



Guide to the Use of CASA Flight Training Syllabuses

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You should not rely on this manual as a legal reference. Refer to the civil aviation legislation—including the Civil Aviation Act 1988 (Cth), its related regulations and any other legislative instruments—to ascertain the requirements of, and the obligations imposed by or under, the law.

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Revision History

Amendments/revisions of this Handbook are recorded below in order of most recent first.

Version No.	Date	Parts/Sections	Details
1.0	October 2016	All	First issue

1 Introduction

CASA's sample syllabuses have been developed to demonstrate one method for the incorporation of Part 61 MOS practical flight standards into a syllabus format.

If adopting one or more of the sample syllabuses the content must be customised, where required, to ensure the specific needs of the operator are met. For example, an operator whose training base is located at a controlled aerodrome would amend the recreational pilot licence syllabus to include training for controlled aerodrome and controlled airspace endorsements. Additional details may also be incorporated, for example techniques and standard operating procedures to be used during the training, or specific information relating to the training aircraft.

Operators who elect to use the sample materials remain responsible for maintaining their validity. This means the syllabuses may need review to ensure they align with any future amendments to the Part 61 Manual of Standards, or changes to the regulations.

CASA's sample syllabuses are presented in hard copy format. Operators may choose to use software based systems to ease the burden of repetitive data entry on lengthy lesson records if desired. In either instance, instructor induction training and operations manual or exposition instructions should be sufficient to enable satisfactory operation of the recording system.

Guidance regarding methodologies used during development of the sample syllabuses, instructions for the use of syllabus documentation and the assumptions under which each of the sample syllabuses have been developed are provided below.

Note: An operator may choose to use CASA's sample syllabuses; however it is not mandatory to do so. Operators should determine the most appropriate structure for their syllabuses. Sample syllabus document design, the distribution of Part 61 MOS practical flight standards and underpinning knowledge into flight lessons, the competency grading scale, the sequence and number of flight lessons and suggested flight hours are intended as one example.

2 Sample syllabus documentation

CASA's sample syllabus documentation includes:

- **A planning matrix**, which is a syllabus design tool for mapping Part 61 MOS competencies into individual flight lessons when planning training and assessment, and for ensuring all required competencies are captured. A planning matrix is recommended, but not required.

The planning matrix sets out:

- the required MOS practical flight competencies and their integration into individual flight lessons
- the sequence of flight lessons
- the suggested allocation of time to flight lessons
- an example of the use of 'performance standards' as a means of monitoring and recording student progress, and
- planned assessments.

The planning matrix may assist operators who wish to alter CASA's sample syllabuses to suit their own operation.

A planning matrix may also be beneficial during future syllabus updates, which may be necessary following an internal audit of training outcomes or an amendment to the Part 61 MOS. It will also be of use during the induction of new instructors by enabling an easier understanding of course design.

- **A syllabus introduction.** Operators may use a syllabus introduction to provide information which is specific to the syllabus, such as the training resources to be utilised for the course or permissible variations to lesson sequences. CASA's syllabus introductions may be customised to meet an operator's requirements. Details such as course duration, resources and other operator specific information will need to be populated.
- **A flight training and theory examination summary,** which is a list of flight training lessons and theory exams in planned sequence.
- **A lesson plan and training record** for each flight. The lesson plan and training record is a single document providing a lesson overview, briefing topics, underpinning knowledge items, performance criteria (where training and assessment is required) and a means for recording training and assessment outcomes.

Lesson plan and training record forms are provided to illustrate what is considered to be the basic level of content.

These forms may be customised to include operator specific information such as standard operating procedures, techniques and instructions for achieving the required outcomes. Long briefing topics are included as standard practice guidance and may be added to or customised if required.

Lesson plans for briefings and ground theory components are not provided in the sample syllabuses. Operators may choose to develop a standardised set of briefing notes.

The briefing and flight training hours represented in each syllabus are recommended training times, however in practice these may vary (for example due to student progress, continuity of training, weather conditions, aerodrome traffic etc.).

CASA's sample syllabus documentation for the commercial pilot licence – aeroplane category rating only includes a training plan for the integrated course, and an introduction, planning matrix and lesson plans for the non-integrated course.

Note: CASA's sample syllabus documentation must be read in conjunction with CASR Parts 61 and 141, and the Part 61 Manual of Standards.

Competency grading scale – performance standards

CASA's sample syllabuses use a numeric competency grading scale as a means for planning and tracking student progress. The grading scale has been applied during course development to represent proposed progress under the training plan, and ensure certain items are assessed prior to significant milestones (such as the first solo flight). It then provides a benchmark against which a student's actual progress may be monitored and recorded.

The grading scale is set out in the 'performance standard' table below:

Performance Standard		
3	2	1
Has received training in the element, however is not able to consistently demonstrate competency to the standard required for qualification issue	Demonstrates a developing level of proficiency, and is deemed safe to conduct solo practice under direct supervision	Achieves competency to the standard required for qualification issue

Performance standard 3 represents the introduction of the specified performance criteria via instructor demonstration, followed by guided student practice. The student demonstrates a basic level of ability.

Performance standard 2 represents the ability to safely conduct a flight for the purposes of practising a sequence or sequences solo. For sequences where solo practice is not required or is not permitted, performance standard 2 is used to represent a developing level of proficiency.

Note: The word "safe" used in performance standard 2 means that the student may achieve the required standard on the majority, but not necessarily on all occasions. The student must be able to recognise a situation where the desired outcome of a manoeuvre may be in doubt and take appropriate corrective action to recover.

Performance standard 1 represents proficiency to the standard required for the issue of the qualification, and therefore constitutes a 'competent' assessment. Assessment should be based on the technique used by the student, as well as the ability to perform manoeuvres within the tolerances specified in schedule 8 of the Part 61 MOS. Sound judgement and decision making should be displayed.

Note: Technique involves smooth and accurate control application when adjusting power, attitude, trim and balance in a timely and coordinated fashion, whilst following correct procedures. On some occasions, flight conditions (e.g. turbulence) may be such that even though the student's technique is sound, the aeroplane may deviate outside specified tolerances for short periods. On these occasions the assessment of technique should be the determining factor.

Assessment of competency

A student may be deemed competent to conduct a solo flight, be recommended for a flight test or issued a qualification when competency is demonstrated on at least two occasions (each occasion being on a separate flight).

Pre-solo and end-of-course assessments have been planned on this basis. End-of-course assessments take into account all of the units of competency mentioned in the Part 61 MOS for the particular licence, rating or endorsement.

To manage situations where a lengthy absence from training occurs, operators should determine a policy to ensure additional assessments are carried out in order to confirm a student has retained previously assessed competencies, prior to authorising further solo practice.

Time to achieve competency

The accumulation of the planned hours specified in a syllabus does not necessarily guarantee achievement of the required standard. The time to achieve competency will vary for each individual student.

Students may require flight time in excess of planned syllabus totals, or may achieve competency ahead of the documented schedule. Significant deviations from the planned syllabus durations should be clearly notated in the student's training records. An operator may require significant deviations to first be approved by the HOO. In these cases consideration must also be given to any Part 61 minimum experience requirements.

Note: When adjustments to the sample syllabus hours are made, and during the development of other syllabuses, operators must ensure that the CASR Part 61 minimum aeronautical experience requirements are met.

3 Using the sample syllabus documents

Planning matrix

It is not a requirement that a copy of the planning matrix be retained on a student's training file.

Flight training and theory examination summary

A copy of the flight training and theory examination summary may be provided to each student at commencement of training. A copy should be retained on the student's file.

Syllabus introduction

The syllabus introduction contains specific requirements to be met during training (for example prior to first solo).

CASA's syllabus introductions may be customised to meet an operator's requirements. Details such as course duration, resources and other operator specific information will need to be populated.

Lesson plan and training record forms

Flight training records should contain sufficient information to ensure that the student's current competencies, any areas of deficiency and recommendations for the next flight are immediately evident.

Instructions for the use of CASA's lesson plan and training record forms are summarised below.

Flight details

Enter the date, student, instructor and other flight details as prompted.

The flight number should normally be recorded as '1', for example, the RPL stalling lesson is to be recorded as flight number 'RPL (A) 5.1'.

If a lesson is repeated it is to be numbered sequentially, for example a repeated RPL stalling lesson would be assigned flight number 'RPL (A) 5.2'.

Lesson overview

Refer to the overview for a summary of lesson content. For Part 61 MOS instructional elements, refer to the 'flight training' section of the form.

Pre-flight knowledge

The pre-flight knowledge section contains:

- suggested briefing duration
- long briefing topics (briefing content should not necessarily be limited to these items. Operators should determine full briefing content)
- underpinning knowledge items, including those relating to HF & NTS (instructors should introduce, review or assess underpinning knowledge to a level of detail that is applicable to the stage of training. Some adjustments to suggested content may be necessary to meet the requirements and conditions during the particular flight)
- a pre-flight briefing checklist.

The instructor is to sign off at the foot of the pre-flight knowledge section to confirm the pre-flight briefings have been carried out and the underpinning knowledge items addressed.

Note: Underpinning knowledge may be assessed via oral questioning, and also through in-house written examinations such as the pre-solo and pre-area solo examinations.

Performance standards

The table containing the performance standard grading scale is included in each lesson plan and training record.

Flight training

The flight training section sets out the suggested flight time and Part 61 MOS elements and performance criteria (instructional elements) to be covered during the lesson.

Instructional elements appear in this section when:

- they are to be introduced or assessed during the lesson
- student practice is required for previously introduced or assessed elements which are not core to the lesson (for example a flapless approach and landing during the RPL (A) 18 steep turns lesson). In this situation the performance standard required is the same as that on the previous occasion. The instructor should monitor the student as they perform the tasks to ensure the previous standard is maintained, providing guidance if required.

To ease the requirement for lengthy lesson plan and training record forms, instructional elements which have previously been introduced or assessed and which are core elements of a subsequent lesson, usually do not appear in the flight training section until they are to be assessed to a higher standard. The focus of the lesson is described in the lesson overview, and the instructor should continue to monitor the student as they perform the tasks to ensure the previous standard is maintained, providing guidance if required. For example during RPL (A) 8 flapless and missed approaches, instructors should continue to monitor the student against the elements required for the conduct of circuits outlined in the circuit introduction lesson RPL (A) 6. These elements do not appear again until they are assessed in lesson RPL (A) 9. If a student’s performance in one or more of these instructional elements regresses, this should be notated on the training record and revision training conducted.

The performance standards 3, 2 or 1 appearing in the ‘performance standard required’ column represent target student progress under the training and assessment plan. They also indicate the following instructor and student actions:

Performance Standard	Instructor	Student
3	Demonstrate Direct Monitor	Observe Perform tasks with guidance Perform tasks with monitoring
2	Assess	Perform tasks
1	Assess	Perform tasks

Performance standard 3, 2 or 1 is to be entered in the ‘performance standard achieved’ column to represent the student’s actual performance during the flight. In the interests of reducing repetitive data entry by the instructor, if progress matches that in the ‘performance standard required’ column, no entry is necessary (i.e. a ‘nil entry’ indicates the standard achieved is the same as that required).

When making entries in the 'performance standard achieved' column:

- Enter the standard achieved (if different to that required).
- If the standard achieved is lower than that required, carry the relevant performance criteria over into the next lesson by writing them in the 'consolidation and/or remedial training' box of the subsequent lesson's training record. The items are to be addressed during the next lesson.
- Performance criteria which were not able to be introduced during the lesson should be marked as 'NI' (not introduced). Enter the relevant performance criteria in the 'consolidation and/or remedial training' box of the training record for the next lesson. This will ensure these items are captured during future training.
- Performance criteria which were not able to be assessed should be marked as 'NA' (not assessed). Enter the relevant performance criteria in the 'consolidation and/or remedial training' box of the training record for the next lesson. This will ensure the items are captured for future assessment.
- If a student is progressing ahead of the syllabus schedule and assessments are conducted in advance (i.e. for performance criteria not included in the lesson plan and training record), record the assessed performance criteria and standard achieved on the 'accelerated competency' form. Attach this form to the lesson plan and training record for the lesson in which the early assessment was made.

Note: Competency must be demonstrated by the student on two separate flights.

In lesson plan and training record documents, the first assessment to a higher performance standard lists both the element and relevant performance criteria.

Only the element is listed for the second assessment; however the instructor must ensure the assessment is conducted against the same performance criteria.

Debriefing

A debriefing checklist is provided in each lesson plan and training record.

Comments and outcome

Instructor comments and recommendations for the next lesson should be entered into the 'comments and outcome' box.

Instructor and student sign-off

An instructor and student sign off section has been provided at the end of the form, as an acknowledgment that the student has been appropriately briefed, debriefed and the lesson was conducted in accordance with the training record. The student's signature is also an acknowledgement of their agreement with the comments and recommendations for future training.

Assessing underpinning knowledge

Either or both written and verbal forms of assessment may be used to determine students hold the required underpinning knowledge and are able to apply it to practical situations.

Some written examinations which have been carried out in the past, for instance pre-solo and pre-area solo, are not necessarily mandated in the MOS however their use and inclusion in a course is considered standard practice.

Note: Transitioning operators may already have examinations which have been suitable in the past. These may continue to be utilised provided their content has been reviewed against the MOS underpinning knowledge standards, and amended if required.

Aeronautical knowledge examinations

The requirement for aeronautical knowledge is that students are able to demonstrate, to the appropriate level, knowledge of the elements, topics and specific content described in Schedule 3 of the Part 61 MOS for the licence, rating or endorsement.

Note: Transitioning operators may already have examinations, for instance for radio theory, which have been suitable in the past. These may continue to be utilised provided their content has been reviewed against the MOS aeronautical knowledge standards, and amended if required.

Knowledge deficiency reports

The body conducting an aeronautical knowledge examination must prepare a knowledge deficiency report (KDR) if the student passes the examination with a score of less than 100%, or fails the examination with a score of at least 51%.

A KDR lists the Part 61 MOS Schedule 3 knowledge content for which questions were answered incorrectly and re-study is required. The knowledge content is later reassessed orally in order to address the areas of deficiency.

Amendments to the sample syllabuses to reflect operational requirements

CASA's sample syllabuses are based on the scenarios described in the bulleted lists below. Operators choosing to adopt the sample syllabuses must make amendments to ensure their own operational requirements are met.

Recreational Pilot Licence (Aeroplane) & Flight Radio Endorsement

Assumptions:

- The training base is located at a non-towered aerodrome.
- Written examinations have been planned to assess underpinning knowledge required prior to the first solo and area solo flights.
- A flight radio endorsement aeronautical knowledge examination has been planned in accordance with the aeronautical knowledge standards mentioned in Schedule 3 of the Part 61 MOS.

Operators conducting training from a controlled aerodrome will need to amend the syllabus to include the RPL controlled aerodrome endorsement by incorporating unit '*CTR - operate at a controlled aerodrome*'.

Operators conducting training in controlled airspace will need to amend the syllabus to include the RPL controlled airspace endorsement by incorporating unit '*CTA - operate in controlled airspace*'.

If a flight radio operator endorsement is not required, remove unit '*C3 - operate aeronautical radio*'.

The sample syllabus refers to written examinations for pre-solo and pre-area solo underpinning knowledge assessment. The intent is that these examinations are similar to those currently used by many flight training operators, however it is not mandatory that these assessments are made by written examination.

The sample syllabus refers to an aeronautical knowledge examination for the RPL flight radio endorsement, set by the operator in accordance with the Part 61 MOS aeronautical knowledge standards.

Note: the RPL syllabus has been developed taking into account proposed amendments to the MOS. These include minor amendments to performance criteria wording.

Private Pilot Licence (Aeroplane)

Assumptions:

- The training base is located at a non-towered aerodrome.
- The first solo navigation exercise is conducted entirely in Class G airspace.
- Students hold an RPL (A) and are able to perform manoeuvres within the flight tolerances specified in Schedule 8 of the Part 61 MOS.

Units of competency C1 to C5, A1 to A6 and IFF, also requirements at RPL level, are included in the sample syllabus for review and assessment to confirm students have maintained competency in these units.

If a student is not able to demonstrate competency in these units in accordance with the syllabus schedule, additional training and assessment is required.

Note: the PPL syllabus has been developed taking into account proposed amendments to the MOS. The unit 'RNE' will be removed as a requirement for the PPL.

Private Pilot Licence (Helicopter)

Assumptions:

- The training base is located at a non-towered aerodrome.

- The student begins the course with no previous aeronautical experience.
- The first solo navigation exercise is conducted entirely in Class G airspace.

Note: the PPL syllabus has been developed taking into account proposed amendments to the MOS. The wording of the performance criteria of the H units differs slightly from that in the MOS current at October 2016. Further, the 'RNE' unit does not appear, consistent with the proposal to remove it from the list of MOS PPL requirements.

Retractable Undercarriage and Manual Propeller Pitch Control Design Feature Endorsements (Aeroplane)

Assumptions:

- Students hold a PPL (A).
- Students have retained a reasonable level of competency since the issue of their PPL (A).

In addition to demonstrating competency in the units of competency DFE2 and DFE3, students must meet the general competency requirement of CASR 61.385 prior to exercising the privileges of their pilot licence within the aeroplane. The sample syllabus provides an example of items which may be included during endorsement training in order to meet the general competency requirement, however training providers must determine the most appropriate inclusions when considering the aeroplane complexity, operating procedures and limitations.

Multi-engine Aeroplane Class Rating

Assumptions:

- Students already hold design feature endorsements for retractable undercarriage and manual propeller pitch control (piston engine).
- An aeronautical knowledge examination has been planned in accordance with the aeronautical knowledge standards mentioned in Schedule 3 of the Part 61 MOS.

For students not holding the design feature endorsements, training for these endorsements may be included in the course by incorporating units '*DFE2 – retractable undercarriage*' and '*DFE3 – manual propeller pitch control*'.

The multi-engine aeroplane class rating aeronautical knowledge examination is not mandatory; however students must demonstrate knowledge of the content described in Schedule 3 of the Part 61 MOS for the rating. In the sample syllabus scenario, a written examination has been set to determine students hold this knowledge.

Note: the multi-engine aeroplane class rating syllabus has been developed taking into account proposed amendments to the MOS. The unit C4 Manage fuel has been added.

Night VFR Rating – single engine aeroplane night VFR endorsement

Assumptions:

- An aeronautical knowledge examination has been set in accordance with the aeronautical knowledge standards mentioned in Schedule 3 of the Part 61 MOS.

The night VFR rating aeronautical knowledge examination is not mandatory; however students must demonstrate knowledge of the content described in Schedule 3 of the Part 61 MOS for the rating. In the sample syllabus scenario, a written examination has been set to determine students hold this knowledge.

Commercial Pilot Licence (Aeroplane) (non-integrated training)

Assumptions:

- The training base is located at a non-towered aerodrome.
- Training is commenced in a C172 prior to moving into the PA-28R Arrow, to meet the scenario for CASA's Part 141 sample operations manual and Part 142 sample exposition. *(It is not a requirement that the CPLA flight test be conducted in an aeroplane equipped with a retractable undercarriage).*
- Students hold a PPL (A).
- Students have retained a reasonable level of competency since the issue of their PPL (A).
- Since the issue of the PPL (A) some, however not all, command flying has been undertaken.

Prior to course commencement an assessment flight may be undertaken with either the HOO or nominated senior instructor. Adjustments to the training plan may then be made to ensure the student's training needs are met, based upon their aeronautical experience and current competency.

For students who do not already hold a design feature endorsement for manual propeller pitch control, training for this and the retractable undercarriage endorsement is provided following lesson 6. *(The placement of this training is intended to be flexible).*

Many instructional elements are introduced into the syllabus performance standard 2, assuming expected prior experience and knowledge. If a student is not able to demonstrate competency to performance standard 2 in these instructional elements, additional training and assessment is required.

Commercial Pilot Licence (Helicopter) (non-integrated training)

Assumptions:

- The training base is located at a non-towered aerodrome.
- The student begins the course with no previous aeronautical experience.
- The first three solo navigation exercises are conducted entirely in Class G airspace.

Note: the CPL syllabus has been developed taking into account proposed amendments to the MOS. The wording of the performance criteria of the H units differs slightly from that in the MOS current at October 2016.

Note: Although related elements and performance criteria have not been included in every lesson plan and training record form for each sample syllabus, it is expected that instructors will continually monitor human factors and non-technical skills awareness and application, making record in the 'comments and outcome' box when required.