



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)

Bachelor of Engineering Technology

(Systems and Security)

/ **Bachelor of Science** (Physics)

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

MEDIAN
AUSTRALIAN
SALARY:

Entry Level

\$90,000

Experienced

\$145,000

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
\$87,000
Experienced
\$158,000

Study pathways

At Australian Universities, study:

Bachelor of Engineering (Honours) (Electrical and Electronic)

Bachelor of Engineering (Honours) (Electrical and Mechatronic)

Bachelor of Engineering (Honours) (Electrical and Electronic)
/ **Bachelor of Finance**

Bachelor of Engineering (Honours) (Electrical and Electronic)
/ **Bachelor of Mathematical and Computer Sciences**

Bachelor of Engineering Technology
(Electronic Systems and Security)

Master of Engineering (Aerospace)

**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.

Study pathways

At Australian Universities, study:

Bachelor of Engineering (Honours) (Engineering)

Bachelor of Computer Science (Advanced)

Master of Engineering (Electrical and Electronics)

Master of Engineering (Mechatronic)

Master of Engineering (Electronic)

MEDIAN
AUSTRALIAN
SALARY:

Early Career

\$95,000

Experienced

\$170,000

Examples of new Space and/or Defence Courses:

Southern Hemisphere Space Studies Program

Diploma of Digital Technologies

Professional Certificate in Advisory Services

Graduate Certificate in Artificial Intelligence and Machine Learning

Graduate Certificate in Space Studies

Graduate Diploma in Artificial Intelligence and Machine Learning

Graduate Diploma in Engineering (Aerospace)

Associate Degree in Technology (Defence Industries)

Bachelor of Technology (Defence Industries)

Master of Engineering (Aerospace)

Global Executive Master of Business Administration: Defence and Space

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
\$133,000

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
\$305,000
Experienced
\$647,000

At Australian Universities, study:

Graduate Certificate of Aeromedical Retrieval

Bachelor of Medicine

Bachelor of Biomedicine

Bachelor of Medical Science (Honours)

Bachelor of Surgery

Bachelor of Science (Biomedical Science)

Master of Surgery

Master of Aeromedical Retrieval

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.

MEDIAN
AUSTRALIAN
SALARY:

Entry Level
\$56,500
Experienced
\$100,000

Study pathways

At TAFEs across Australia, study:

Diploma of Engineering
Technical (MEM50212)

Certificate III in Engineering
Technical (MEM30505)

Certificate IV in Engineering
Drafting (MEM40412)

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
\$90,000

Experienced
\$113,000

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

\$90,000

Experienced

\$121,000

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
\$74,000
Experienced
\$93,000

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 (MEA41322)

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

Diploma of Aviation Maintenance Management (MEA50422)

Diploma of Engineering – Advanced Trade (MEM50119)

**Bachelor of Engineering Technology (Aircraft Technology)
(Aircraft Maintenance - Mechanical)**

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
\$55,000
Experienced
\$75,000

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
\$116,000

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
\$69,000
Experienced
\$118,000

Study pathways

At TAFEs across Australia, study:

Certificate III in Electrotechnology Electrician (UEE30820) 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
\$65,000
Experienced
\$110,000

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

Study pathways

At Australian Universities, study:

Graduate Diploma in Spatial Science

Bachelor of Computer Science

Bachelor of Mathematics and Computer Science

Bachelor of Applied Data Analytics

Bachelor of Creative Industries/ Bachelor of Data Science

Bachelor of Science - Data Science

Bachelor of Science - Spatial Systems

Bachelor of Information Technology
(Big Data and Analytics)

Master of Engineering Practice in Intelligent Industrial
Control and Autonomous Systems Engineering

Master of Data Science

Master of Machine Learning (AI)

MEDIAN
AUSTRALIAN
SALARY:

Entry Level

\$109,000

Experienced

\$193,000

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
\$99,000

Experienced
\$117,000

Study pathways

AT TAFEs across Australia, study:

Certificate IV in Information Technology
(Programming) (ICT40120)

Diploma of Information Technology
(Advanced Programming) (ICT50220)

At Australian Universities, study:

Bachelor of Computer Science

Bachelor of Software Engineering

Bachelor of Business Informatics

Bachelor of Engineering (Computer Systems) Honours

Bachelor of IT (Software Development)

Bachelor of Engineering (Hons) (Software)

Master of Software Engineering

Master of Computer Science

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
\$94,000
Experienced
\$151,000

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

\$70,000

Experienced

\$120,000

Study pathways

At TAFEs across Australia, study:

Certificate IV in Information Technology

(Networking) (ICT40120)

Diploma of Information Technology (Advanced Networking)

and (Cloud Engineering) (ICT50220)

Advanced Diploma of Information Technology (ICT60220)

At Australian Universities, study:

Bachelor of Computer Science

Bachelor of Engineering Technology (Systems and Security)/

Bachelor of Science (Physics)

Bachelor of Engineering (Computer and Network Engineering)

Bachelor of Information Technology

(Networking and Security)

Bachelor of Technology (Computer Systems and Networking)

Master of Information Technology in Networking

Master of Defence Systems Integration (LMDI)

Master of Information Technology
in Cyber Security and Networking

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
\$70,000
Experienced
\$185,000

Study pathways

At TAFEs across Australia, study:

Certificate IV in Cyber Security (22603VIC)

Advanced Diploma of Cyber Security (22610VIC)

At Australian Universities, study:

Graduate Certificate in Cyber Security (LCCY)

Bachelor of Computer Science

Bachelor of Engineering Technology (Systems and Security)

Master of Engineering (Cyber Engineering and Telecommunications) (LMEL)

Master of Cybersecurity (Advanced)

Bachelor of Information Technology
(Networking and Cyber Security)

Master of Cyber Security

Master of Information Technology
(Network and Cybersecurity Systems)

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.

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

Graduate Certificate in Occupational Health, Safety and Ergonomics

Graduate Certificate in Safety Leadership

Graduate Certificate in Occupational Health and Safety (Post Graduate)

Graduate Certificate in System Safety Engineering and Management

Bachelor of Arts/Bachelor of Health Sciences

MEDIAN
AUSTRALIAN
SALARY:

**Entry Level
\$75,000**

**Experienced
\$143,000**



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

Bachelor of Science

(Space Science and Astrophysics)

MEDIAN
AUSTRALIAN
SALARY:

**Entry Level
\$100,000**

**Experienced
\$180,000**



Space Business Development

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

Study pathways

At Australian Universities, study:

Bachelor of Commerce

Bachelor of Business

Professional Certificate in Advisory Services

Global Executive Master of Business Administration: Defence and Space

Graduate Certificate in Commerce

Bachelor of Business Management

Master of Commerce

MEDIAN
AUSTRALIAN
SALARY:

Entry Level

\$86,000

Experienced

\$151,000

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
\$75,000**

**Experienced
\$155,000**

Study pathways

At TAFEs across Australia, study:

Certificate IV in Project Management Practice (BSB40920)

Diploma of Project Management (BSB50820)

At Australian Universities, study:

Graduate Diploma of Applied Project Management

**Graduate Certificate and Masters programs
in Project Management**

Bachelor of Project Management

Master of Defence Systems Integration (LMDI)

Master of Applied Project Management

Master of Applied Project Management (Project Systems)

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
\$60,000

Experienced
\$120,000

Study pathways

At TAFEs across Australia, study:

Certificate IV in Marketing and Communication (BSB40820)

Diploma of Marketing and Communication (BSB50620)

Diploma of Marketing

At Australian Universities, study:

Graduate Certificate in Marketing (DCKG)

Bachelor of Business (Marketing)

Bachelor of Marketing

Master of Marketing

Master of Management - Marketing (DMMX)

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
\$60,000
Experienced
\$101,000

Study pathways

At TAFEs across Australia, study:

Diploma of Graphic Design (CUA50720)

Advanced Diploma of Graphic Design (CUA60320)

At Australian Universities, study:

Graduate Certificate in Creative Industries

Bachelor of Creative Arts

Bachelor of Media

Bachelor of Media/Bachelor of Arts

Bachelor of Visual Arts

Bachelor of Business/Bachelor of Fine Arts (Visual Arts)

Bachelor of Visual Arts and Design

Bachelor of Visual Communication Design



Education Outreach

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

MEDIAN
AUSTRALIAN
SALARY:

Entry Level
\$73,000
Experienced
\$100,000

Study pathways

At Australian Universities, study:

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

Graduate Diploma in Education Studies
(Digital Learning) (MGDL)

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
\$66,000

Experienced
\$109,000

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

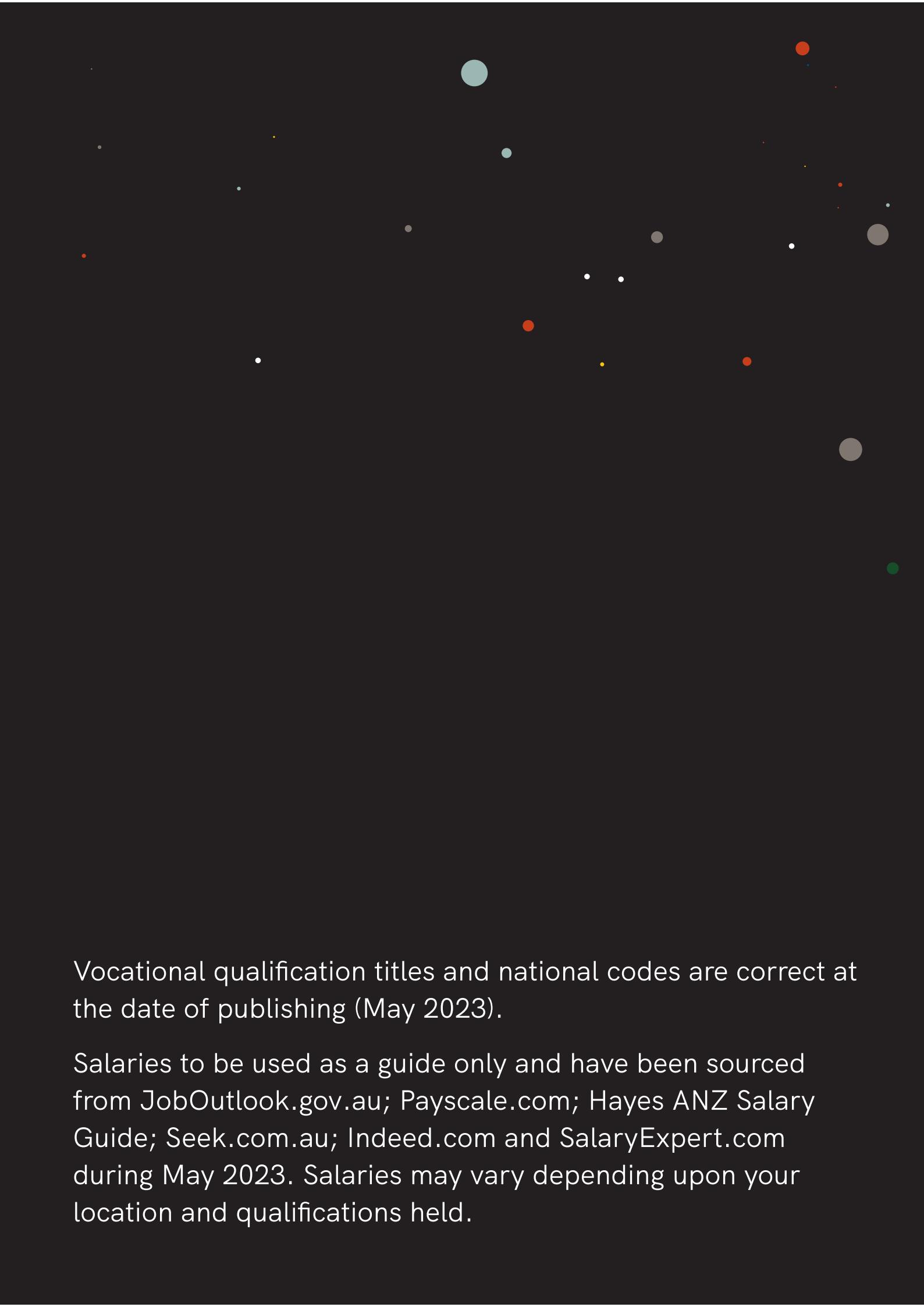
Bachelor of Marketing and Communications

Bachelor of Business (Marketing)(Advertising)

Bachelor of Creative Arts/
Bachelor of Communication Media

Master of Design/Master of Public Relations
and Advertising





Vocational qualification titles and national codes are correct at the date of publishing (May 2023).

Salaries to be used as a guide only and have been sourced from JobOutlook.gov.au; Payscale.com; Hayes ANZ Salary Guide; Seek.com.au; Indeed.com and SalaryExpert.com during May 2023. Salaries may vary depending upon your location and qualifications held.

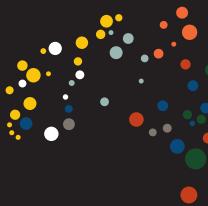
Developed in partnership with



Government of
South Australia



Australian Government



Australian
Space Agency