



Australian Government
Civil Aviation Safety Authority

SELF-STUDY PATHWAY

to becoming
a licensed aircraft
maintenance engineer





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Self-study pathway to becoming a licensed aircraft maintenance engineer

A licensed aircraft maintenance engineer (LAME) is a great career choice

- Australia's aviation industry needs skilled LAMEs to keep aircraft well maintained and safe to fly.
- This career can be very rewarding if you enjoy understanding how things work and solving problems.
- You get to do hands-on work maintaining and repairing real aircraft.
- The skills you gain can be used in Australia and in many other countries.
- LAMEs can earn good pay.
- There are lots of career pathways and chances to move into more senior roles over time.

While many people go to a training organisation or do a formal apprenticeship to become a LAME, you don't have to. You can choose to study by yourself and gain practical experience while you are working at an aircraft maintenance organisation.

(If you would prefer to go to a training organisation, visit the [CASA website](#) to find a list of approved organisations.)

Choosing the CASA self-study pathway

The self-study pathway is a flexible and cost-effective option to become a LAME

This pathway is ideal if you:



prefer to learn at your own pace



are currently working in aviation and want to get your licence



do not want to (or cannot) complete an apprenticeship



do not want to (or cannot) attend a maintenance training organisation.

This guide provides detailed information on CASA's self-study pathway, and sets out the theoretical and practical experience requirements for the two most common licence categories:

B1

CATEGORY B1

Maintenance certifying engineer – mechanical

B2

CATEGORY B2

Maintenance certifying engineer – avionics

It will walk you through the steps to help you get started.

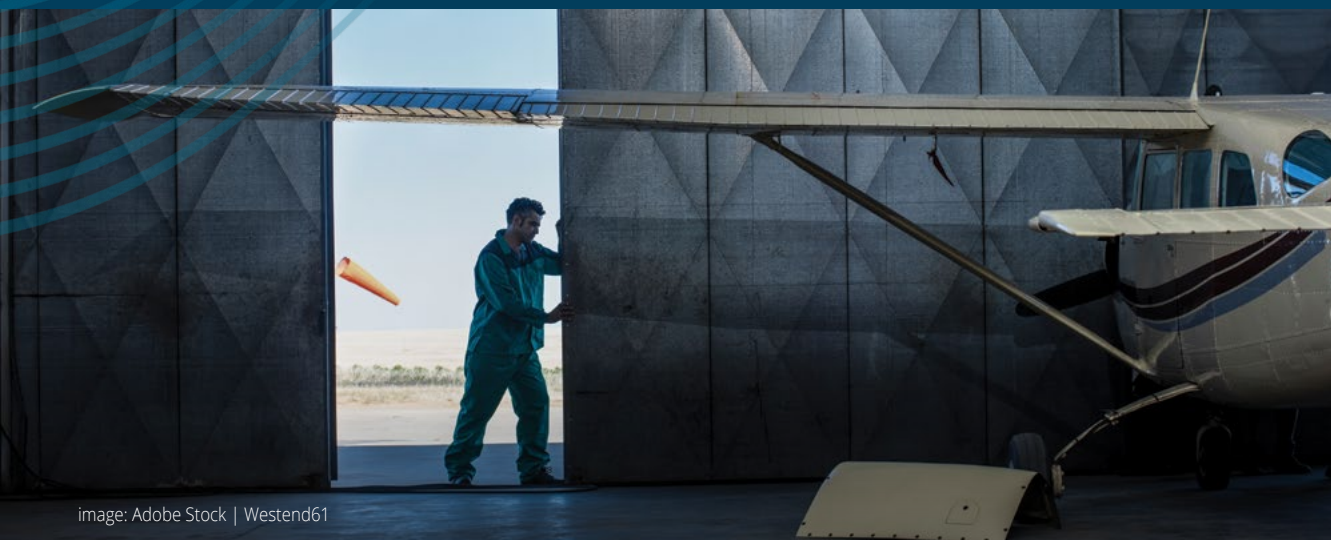
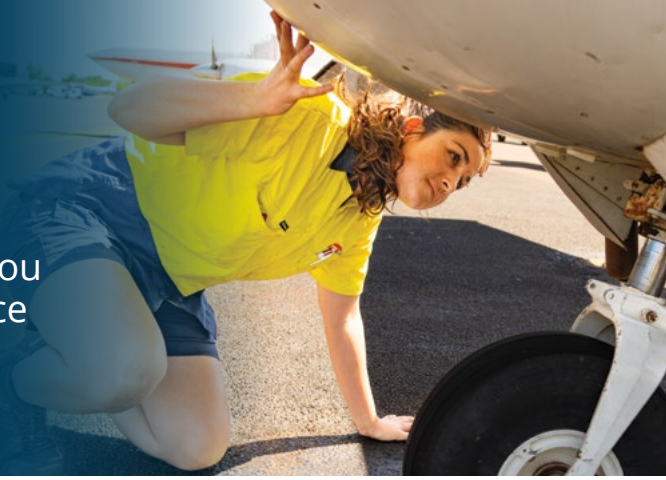


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What is the Part 66 self-study pathway?

The self-study pathway allows you to study and get work experience at your own pace.



Costs

Costs for the self-study pathway option are low compared to formalised training with a training organisation. You won't have the fees associated with enrolling and studying at a training organisation such as enrolment fees or tuition fees.

You will, however, need to pay for:

- textbooks or study materials (approximately \$60 to \$80 per module)
- examination fees (approximately \$175 to \$285 per exam)
- licence application fee (approximately \$320).

There are no government funding options available for self-study.

Duration

The self-study pathway is self-paced so you can learn as quickly or slowly as you wish and take a break from studying when you want.

Depending on the licence you apply for, you can complete your studies and practical experience within as little as 2 years to qualify for an initial modular licence.

There is a 10-year limit on completing all your exams. This means you must apply for your initial licence within 10 years of sitting your first CASA exam. If you do not, you will need to re-sit those exams that fall outside the 10-year limit.

Tips for success

Stay organised

Keep track of your study schedule and logbook entries.

Seek support

Join online forums or local groups for advice and motivation.

Use quality resources

Refer to CASA's website for accurate guidance information.

Plan ahead

Allocate time for study, practical work, and exam preparation.

Talk to your employer

Find out what work experience you can be involved in.

Book your exams

Find out when exams are being held in your area at casa.aspeqexams.com



Steps to getting licensed

1. DECIDE



Choose your licence category

Explore the options and pick the right path for you



2. LEARN (in any order)



Study the required modules

Build your knowledge with focused, relevant learning



Pass the exams

Test your knowledge and demonstrate your understanding



Gain practical experience

Apply what you've learned in real-world settings

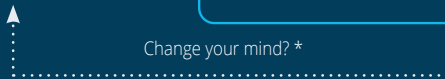


3. GET YOUR LICENCE



Apply for your licence

Submit your application and take the next step in your career



Change your mind? *

* After you've started studying and passed some exams, you can change your mind and work towards a different licence category. However, you will need to do extra exams and gain further experience in this new area.





Choose your licence category

If you are already working in aviation, you probably have a good idea of what type of aircraft you want to work on.

If not, take a look at our [Engineer student guide](#) or [Aircraft maintenance engineer career guide](#) to further understand the different types of licensed aircraft maintenance engineers and what they do.

Only the B1 and B2 category licences are available for self-study.

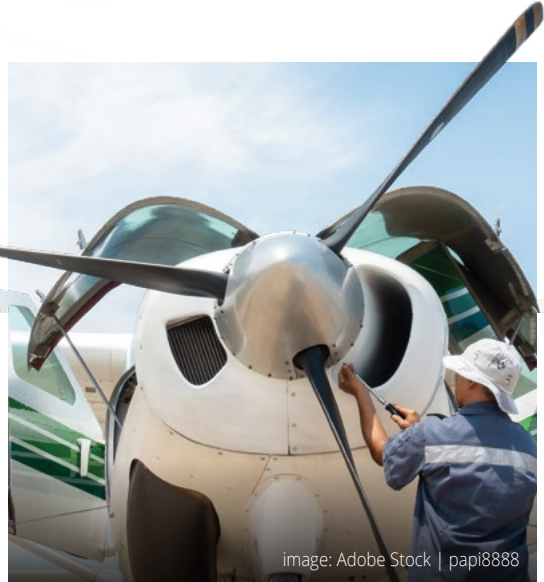


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B1 Category B1 (mechanical) licence

The B1 licence covers maintenance of aircraft structures (airframe), powerplant (engines) and mechanical and electrical systems. The licence is divided into subcategories so you can specialise in either aeroplanes (with turbine engines or piston engines) or helicopters (with turbine engines or piston engines).

B2 Category B2 (avionic) licence

The B2 licence covers maintenance of avionics and electrical systems and applies to all aircraft.



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This guide covers the following licence categories / subcategories:



B1.1

B1.1
turbine engine
aeroplanes



B1.2

B1.2
piston engine
aeroplanes



B1.3

B1.3
turbine engine
helicopters



B1.4

B1.4
piston engine
helicopters



B2

B2
avionics
(all aircraft types)

If you want to get your licence in a particular category or subcategory, find an employer who maintains that type of aircraft.

Alternatively, find an employer and work towards your initial licence on the type of aircraft that the organisation maintains.

You can extend your licence later by studying and gaining further experience to qualify for other subcategories. It is very common for LAMEs to do this. For example, you initially gain your B1.2 licence for aeroplanes powered by piston engines then gain further experience and pass further exams to add turbine engine aeroplanes to your licence. You then have a B1.1 and B1.2 licence.

Modular licences

CASA also allows you to initially apply for a 'modular' licence, which is a partial category or subcategory licence. You can apply for an initial (airframe only or engine only) modular licence with just 8 modules of study compared to 13 modules for the full subcategory licence.

This means you can start working as a LAME sooner and continue working while you further your studies.

B1.1 turbine aeroplanes (airframe only)

B1.1 turbine aeroplanes (turbine engine only)

B1.2 piston aeroplanes (airframe only)

B1.2 piston aeroplanes (piston engine only)

B1.3 turbine helicopters (airframe only)

B1.3 turbine helicopters (turbine engine only)

B1.4 piston helicopters (airframe only)

B1.4 piston helicopters (piston engine only)

B2 avionics (electrical systems only)

B2 avionics (instrument systems only)

B2 avionics (radio systems only)

B1 B1 licences

MODULAR LICENCE

CORE MODULES

+

either
AIRFRAME or **ENGINE**
(and propeller) **MODULES**

You need a minimum of 2 years experience working on relevant operating aircraft to apply for a modular licence.

You can add additional modules at any time to expand the privileges of your licence.

FULL LICENCE

CORE MODULES

+

AIRFRAME MODULES

+

ENGINE (and propeller) MODULES

+

ELECTRICAL MODULES

You need a total of at least 3 or 4 years experience working on relevant operating aircraft to apply for a full licence.

B2 B2 licences

MODULAR LICENCE

CORE MODULES

+

either
ELECTRICAL, INSTRUMENT or
RADIO MODULES

You need a minimum of 2 years experience working on relevant operating aircraft to apply for a modular licence.

You can add additional modules at any time to expand the privileges of your licence.

FULL LICENCE

CORE MODULES

+

ELECTRICAL MODULES

+

INSTRUMENT MODULES

+

RADIO MODULES

You need a total of at least 4 years experience working on relevant operating aircraft to apply for a full licence.



Study the required modules

The tables at the back of this guide identify the theory modules you need for the different licence types.

To assist with exam preparation and study, you can purchase Part 66 study material (Modules 1–9 and 11–17) from websites stocking EASA Part 66 textbooks.

Use [CASA's Module 10 study guide](#) to help with the Aviation Legislation module.



Pass the exams

You can take the theory module exams at any time. You can do one exam at a time or do several close together. CASA contracts an exam provider to administer these exams, so contact the exam provider to see when and where exams are being held. (Aspeq: casa.aspeqexams.com)

Generally, there is one exam for each module. Some exams may include both multiple-choice and essay-style questions. The essay-style questions assess your understanding of critical safety and human performance concepts relevant to aircraft maintenance.

You must pass all required exams to proceed with your licence application.



Gain practical experience

Along with theory study and passing exams, you must complete practical experience in your chosen category. The tables at the end of this guide set out what practical experience you need to demonstrate for the different modules.

You must document your hands-on maintenance experience in your Part 66 practical experience logbook (there is a guide to explain which sections you need to complete). The experience must be signed off by a suitably qualified person.

If you are already working in aircraft maintenance, you can start documenting your work now in a logbook, even if you aren't sure what type of licence you intend to get. See the tables at the end of this guide for which sections of your logbook to fill out for the different modules.



Apply for your licence

You can apply for a modular licence once you have completed the relevant theory exams and practical experience. The tables at the end of this guide set out which exams you need to pass, and what practical experience you need to log for the different modules.

To apply for your licence, you will need:

- your practical experience logbook
- exam results
- any other documentation requested.

CASA will review your application and issue you a licence based on the criteria you have met.

Your licence will allow you to certify for work completed on certain types of aircraft. You should ensure you understand the privileges of your licence (what you can do) and the conditions of your licence.

Exclusions

Your licence will have exclusions listed on it. Exclusions tell you what maintenance you cannot certify for with your licence. For example, Exclusion E37 excludes fuel injection systems. You must make sure you only certify work you are licensed and authorised for.

If you complete additional knowledge modules, exams and practical experience, you can apply to have these exclusions removed so you can work on the relevant systems.



Explainer: The practical experience logbook

Your Part 66 modular licence – basic practical experience logbook is where you document your hands-on experience to demonstrate your competence in various tasks. Tasks in the logbook are organised by the licence category and subcategory.

Sample subcategory B1.1 tasks include:

- removing/installing primary flight control surface
- performing normal operation landing gear extension retraction procedure
- checking main doors and emergency exit door seals and replacing if required.

Sample category B2 tasks include:

- replacing engine fuel pressure indication system components and testing
- checking pitot static system for leaks
- calibrating magnetic direction indicator.

Ensure that each required task is signed off by a suitably qualified person. You can download the logbook and user guide from CASA's website.

See the tables at the end of this guide for which sections of your logbook to fill out for the different modules.

Practical experience logbook:

[Part 66 modular licence basic practical experience logbook](#)

Practical experience logbook –

User guide: [Part 66 modular licence basic practical experience logbook – User guide](#)

More information

The Part 66 self-study pathway is a flexible pathway to becoming a licensed aircraft maintenance engineer (LAME) in Australia. With dedication and the right resources, you can advance your career and take on greater responsibilities in the aviation industry.

The following tables show the modules available and the sections you need to fill in your practical experience logbook for each module.

For more information and resources, visit Civil Aviation Safety Authority: casa.gov.au



B1

Modules and logbook sections required for B1 licences

Core and additional modules

The table below outlines **core** modules and practical experience that are common across all B1 modular pathways.

The **additional** modules and practical experience specific to your chosen pathway are outlined on the following page.

Theory modules

You will need to study and sit exams on these modules. Some exams may include both multiple-choice and essay-style questions.

Practical experience

Experience generally needs to be gained in the real environment of maintenance. You demonstrate this experience by filling in a logbook. Complete these parts of your [Part 66 modular licence basic practical experience logbook](#).

	THEORY MODULES	PRACTICAL EXPERIENCE
Core modules <i>(common across all B1 modular licence pathways)</i>	<ul style="list-style-type: none"> 1 Mathematics 2 Physics 6 Materials and hardware 7 Maintenance practices 9 Human factors 10 Aviation legislation 	<ul style="list-style-type: none"> Part 1 personal information Part 2 module 7 basic knowledge

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	THEORY MODULES	PRACTICAL EXPERIENCE
B1.1 Turbine aeroplanes – airframe	<p>8 Basic aerodynamics</p> <p>11A Turbine aeroplane aerodynamics, structures and systems</p>	<p>Subpart 3A module 11A tasks</p> <p>Subpart 3A practical maintenance experience</p>
B1.1 Turbine aeroplanes – engine	<p>15 Gas turbine engines</p> <p>17 Propellers*</p>	<p>Subpart 4A module 15 tasks</p> <p>Subpart 4A module 17 tasks*</p> <p>Subpart 4A practical maintenance experience</p>
B1.2 Piston aeroplanes – airframe	<p>8 Basic aerodynamics</p> <p>11B Piston aeroplane aerodynamics, structures and systems</p>	<p>Subpart 3A module 11B tasks</p> <p>Subpart 3A practical maintenance experience</p>
B1.2 Piston aeroplanes – engine	<p>16 Piston engines</p> <p>17 Propellers</p>	<p>Subpart 4B module 16 tasks</p> <p>Subpart 4B module 17 tasks</p> <p>Subpart 4B practical maintenance experience</p>
B1.3 Turbine helicopters – airframe	<p>8 Basic aerodynamics</p> <p>12 Helicopter aerodynamics, structures and systems</p>	<p>Subpart 3B module 12 tasks</p> <p>Subpart 3B practical maintenance experience</p>
B1.3 Turbine helicopters – engine	<p>15 Gas turbine engines</p>	<p>Subpart 4A module 15 tasks</p> <p>Subpart 4A practical maintenance experience</p>
B1.4 Piston helicopters – airframe	<p>8 Basic aerodynamics</p> <p>12 Helicopter aerodynamics, structures and systems</p>	<p>Subpart 3B module 12 tasks</p> <p>Subpart 3B practical maintenance experience</p>
B1.4 Piston helicopters – engine	<p>16 Piston engines</p>	<p>Subpart 4B module 16 tasks</p> <p>Subpart 4B practical maintenance experience</p>
B1 licences – electrical systems extension	<p>3 Electrical fundamentals</p> <p>4 Electronic fundamentals</p> <p>5 Digital techniques/electronic instrument systems</p>	<p>All items relevant to electrical exclusions (E1, E4 and E5) of the modules you have completed</p>

* Optional for turbine powerplants in aircraft without propellers (such as turbofan aeroplanes)

B2

Modules and logbook sections required for B2 licences

Core and additional modules

The table below outlines **core** modules and practical experience that are common across all B2 modular pathways.

The **additional** modules and practical experience specific to your chosen pathway are outlined on the following page.

Theory modules

You will need to study and sit exams on these modules. Some exams may include both multiple-choice and essay-style questions.

Practical experience

Experience generally needs to be gained in the real environment of maintenance. You demonstrate this experience by filling in a logbook. Complete these parts of your [Part 66 modular licence basic practical experience logbook](#).

	THEORY MODULES	PRACTICAL EXPERIENCE	
Core modules <i>(common across all B2 modular licence pathways)</i>	1 Mathematics	Part 1 personal information	
	2 Physics		
	3 Electrical fundamentals	Part 2 module 7 basic knowledge	
	4 Electronic fundamentals		
	5 Digital techniques electronic instrument systems	Part 5 'initial' tasks	
	6 Materials and hardware		
	7 Maintenance practices	Part 5 practical maintenance experience	
	8 Basic aerodynamics		
	9 Human factors		
	10 Aviation legislation		
	13 Aircraft structures and systems		
		<i>Topic 13.1 Theory of flight</i>	
		<i>Topic 13.2 Structures – general concepts</i>	

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	THEORY MODULES	PRACTICAL EXPERIENCE
B2 Electrical systems	<p>13 Aircraft structures and systems</p> <p><i>Topic 13.5 Electrical power</i></p> <p><i>Topic 13.6 Equipment and furnishings</i></p> <p><i>Topic 13.7 Flight controls</i></p> <p><i>Topic 13.8 Instruments</i></p> <p><i>Topic 13.9 Lights</i></p> <p><i>Topic 13.10 On-board maintenance systems</i></p> <p><i>Topic 13.11 Air-conditioning and cabin pressurisation</i></p> <p><i>Topic 13.12 Fire protection</i></p> <p><i>Topic 13.13 Fuel systems</i></p> <p><i>Topic 13.14 Hydraulic power</i></p> <p><i>Topic 13.15 Ice and rain protection</i></p> <p><i>Topic 13.16 Landing gear</i></p> <p><i>Topic 13.18 Pneumatic/vacuum</i></p> <p><i>Topic 13.19 Water/waste</i></p>	<p>Part 5 'E' tasks</p> <p>Part 5 practical maintenance experience</p>
B2 Instrument systems	<p>13 Aircraft structures and systems</p> <p><i>Topic 13.3 Autopilots</i></p> <p><i>Topic 13.4 Communication and navigation</i></p> <p><i>Topic 13.7 Flight controls</i></p> <p><i>Topic 13.8 Instruments</i></p> <p><i>Topic 13.17 Oxygen</i></p> <p><i>Topic 13.20 Integrated modular avionics</i></p> <p><i>Topic 13.21 Cabin systems</i></p> <p><i>Topic 13.22 Information systems</i></p> <p>14 Propulsion – avionic systems</p>	<p>Part 5 'I' tasks</p> <p>Part 5 practical maintenance experience</p>
B2 Radio systems	<p>13 Aircraft structures and systems</p> <p><i>Topic 13.4 Communication and navigation</i></p> <p><i>Topic 13.20 Integrated modular avionics</i></p> <p><i>Topic 13.21 Cabin systems</i></p> <p><i>Topic 13.22 Information systems</i></p>	<p>Part 5 'R' tasks</p> <p>Part 5 practical maintenance experience</p>

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