

# AIRCRAFT MAINTENANCE ENGINEER (AVIONICS)

ALSO KNOWN AS: **AVIONICS TECHNICIAN** **AIRCRAFT ELECTRICAL SYSTEMS ENGINEER** **AEROSPACE ELECTRICAL ENGINEER**  
**AVIONICS SPECIALIST** **AIRCRAFT ELECTRONICS ENGINEER**

## NAVIGATE THE CUTTING EDGE OF AVIATION TECHNOLOGY.

As an Aircraft Maintenance Engineer (Avionics), you'll be the mastermind behind the complex electronic systems that guide aircraft through the skies. Your expertise will ensure that pilots have the most advanced tools at their fingertips, making you the unseen co-pilot of every successful flight.

### KEY SKILLS

Skills which may benefit anyone considering a job as a aircraft maintenance engineer (avionics) include:

- ☑ Cybersecurity awareness
- ☑ Diagnostic reasoning
- ☑ Electrical systems knowledge
- ☑ Software literacy
- ☑ System integration

### VALUES & ATTRIBUTES

Values and attributes of anyone considering a job as a aircraft maintenance engineer (avionics) include:

- ☑ Attention to detail
- ☑ Innovative
- ☑ Patience
- ☑ Technical Aptitude
- ☑ Methodical
- ☑ Realistic - "Do-er"

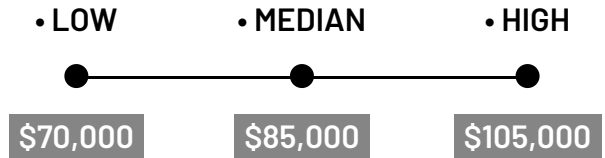
### CAREER PROGRESSION

In this role, you may have the opportunity to progress to other positions. Career progression opportunities include:

- Aerospace Engineer
- Team Leader
- Mechanical Engineer
- Chief Engineering Officer

### SALARY EXPECTATION

The expected salary for a Aircraft Maintenance Engineer (Avionics) can vary across different areas of manufacturing and may vary as you become more experienced.



### RELATED INDUSTRIES

- ▶ Aerospace and Defence
- ▶ Transport Equipment and Machinery

### RECOMMENDED SCHOOL SUBJECTS

- Aerospace Systems
- Engineering Skills

### CORE SCHOOL SUBJECTS

- General Mathematics
- Essential English
- Engineering
- Physics

## JOB OVERVIEW

Aircraft Maintenance Engineers (Avionics) are essential to the aviation industry, specialising in the maintenance, repair, and installation of aircraft electronic systems. Their work encompasses a wide range of technologies, from communication and navigation systems to flight control computers and in-flight entertainment.

These professionals contribute significantly to flight safety and operational efficiency, directly impacting the reliability of air travel. Their expertise helps airlines maintain competitive edge by keeping aircraft equipped with the latest avionics technology. They work with sophisticated diagnostic equipment and must stay current with rapidly evolving electronic systems.

A typical day for an Aircraft Maintenance Engineer (Avionics) might involve troubleshooting complex electronic issues, performing software updates, calibrating instruments, and ensuring all avionics systems meet strict regulatory standards. The role requires a unique blend of electrical engineering knowledge, IT skills, and aviation expertise.

## WHAT WILL YOU DO?

Your role may include duties as follows:

1. Inspect, test, and troubleshoot aircraft avionics systems
2. Install and integrate new avionics equipment
3. Perform routine maintenance and repairs on electronic flight systems
4. Update system software and maintain cybersecurity protocols
5. Collaborate with mechanical engineers to resolve integrated system issues

## HOW TO BECOME A AIRCRAFT MAINTENANCE ENGINEER (AVIONICS)

Becoming an Aircraft Maintenance Engineer (Avionics) requires specific qualifications and licensing. Here's a general pathway to enter this specialised field:

1. Complete Year 12 with a focus on mathematics, physics, and English
2. Consider undertaking a Certificate II in Aeroskills (MEA20418) which provides good foundation skills
3. Research potential employers in the aviation industry, including airlines, maintenance repair and overhaul (MRO) facilities, and aircraft manufacturers
4. Prepare a strong resume highlighting your qualifications and any relevant experience, and apply for entry-level positions or apprenticeships in aircraft maintenance
5. Gain practical experience through an apprenticeship or traineeship with an approved maintenance organisation
6. Obtain a Civil Aviation Safety Authority (CASA) Aircraft Maintenance Engineer License
7. Consider specialising in specific aircraft types or systems through additional training and certifications

# VOCATIONAL EDUCATION & TRAINING

Vocational education and training are crucial for aspiring Aircraft Maintenance Engineers (Avionics). These programs provide the specialised knowledge and skills required in this high-tech field. An apprenticeship with is the best pathway to gain employment in this role.

- Certificate IV in Aeroskills (Avionics)(MEA40618)

As an apprentice you will combine work with formal training, allowing you to gain practical skills and knowledge in a specific trade while earning a salary.

**Duration:** Apprenticeships typically last up to 3 years for full-time participants. Part-time apprenticeships may take longer, depending on the individual's work schedule and training progress.

**Work and study combination:** As an apprentice you will work either full-time or part-time while receiving formal training from a Registered Training Organisation (RTO). School-based apprenticeships may be available.

**Eligibility:** Generally, apprenticeships do not require any formal qualifications to enter, making them accessible to a wide range of individuals, including if you are a school leaver or someone looking to change careers. There are minimum age requirements and there may be other eligibility criteria.

**Completion:** On completion you will receive a nationally recognised trade qualification, showcasing your skill and experience.

## Advancing your career

For those looking to advance into leadership roles or deepen their expertise:

- Diploma of Aeroskills (Avionics)(MEA50118)
- Diploma of Aviation Maintenance Management (MEA50422)
- Advanced Diploma of Aviation Maintenance Management (MEA60222)

# UNIVERSITY & HIGHER EDUCATION

While not always mandatory, university education can provide advanced knowledge and open opportunities for career progression. Relevant degree programs might include:

- Bachelor of Engineering (Electrical/Electronic)
- Bachelor of Aviation (Maintenance Management)

The pathway to university often involves completing a vocational qualification and gaining industry experience before pursuing higher education. University programs offer in-depth understanding of electrical engineering principles, avionics systems, and project management. These skills can be particularly valuable for those aiming for senior technical or management positions in the aviation industry, or for those interested in avionics research and development.