUSTRALIAN
SALARY:**

**Entry Level
\$83,000**

**Experienced
\$130,000**

Study pathways

At Australian Universities, study:

Bachelor of Engineering

(Honours) (Electrical and Electronic)

Bachelor of Engineering

(Honours) (Electrical and Mechatronic)

Bachelor of Engineering Technology

(Electronic Systems and Security)

**For higher level industry and research jobs,
postgraduate study at Masters and/or
PhD level is recommended.**



Robotics Engineers

Build, install, operate, test and maintain robots, robotic components, devices and systems.

**MEDIAN
AUSTRALIAN
SALARY:**

**Early Career
\$90,000
Experienced
\$160,000**

Study pathways

At Australian Universities, study:

**Bachelor of Engineering (Honours)
and postgraduate qualifications in
specialised engineering areas including:**

**Mechanical, Electrical, Electronics,
Mechatronics or Robotics**

Examples of Space and Defence Studies Specialised Courses:

Southern Hemisphere Space Studies Program

Graduate Certificate in Space Studies

Associate Degree in Technology
(Defence Industries)

Bachelor of Technology
(Defence Industries)

Diploma of Digital Technologies

Master of Engineering
(Aerospace)

Scientists

I like to...

create breakthroughs in our understanding of space and work individually, or in teams, to research.

Rocket Propulsion Scientists

(Rocket Scientists)

Design, test, and manufacture spacecraft propulsion systems using scientific and engineering knowledge.

**MEDIAN
AUSTRALIAN
SALARY:**

**Entry Level
\$72,000**

**Experienced
\$125,000**

Study pathways

At Australian Universities, study:

Bachelor of Science and choose to focus on:

- Physics
- Chemistry
- Biochemistry
- Mathematical Science
- High Performance Computational Physics
- Geographical Information Systems (GIS)
- Statistics

- Space Science and Astrophysics or
- Geoscience

Other options include:

Bachelor of Computer Science

Bachelor of Mathematical Sciences

For higher level industry and research jobs, postgraduate study at Masters and/or PhD level is recommended.

Space Scientists

Apply the laws of physics, chemistry and geology to understand the universe.

This can include:

- Astrophysicists
- Meteorologists
- Astronomers
- Geologists
- Chemists
- Materials Scientists
- Biochemists and Biophysicists
- Mathematicians
- Computer Scientists

**MEDIAN
AUSTRALIAN
SALARY:**

**Entry Level
\$76,000**

**Experienced
\$132,000**

Study pathways

At Australian Universities, study:

Bachelor of Science and choose to focus on:

- Physics
- Chemistry
- Biochemistry
- Mathematical Science
- High Performance Computational Physics
- Geographical Information Systems (GIS)
- Statistics

- Space Science and Astrophysics or
- Geoscience

Other options include:

Bachelor of Computer Science

Bachelor of Mathematical Sciences

For higher level industry and research jobs, postgraduate study at Masters and/or PhD level is recommended.



Flight Surgeons

Support the health, safety and wellbeing of astronauts, utilising medical science and technology to prevent and control hazards.

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$224,000

Experienced

\$421,000

At Australian Universities, study:

Bachelor of Medicine

Bachelor of Surgery

Bachelor of Science (Biomedical Science)

**Specialised postgraduate studies in
Aerospace Medicine**

Designers, Engineering Technicians and Engineering Technologists

I like...

working in a team, using cutting edge technologies, to develop new processes and pathways to overcome challenges.



CAD Drafters and Designers

Use computer-aided design to create and modify 2D and 3D designs and drawings.

Study pathways

At TAFEs across
Australia, study:

**Diploma of Engineering
Technical (MEM50212)**

**Certificate III in Engineering
Technical (MEM30505)**

**Certificate IV in Engineering
Drafting (MEM40412)**

**MEDIAN
AUSTRALIAN
SALARY:**

**Entry Level
\$55,000**

**Experienced
\$100,000**

Engineering Technicians

Work as an engineer to design, build and test equipment, conduct experiments, collect data and identify and solve complex problems.

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$63,000

Experienced

\$104,000

Study pathways

At TAFEs across Australia, study:

Diploma of Engineering Technical (MEM50212)

A range of Associate Degrees in Engineering

Certificate III in Engineering Technical (MEM30505)

Certificate IV in Engineering Drafting (MEM40412)

At Australian Universities, study:

**Diplomas and Associate Degrees in Engineering
and Bachelor Degrees in**

- **Engineering Technology;**
- **Product Design;**
- **Digital Technologies; and**
- **Design and Technology Innovation**

Engineering Technologists

Analyse, modify, test and apply new and existing engineering technologies to solve complex issues in consultation with engineers.

MEDIAN
AUSTRALIAN
SALARY:

Entry Level

\$73,000

Experienced

\$128,000

Study pathways

At TAFEs across Australia, study:

Diploma of Engineering – Technical (MEM50212)

Diploma of Applied Technologies (22460VIC)

A range of **Associate Degrees in Engineering**

At Australian Universities, study:

Diplomas and Associate Degrees in

- **Engineering**
- **Engineering Technology**
- **Technology**

or

Bachelor of Technology

Bachelor Engineering Technology

Machinists, Assembly and Testing Technicians

I want to...

machine and assemble parts and components for space craft, satellites and other systems as part of Australia's future in space.

CNC Machinists

Interpret and use technical drawings and designs. Set up, program, operate and oversee industrial machinery, milling machines and tools to create precision metal parts.

Other job titles and specialty functions include:

- 3D Printing
- Additive Manufacturing

MEDIAN
AUSTRALIAN
SALARY:

Early Career

\$56,000

Experienced

\$93,000

Study pathways

**At TAFEs across Australia,
become an apprentice and study:**

Certificate III in Engineering
Mechanical Trade (MEM30219)

At a post-trade level, undertake skill sets in:

Diploma of Engineering
Advanced Trade (MEM50119)

Mechanical Technicians

Install machinery, parts and equipment onto aircraft and spacecraft.

Other job titles include:

- Equipment Maintenance Technician
- Maintenance Technician
- Integration Technician
- Vehicle and Payload Technician
- Metrology Technician

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$64,000

Experienced

\$96,000

Study pathways

At TAFEs across Australia, study:

Certificate III in Engineering – Mechanical Trade
(MEM30219)

Certificate IV in Aeroskills – Mechanical (MEA40718)

Certificate IV in Aeroskills – Structures (MEA41318)

**Diploma of Aircraft Maintenance Engineering –
Mechanical (TB1)** (11064NAT)

Diploma of Engineering – Advanced Trade (MEM50119)

Assembly/Assembler Technicians

Construct, assemble, fit, fasten and install parts in aeroplanes, spacecraft and satellites.

Other job titles and specialty functions include:

- Structural Fitters and Technicians
- Maintenance Technicians

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$50,000

Experienced

\$70,000

Study pathways

At TAFEs across Australia, study:

Certificate II in Engineering Pathways (MEM20413)
and then undertake a trade qualification:

Certificate III in Engineering – Fabrication Trade (MEM30319)

Certificate III in Engineering – Mechanical Trade (MEM30219)

Diploma of Engineering – Advanced Trade (MEM50119)

Certificate II in Aeroskills – Mechanical (MEA20418)

Certificate IV in Aeroskills – Mechanical (MEA40718)

Diploma of Aircraft Maintenance Engineering –
Mechanical (TB1) (11064NAT)



Production Test Technicians

Monitor, adjust and test processes and equipment in the production environment.

MEDIAN
AUSTRALIAN
SALARY:

Early Career
\$60,000
Experienced
\$90,000

Study pathways

At TAFEs across Australia, study:

Certificate III in Engineering – Mechanical Trade (MEM30219)

Diploma of Engineering – Technical (MEM50212)

Diploma of Applied Technologies (22460VIC)

Avionics and Electronics Technicians, Electrical and Automation Technicians

I want to...

install, test and repair electronics,
communications and control systems
and set up, monitor and repair
automated and robotic systems.

Avionics Technicians

Install, inspect, test, adjust and repair electronic equipment on air and spacecraft.

Similar jobs include:

- Electronics Technician
- Communications Technician
- Instrumentation Technician
- Radar Technician
- Satellite Technician
- Simulator Technician
- Sensor Technician

**MEDIAN
AUSTRALIAN
SALARY:**

Early Career

\$68,000

Experienced

\$100,000

Study pathways

At TAFEs across Australia, study:

Certificate II in Electronics (UEE21920)

**Certificate III in Electronics and Communications
(UEE30920)**

**Diploma of Electronics and Communications Engineering
(UEE50520)**

Associate Degree in Electronic Engineering (CRS1400029)

Certificate IV in Aeroskills – Avionics (MEA40618)

**Diploma of Aircraft Maintenance Engineering –
Mechanical (TB1) (11065NAT)**

Electricians and Electrical Technicians

Construct, install, test and repair electrical systems, equipment and components.

MEDIAN
AUSTRALIAN
SALARY:

Early Career

\$67,000

Experienced

\$102,000

Study pathways

At TAFEs across Australia, study:

Certificate III in Electrotechnology Electrician (UEE30811) and undertake an apprenticeship to become a licensed electrician.

Certificate IV in Electrical Instrumentation (UEE40420)

Diploma of Electrical Engineering (UEE50420)

Diploma of Applied Technologies (22460VIC)

Associate Degrees in Electrical Engineering



Automation and Robotics Technicians

Assist engineers to build, install, operate, test and maintain robots, robotic components, devices and systems.

Other job titles include:

- Remote Systems Technician

**MEDIAN
AUSTRALIAN
SALARY:**

**Early Career
\$64,000**

**Experienced
\$108,000**

Study pathways

At TAFEs across Australia, study:

**Diploma of Electronics and Communication
Engineering (UEE50520)**

Diploma of Electrical Engineering (UEE50420)

**Associate Degree in Electronic Engineering
(CRS1400029)**

Diploma of Applied Technologies (22460VIC)

**Data Scientists, Analysts, Software
Developers and Engineers, Programmers
and Serious Game Developers**

I want to...

gather and analyse big data,
and develop software and
simulations.

Computer Scientists, Data Scientists and Analysts

Collect, organise, interpret and report on data to gain insights and information for organisations.

Specialty functions include:

- Natural Language Processing
- Artificial Intelligence and Machine Learning
- Global Information Systems (GIS) Analysis

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$107,000

Experienced

\$189,000

Study pathways

At Australian Universities, study:

Bachelor of Computer Science

Bachelor of Mathematics and Computer Science

Bachelor of Applied Data Analytics

Master of Data Science

Master of Machine Learning (AI)

Software Developers and Software Engineers

Design, program, test, implement and maintain software programs.

This can include:

- Space Systems
- Ground Systems
- Space Simulations

**MEDIAN
AUSTRALIAN
SALARY:**

**Entry Level
\$79,000
Experienced
\$136,000**

Study pathways

AT TAFEs across Australia, study:

Certificate IV in Information Technology (Programming)
(ICT40120)

Diploma of Information Technology (ICT50220)

At Australian Universities, study:

Bachelor of Computer Science

Bachelor of Software Engineering

Bachelor of IT (Software Development)

Bachelor of Engineering (Hons) (Software)

Intelligent Game Developers

Build, program and utilise systems and games in virtual reality, augmented reality and simulations to analyse data, make intelligent decisions and interacts with others in human-like ways.

Similar jobs include:

- Serious Games Developer
- Simulation Developer

**MEDIAN
AUSTRALIAN
SALARY:**

Early Career

\$92,000

Experienced

\$140,000

Study pathways

At TAFEs across Australia, study:

Diploma of Screen and Media

(Animation, Gaming and Visual Effects) (CUA51020)

At Australian Universities, study:

Bachelor of Creative Industries (Interactive Design)

Bachelor of Information Technology

(Simulation and Serious Games)

Bachelor of Creative Industries

Bachelor of Serious Games

Information Technology and Cyber Security

I want to...

develop the ICT systems and build the cyber security frameworks that will secure the Australian space sector's future activities.

Network and Systems Administrator

Configure, install, maintain and protect software, hardware and the network.

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$77,000

Experienced

\$112,000

Study pathways

At TAFEs across Australia, study:

Certificate IV in Information Technology (Networking)
(ICT40120)

Diploma of Information Technology (ICT50220)

Advanced Diploma of Information Technology (ICT60220)

At Australian Universities, study:

Bachelor of Computer Science

Bachelor of Information Technology

Bachelor of Engineering

(Computer and Network Engineering)

Cyber Security Specialists and Managers

Plan and implement security measures to protect computer networks and systems from cyber-attacks and manage incident responses.

**MEDIAN
AUSTRALIAN
SALARY:**

**Entry Level
\$104,000
Experienced
\$183,000**

Study pathways

At TAFEs across Australia, study:

Certificate IV in Cyber Security (22334VIC)

Advanced Diploma of Cyber Security (22445VIC)

At Australian Universities, study:

Bachelor of Computer Science

Bachelor of Information Technology

**Bachelor of Information Technology
(Networking and Cyber Security)**

Master of Cyber Security

**Master of Information Technology
(Network and Cybersecurity Systems)**

Widely recognised industry certifications include:

**CISSP - Certified Information Systems
Security Professional**

CISM - Certified Information Security Manager

**Law, Project Management
and Business Support**

I want to...

play a pivotal role in the successful
running of Australian space sector
projects and missions.



Work, Health and Safety Officers

Ensure compliance of health and safety systems, conduct risk assessments and advise managers and employees.

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$70,000

Experienced

\$152,000

Study pathways

At TAFEs across Australia, study:

Certificate IV in Work Health and Safety (BSB41419)

Diploma in Work, Health and Safety (BSB51319)

At Australian Universities, study:

Graduate Certificate in Organisational Safety and Human Factors

Graduate Diploma in Human Factors and Safety Management Systems



Space Law

Provide advice and prepare legal contracts and documentation to ensure compliance with Australian treaties and international laws.

Study pathways

At Australian Universities, study:

Bachelor of Laws

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$98,000

Experienced

\$175,000



Space Business Development

Identify, build and plan new customer and business proposals to gain additional business opportunities.

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$84,000

Experienced

\$141,000

Study pathways

At Australian Universities, study:

Bachelor of Commerce

Bachelor of Business

Project Managers and Mission Managers

Plan and manage resources for projects to deliver on time and on budget. Frequently these roles are filled by experienced engineers or scientists.

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$89,000

Experienced

\$153,000

Study pathways

At TAFEs across Australia, study:

Certificate IV in Project Management Practice
(BSB40920)

Diploma of Project Management (BSB50820)

At Australian Universities, study:

Bachelor of Project Management

Graduate Certificate and Masters programs
in Project Management

Space Communications and Creative Courses

I love space...

and want to communicate and design
assets that educate the world
about Australia's exciting and
critical role in space.

Space Communicators

Promote or create an intended image for individuals and space industry companies to increase awareness of capability, goals and achievements.

MEDIAN
AUSTRALIAN
SALARY:

Entry Level

\$54,000

Experienced

\$119,000

Study pathways

At TAFEs across Australia, study:

Certificate IV in Marketing and Communication
(BSB40820)

Diploma of Marketing and Communication (BSB50620)

At Australian Universities, study:

Bachelor of Marketing

Bachelor of Marketing and Communication

Bachelor of Business (Marketing)

Graphic Designers

Produce images, illustrations, videos, photos and animation to promote space concepts and companies.

Other job titles and specialty functions include:

- Illustrator
- Artist
- Launch Photographer

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$57,000

Experienced

\$82,000

Study pathways

At TAFEs across Australia, study:

Diploma of Graphic Design (CUA50720)

Advanced Diploma of Graphic Design (CUA60320)

At Australian Universities, study:

Bachelor of Media

Bachelor of Creative Arts



Education Outreach

Plan and deliver educational event activities for school and higher education students.

**MEDIAN
AUSTRALIAN
SALARY:**

Entry Level

\$62,000

Experienced

\$100,000

Study pathways

At Australian Universities, study:

**Bachelor of Science with a Bachelor/
Master of Teaching (Secondary/Middle)**

Media and PR

Build interest in companies with media, government and the public by creating advertising, events, social media, print-based and online content. Translate complex technical information into engaging content and experiences.

MEDIAN
AUSTRALIAN
SALARY:

Entry Level

\$53,000

Experienced

\$81,000

Study pathways

At TAFEs across Australia, study:

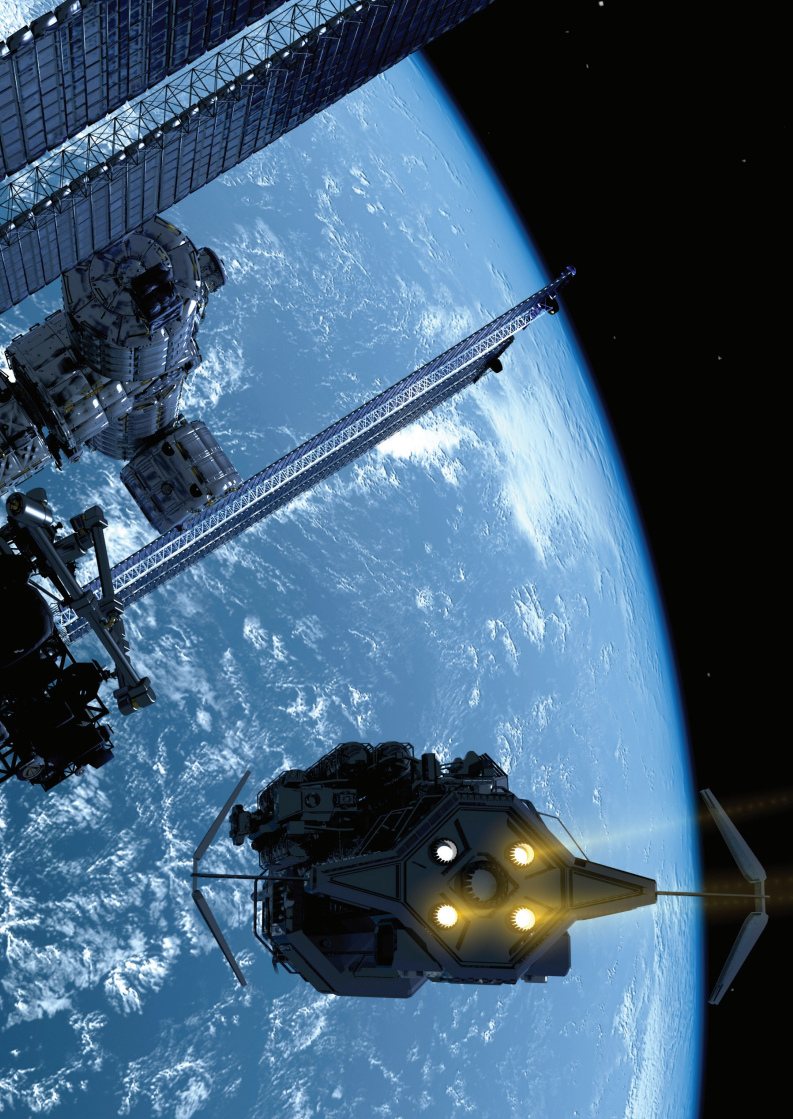
Certificate IV in Marketing and Communication
(BSB40820)

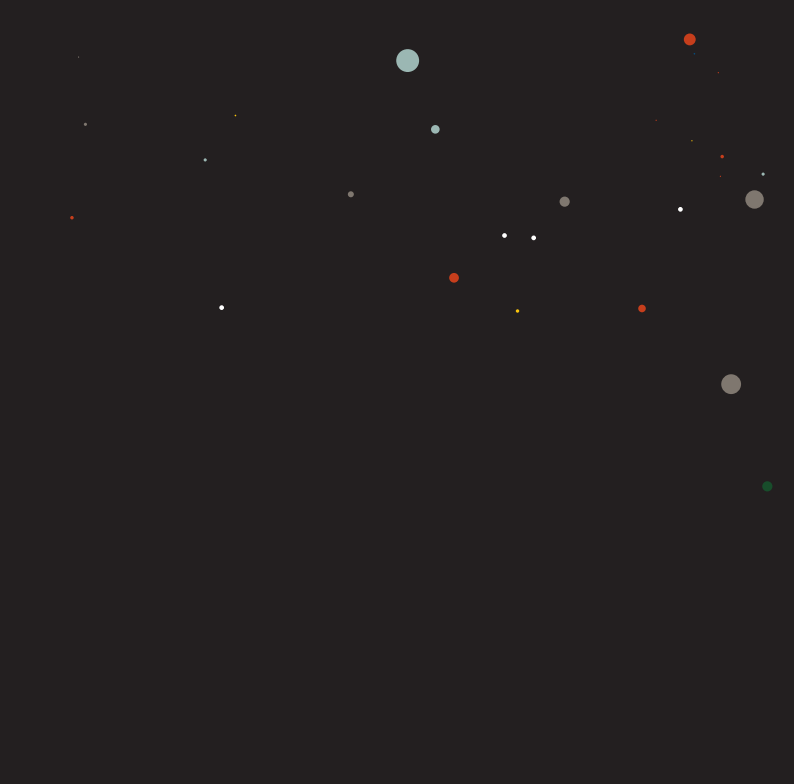
At Australian Universities, study:

Bachelor of Marketing

Bachelor of Marketing and Communications

Bachelor of Business (Marketing)





Vocational qualification titles and national codes are correct at the date of publishing (October 2022).

Salaries to be used as a guide only and have been sourced from [JobOutlook.gov.au](https://www.joboutlook.gov.au); [Payscale.com](https://www.payscale.com); Hayes ANZ Salary Guide; [Seek.com.au](https://www.seek.com.au); [Indeed.com](https://www.indeed.com) and [SalaryExpert.com](https://www.salaryexpert.com) during July 2020. Salaries may vary depending upon your location and qualifications held.

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Australian Government



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