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This document is authorised for release once all signatures have been obtained.

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TRIM EF11/11257-7
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PILOT INSTRUCTOR RATINGS

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INTRODUCTION

This guide provides information on the requirements for the grant of an instructor rating (FIR). This guide does not provide the administrative procedure or requirements for obtaining the rating or instrument endorsements.

Relevant sections of the Part 61 Manual of Standards have been extracted to provide a complete set of requirements a person must meet to be eligible for an FIR.

A training course for the FIR must include:

- theory knowledge covering all units of knowledge;
- training for all the underpinning knowledge items specified in the units of competency; and
- practical flight training covering all the units of competency.

Schedules 1, 2 and 3 contain the training and assessment standards that must be completed before a person is eligible for an FIR flight test.

A person must satisfy the requirements for the grant of at least one training endorsement.

How to use this guide

1. Refer to Schedule 1 to find the units of competency that apply to the FIR.
2. For practical flight standards, identify the unit of competency you want information on and find it in Schedule 2.
3. For aeronautical knowledge standards, identify the unit of knowledge you want information on and find it in Schedule 3.
4. Refer to Schedule 8 for the flight tolerances and the common key competency markers that support the assessment of competency.
5. Developing a training course – a training course must include all of the units of competency prescribed in this guide. Details on how the elements are to be covered by the training course need to be specified in the course training materials.

Schedule 1

Schedule 1 provides a list of the units of knowledge and competency that apply to the FIR and its associated endorsements. The units are described in detail in Schedules 2 and 3.

Schedule 2 – Practical flight standards

Schedule 2 contains all of the units of competency that apply to the FIR and its associated endorsements.

Each unit has a code and title. Note in some cases there are two codes.

A unit of competency covers a particular aspect of flying and includes the following:

a. a description of the unit;
b. the elements of competency that make up the unit;
c. for each element, what a person is required to be able to consistently demonstrate in order to show competency performing that task or activity;
d. the range of variables under which the performance is to be assessed; and

e. the underpinning knowledge that applies to the unit; the person is expected to be familiar with that knowledge and be able to apply it in a practical context.
Unit description
The unit description is a general statement about the skills and knowledge that apply to a person performing the tasks/activities covered by the unit.

Elements of competency
Each unit has one or more elements that are commonly described as tasks or activities.

For example, there is a unit of competency called ‘Conduct flight training’. The unit code is FIR3. The second of 7 elements in the unit is ‘FIR3.2 – Conduct pre-flight briefing’. That element covers a critical task, competency in which is essential in order to conduct flight training. Where appropriate (and this is in most cases), each element is clarified by performance criteria.

Performance criteria
For each element of competency, performance criteria are prescribed. These criteria clarify what a person is expected to be able to do when performing the element. For the element ‘FIR3.2 – Conduct pre-flight briefing’, there are 6 performance criteria and they breakdown the element into quite specific sub-tasks. The third criterion states the following “link previous training to the current exercise”. That means a person performing flight training must be able to link the training the student has received previously to the current exercise. Performance needs to be demonstrated consistently, on several occasions and on more than one flight. Competency is not achieved by demonstrating a task or activity on a single occasion.

The conditions under which a task or activity is performed can vary. So a range of variables is provided to ensure all of the essential conditions under which the task or activity need to be performed are covered by the competency specification.

Range of variables
Each unit of competency includes a range of variables (ROV). These variables cover the conditions under which performance must be demonstrated. These conditions need to be made available during training. In some cases, the conditions can be covered by simulating conditions.

Underpinning knowledge
Performing a task or activity effectively involves having underpinning knowledge pertinent to the task or activity. This underpinning knowledge supplements the knowledge covered by the units of aeronautical knowledge that are associated with the licence, rating or endorsement.

In some cases, knowledge content is covered in both the aeronautical knowledge units and the underpinning knowledge. This is necessary since, in many cases, a person can complete the practical training prior to sitting the related aeronautical knowledge examination. So it is essential where underpinning knowledge is identified, the trainee should be familiar with the content and be able to apply that knowledge to practical situations.

Schedule 3 – aeronautical knowledge standards
For aeronautical knowledge standards, go to schedule 3. Find the unit of knowledge you want information on and note its content. The content includes:

a. topics; and
b. descriptions of the knowledge standard.

A training course is required to cover the entire knowledge standards for the licence rating or endorsement. Aeronautical knowledge examinations sample the knowledge standards.

An examination can cover any content contained in these standards.
Schedule 8 – flight tolerances

Flight tolerances are specified for handling skills. For example, pilots are expected to be able to fly within certain parameters. Tolerances are related to licence levels so a private pilot is not expected to be able to perform manoeuvres to within the same tolerances as an air transport pilot.
SCHEDULE 1: DIRECTORY

The following tables summarise the units of aeronautical knowledge and practical flight standards that apply to the pilot instructor rating and each endorsement.

SECTION T PILOT INSTRUCTOR RATING AND ENDORSEMENTS

Flight instructor rating

Appendix T.01 Flight instructor ratings

Aeronautical knowledge standards

<table>
<thead>
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Simulator instructor rating

Appendix T.02 Simulator Instructor Rating

Aeronautical knowledge standards

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Practical flight standards

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<td>FIR7</td>
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Training endorsements

Appendix T.1 Grade 1 training endorsement

Practical flight standards

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<td>Assess competence</td>
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<td>FIR3</td>
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### Appendix T.2 Grade 2 training endorsement

**Practical flight standards**

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<td>FIR2</td>
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### Appendix T.3 Grade 3 training endorsement

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### Appendix T.3A Grade 3 training endorsement (aeroplane)

**Practical flight standards**

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### Appendix T.4 Multi-crew pilot training endorsement

**Practical flight standards**

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### Appendix T.5  Type rating training endorsement (type specific)

**Practical flight standards**

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### Appendix T.6  Multi-engine aeroplane training endorsement

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### Appendix T.7  Design feature endorsement training endorsement

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Appendix T.8 Instrument rating training endorsement

Practical flight standards

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Appendix T.9 Night VFR rating training endorsement

Practical flight standards

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Appendix T.10 Night vision imaging system rating training endorsement

Practical flight standards

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Appendix T.11 Low-level rating training endorsement

Practical flight standards

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FIR2 | Assess competence  
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FIR7 | Conduct flight review  

### Appendix T.12  Aerial application rating (day) training endorsement

#### Practical flight standards

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### Appendix T.13  Aerial application rating (night) training endorsement

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### Appendix T.14  Instructor rating training endorsement

#### Practical flight standards

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### Appendix T.15  Multi-engine aeroplane class rating instructor training endorsement

#### Practical flight standards

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### Appendix T.16  Sling operations training endorsement

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### Appendix T.17  Winch and rappelling operations training endorsement

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### Appendix T.18  Spinning training endorsement

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**Appendix T.19 Aerobatics training endorsement**

Practical flight standards

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<td>FIR3</td>
<td>Conduct flight training</td>
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**Appendix T.20 Formation (aeroplane) training endorsement**

Practical flight standards

<table>
<thead>
<tr>
<th>Unit code</th>
<th>Unit of competency</th>
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<tbody>
<tr>
<td>NTS1</td>
<td>Non-technical skills 1</td>
</tr>
<tr>
<td>NTS2</td>
<td>Non-technical skills 2</td>
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<tr>
<td>FIR1</td>
<td>Conduct aeronautical knowledge training</td>
</tr>
<tr>
<td>FIR2</td>
<td>Assess competence</td>
</tr>
<tr>
<td>FIR3</td>
<td>Conduct flight training</td>
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</tbody>
</table>

**Appendix T.21 Formation (helicopter) training endorsement**

Practical flight standards

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<tr>
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<tr>
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<td>Non-technical skills 1</td>
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<tr>
<td>NTS2</td>
<td>Non-technical skills 2</td>
</tr>
<tr>
<td>FIR1</td>
<td>Conduct aeronautical knowledge training</td>
</tr>
<tr>
<td>FIR2</td>
<td>Assess competence</td>
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<tr>
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<td>Conduct flight training</td>
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### Appendix T.22  Formation aerobatics training endorsement

**Practical flight standards**

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<thead>
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</tr>
<tr>
<td>FIR1</td>
<td>Conduct aeronautical knowledge training</td>
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<tr>
<td>FIR2</td>
<td>Assess competence</td>
</tr>
<tr>
<td>FIR3</td>
<td>Conduct flight training</td>
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### Appendix T.23  Glider towing training endorsement

**Practical flight standards**

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<thead>
<tr>
<th>Unit code</th>
<th>Unit of competency</th>
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<td>FIR2</td>
<td>Assess competence</td>
</tr>
<tr>
<td>FIR3</td>
<td>Conduct flight training</td>
</tr>
</tbody>
</table>
SCHEDULE 2: PRACTICAL FLIGHT STANDARDS
FLIGHT INSTRUCTOR RATING

FIR1  Conduct aeronautical knowledge training

1.  Unit description

This unit describes the skills and knowledge required to competently plan, conduct and review aeronautical knowledge training for Part 61 authorisations.

2.  Elements and performance criteria

2.1  FIR1.1 – Plan aeronautical knowledge training

(a)  assess and confirm the trainee’s readiness for training;
(b)  ensure the training plan includes training objectives, including threat and error management training;
(c)  identify appropriate training resources;
(d)  plan the lesson and delivery method appropriate to the training objectives;
(e)  specify the assessment procedures;
(f)  schedule and integrate the theory training with flight training lessons where appropriate;
(g)  confirm the availability of the required facilities, equipment, training aids and reference materials.

2.2  FIR1.2 – Conduct aeronautical knowledge training

(a)  establish a learning environment and motivation that suits the trainee’s needs;
(b)  present the training materials;
(c)  state the training objectives;
(d)  lesson plan is followed and modified where applicable to achieve training objectives and transfer of knowledge;
(e)  new knowledge to previous knowledge is linked and presented within a meaningful and logical framework;
(f)  training aids are used to illustrate and enhance explanations;
(g)  accurate technical knowledge is presented clearly and to the required standard;
(h)  opportunities for trainee participation and practice are provided;
(i)  applicable threat and error management issues are discussed;
(j)  trainees ability to apply threat and error management principles to the material presented is confirmed;
(k)  achievement of training objectives is confirmed by questioning, review and other suitable methods;
(l)  feedback on trainee performance is provided;
(m)  trainee self-assessment skills are developed;
(n)  training objectives are completed in the time available;
(o)  training is conducted effectively and safely.

2.3  FIR1.3 – Review aeronautical knowledge training

(a)  training objectives and transfer of knowledge are achieved;
(b)  training delivery and effectiveness using self-assessment, peers and supervisors is reviewed;
(c)  records of assessment and progress of trainee are maintained and reviewed in accordance with established workplace procedures.
3. **Range of variables**
   (a) Activities are performed in accordance with published procedures.
   (b) Delivering aeronautical knowledge training to trainees that is for a flight crew licence, rating or endorsement.
   (c) The training covers the units and elements of competency that applies to the licence rating or endorsement.
   (d) The training environment includes suitable classroom or briefing facilities and training aids.
   (e) The training is delivered in accordance with appropriate and documented lesson plans.
   (f) Suitable learning resources may be used to assist the presentation, including audio visual aids, aircraft models, synthetic training devices, regulatory publications and aircraft and operations manuals.
   (g) Training outcomes are reviewed as applicable to the needs of the trainee and against the standards specified for the issue of the licence, rating or endorsement.

4. **Underpinning knowledge of the following:**
   (a) principles of learning:
      (i) learning as a behavioural change;
      (ii) sensory perception;
      (iii) factors affecting perception;
      (iv) motivation, positive and negative;
      (v) attitudes, discipline and responsibility;
      (vi) the following levels of learning:
         (A) rote;
         (B) understanding;
         (C) application;
         (D) correlation;
      (vii) factors which aid the learning process;
      (viii) transfer, habit formation;
      (ix) reinforcement;
      (x) memory and retention;
   (b) role of psychology in flying instruction:
      (i) satisfaction of human needs;
      (ii) defence mechanisms;
      (iii) dealing with stress, abnormal reactions to airborne stress situations;
      (iv) psychological problems of both student and experienced pilots;
   (c) teaching methods:
      (i) lecture, theory and skill lessons, guided discussion, briefing;
      (ii) behavioural objectives; their importance and formulation;
   (d) lesson planning and development;
   (e) effective communication;
   (f) questioning techniques;
   (g) use and abuse of teaching aids;
   (h) application of instructional principles to airborne instruction.
FIR2 Assess competence

1. Unit description

This unit describes the skills and knowledge required to effectively assess a trainee’s competence.

2. Elements and performance criteria

2.1 FIR2.1 – Prepare for assessment

(a) interpret an assessment plan and confirm organisational, legal and ethical requirements for conducting an effective competency assessment;

(b) access and interpret relevant benchmarks for assessment and nominated assessment tools to confirm the requirements for evidence to be collected;

(c) arrange identified material and physical resource requirements according to assessment system policies and procedures;

(d) organise specialist support required for assessment;

(e) explain, discuss and agree details of the assessment plan with candidate.

2.2 FIR2.2 – Gather quality evidence

(a) use agreed assessment methods and instruments to gather, organise and document evidence in a format suitable for determining competence;

(b) apply the principles of assessment and rules of evidence in gathering quality evidence;

(c) determine opportunities for evidence gathering in actual or simulated activities through consultation with the candidate and relevant personnel;

(d) determine opportunities for integrated assessment activities and document any changes to assessment instruments where required.

2.3 FIR2.3 – Support the candidate

(a) guide candidates in gathering their own evidence to support recognition of prior learning (RPL);

(b) use appropriate communication and interpersonal skills to develop a professional relationship with the candidate that reflects sensitivity to individual differences and enables two-way feedback;

(c) make decisions on reasonable adjustments with the candidate, based on candidate’s needs and characteristics;

(d) access required specialist support in accordance with the assessment plan;

(e) address any OHS risk to person or equipment immediately.

2.4 FIR2.4 – Make the assessment decision

(a) examine collected evidence and evaluate it to ensure that it reflects the evidence required to demonstrate competence;

(b) use judgement to infer whether competence has been demonstrated, based on the available evidence;

(c) make assessment decision in line with agreed assessment procedures and according to agreed assessment plan;

(d) provide clear and constructive feedback to candidate regarding the assessment decision and develop any follow-up action plan required.

2.5 FIR2.5 – Record and report the assessment decisions as follow:

(a) record assessment outcomes promptly and accurately;
(b) complete and process an assessment report according to agreed assessment procedures;

(c) inform other relevant parties of the assessment decision according to confidentiality conventions.

2.6 **FIR2.6 – Review the assessment process**

(a) review the assessment process in consultation with relevant people to improve own future practice;

(b) document and record the review according to relevant assessment system policies and procedures.

3. **Range of variables**

(a) Activities are performed in accordance with published procedures.

(b) Assessment plan may include:

(i) overall planning, describing:
   (A) what is to be assessed;
   (B) when assessment is to take place;
   (C) where assessment is to take place;
   (D) how assessment is to take place.

(c) Benchmarks for assessment:

(i) refer to a criterion against which the candidate is assessed;

(ii) may be a competency standard, unit of competency, assessment criteria of course curricula, performance specifications, or product specifications.

(d) Assessment tools include:

(i) the learning or competency unit(s) to be assessed;

(ii) the target group, context and conditions for the assessment;

(iii) the tasks to be administered to the candidate;

(iv) an outline of the evidence to be gathered from the candidate;

(v) the evidence criteria used to judge the quality of performance (i.e. the assessment decision-making rules);

(vi) the administration, recording and reporting requirements;

(vii) the evidence of how validity and reliability have been tested and built into the design and use of the tool.

(e) Specialist support may include:

(i) assistance by third party, such as carer or interpreter;

(ii) support from specialist educator;

(iii) provision of developed online assessment activities;

(iv) support for remote or isolated candidates and assessors;

(v) support from subject matter or safety experts;

(vi) advice from regulatory authorities;

(vii) assessment teams and panels;

(viii) support from lead assessors;

(ix) advice from policy development experts.

(f) Assessment methods include:

(i) particular techniques used to gather different types of evidence, such as:
   (A) direct observation;
   (B) structured activities;
(C) oral or written questioning;
(D) portfolios of evidence;
(E) review of products;
(F) third-party feedback.

(g) Feedback may include:
(i) ensuring assessment for RPL process is understood;
(ii) ensuring candidate concerns are addressed;
(iii) enabling questions and answers;
(iv) confirming outcomes;
(v) identifying further evidence to be provided;
(vi) discussing action plans;
(vii) confirming gap training needed;
(viii) providing information regarding available appeal processes;
(ix) suggesting improvements in evidence gathering and presentation.

(h) Consultation may involve:
(i) moderation with other assessors, or training and assessment coordinators;
(ii) discussions with client, team leaders, managers, RPL coordinators, supervisors, coaches and mentors;
(iii) technical and subject experts;
(iv) English language, literacy and numeracy experts.

4. **Underpinning knowledge of the following:**

(a) competency-based assessment, including:
(i) vocational education and training as a competency-based system;
(ii) criterion-referenced assessment as distinct from norm-referenced assessment;
(iii) competency standards as the basis of qualifications;
(iv) structure and application of competency standards;
(v) principles of assessment and how they are applied;
(vi) rules of evidence and how they are applied;
(vii) range of assessment purposes and assessment contexts, including RPL;
(viii) different assessment methods, including suitability for gathering various types of evidence, suitability for content of units, and resource requirements and associated costs;
(ix) reasonable adjustments and when they are applicable;
(x) types and forms of evidence, including assessment instruments that are relevant to gathering different types of evidence used in competency-based assessment, including RPL;
(xi) potential barriers and processes relating to assessment tools and methods;
(xii) assessment system, including policies and procedures established by the industry, organisation or training authority;

(b) Recognition of prior learning policies and procedures established by the organisation.

**FIR3 Conduct flight training**

1. **Unit description**

This unit describes the skills and knowledge required to effectively conduct and review flight training in an aircraft.
2. Elements and performance criteria

2.1 FIR3.1 – Plan flight training

(a) review a trainee's performance records, identify the appropriate units and elements of training to be delivered and develop an appropriate lesson plan, including remedial training if required;
(b) identify training outcomes based on prescribed performance criteria, the operator’s training plans and consultation with supervisors;
(c) identify underpinning knowledge for the units and elements and confirm that the trainee has received the appropriate training;
(d) plan flight training exercise to ensure an effective, efficient and safe outcome;
(e) identify potential threats and errors, including those associated with simulation of abnormal or emergency procedures or aircraft mishandling by trainee, and apply suitable mitigators;
(f) consider availability and program suitable training aircraft and briefing facilities;
(g) establish airworthiness and fuel state of the training aircraft;
(h) determine that environmental conditions are suitable for the training exercise.

2.2 FIR3.2 – Conduct pre-flight briefing

(a) confirm the trainee is mentally and physically prepared for flight training and she or he can recall the underpinning knowledge required for the flight exercise;
(b) brief the trainee on the training outcomes, the associated performance criteria and the actions required of the trainee during the flight;
(c) link previous training to the current exercise;
(d) brief the trainee on how the flight will be conducted to meet the training outcomes;
(e) confirm the trainee’s ability to recall the training outcomes, underpinning knowledge, handling technique and planned flight scenario;
(f) discuss threat and error management issues applicable to the proposed flight and confirm the trainee understands her or his responsibility for managing those issues (airmanship).

2.3 FIR3.3 – Conduct airborne training

(a) Demonstrate elements:
   (i) introduce tasks in manageable portions without trainee overload;
   (ii) make clear, concise and systematic explanations;
   (iii) coordinate demonstration with explanation of manoeuvre;
   (iv) make coordinated control inputs without abrupt manoeuvring, using accepted techniques;
   (v) demonstrate the manoeuvre to the competency standards specified in this manual for a commercial pilot.

(b) Directs task performance:
   (i) implements hand-over and takeover procedures for control of aircraft;
   (ii) provides direction appropriate to trainee’s progress;
   (iii) provides instructions in a clear, concise and timely manner;
   (iv) provides sufficient practice for the trainee to achieve the task;
   (v) intervenes only to the extent necessary to assist the trainee’s progress or to maintain safety.

(c) Monitors trainee performance (unassisted practice):
(i) Identify the trainee’s deficiencies and provide feedback to assist the trainee in achieving the standard;
(ii) provide additional instruction and demonstration as necessary to assist trainee;
(iii) encourage the trainee to develop self-assessment skills;
(iv) note training events for debriefing and assessment.

2.4 FIR3.4 – Manage threats and errors:
(a) manage responsibilities as pilot-in-command for the safe operation of the aircraft and maintain situation awareness while providing instruction;
(b) identify and manage threats and errors;
(c) intervene to recover the aircraft if trainee does not manage an undesired aircraft state;
(d) develop the trainee’s responsibility through the application of human factors principles for threat and error management.

2.5 FIR3.5 – Conduct post-flight briefing
(a) ask the trainee to self-assess performance against the performance criteria;
(b) describe, clearly and accurately, significant details of the trainee’s performance and assess the trainee’s achievement against the training outcomes for the lesson and associated performance criteria;
(c) identify any deficiencies in performance and suggest remedial actions and training;
(d) discuss threat and error management issues encountered during the flight;
(e) brief the trainee on the details of the next training exercise;
(f) record achievement, or otherwise, of competency, any remedial training required and identify content of the next training exercise.

2.6 FIR3.6 – Complete post-training administration
(a) relevant staff are informed of trainee’s performance and results;
(b) administration procedures required for issue of an endorsement or military equivalent are completed.

2.7 FIR3.7 – Review training
(a) evaluate training effectiveness with trainees and other appropriate stakeholders;
(b) evaluate final session outcomes against desired session outcomes;
(c) identify and incorporate adjustments to delivery, presentation and content of training when appropriate.

3. Range of variables
(a) Activities are performed in accordance with published procedures.
(b) Flight training includes training for the issue of a flight crew licence, rating or endorsement using a suitable training aircraft or approved synthetic flight trainer.
(c) Flight training includes the units and elements authorised by the flight training endorsement(s) held by the instructor.
(d) Aeronautical knowledge training, including pre- and post-flight briefings, is provided to support the flight training units and elements.
(e) Flight training and aircraft operation is conducted in accordance with regulatory requirements and safe operational practices and includes administrative procedures associated with authorising and recording flight training and maintaining training records.
(f) Flight training for licences and ratings is conducted under a Part 141 or Part 142 operator certificate with the relevant training specification in accordance with holder’s operations manual.
4. Underpinning knowledge of the following:
   (a) relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders;
   (b) performing and learning complex skills including cognitive and developmental issues and observational learning;
   (c) cognitive basis of airmanship, situational awareness, captaincy, prioritisation, load shedding and decision making;
   (d) rate of learning, enforced automaticity and the foundations of expertise;
   (e) instructor professionalism including interpersonal skills, implications of being a role-model, self-reflection and self-managed professional development.
   (f) effective use of a course of training, curricula and syllabus and lesson plans;
   (g) training and assessment standards;
   (h) debriefing and feedback techniques;
   (i) transfer of control (hand-over and takeover or follow-through) drills and procedures;
   (j) principles of flight;
   (k) crew resource management (CRM) principles;
   (l) techniques for introducing tasks in manageable segments to avoid overloading a trainee and principles for integrating task segments;
   (m) appropriate use of scenario-based training in flight instruction;
   (n) application of risk management principles to emergency procedure simulations in flight;
   (o) checklists for single-pilot or multi-crew operations as applicable;
   (p) common student errors and suggested suitable remedial instruction;
   (q) operational concept of threat and error management in relation to flight training in terms of:
      (i) managing threats;
      (ii) managing errors;
      (iii) managing undesired aircraft state.
   (r) procedures and strategies for developing trainee threat and error management skills;
   (s) task prioritisation system to assist the development of trainee task management skills in terms of:
      (i) aircraft control;
      (ii) navigation;
      (iii) communication;
   (t) suitable procedures for making decisions in-flight and for developing trainee decision making skills;
   (u) goal fixation effects on good decision making;
   (v) 3 types of stress likely to affect trainee performance and methods of assisting trainees to cope with stress:
      (i) physical;
      (ii) physiological;
      (iii) psychological;
   (w) requirements for completing relevant documentation;
   (x) principles, purpose and location of controls, monitoring devices, and systems;
   (y) procedures to be followed in the event of an emergency.
FIR7 Conduct flight review

1. Unit description

This unit describes the skills and knowledge required to conduct a flight review and assess competency of a pilot to continue to use a flight crew licence or rating.

2. Elements and performance criteria

2.1 FIR7.1 – Conduct pre-flight discussion

(a) pre-flight discussion plan is prepared that covers the topics required for the rating being reviewed;
(b) pre-flight discussion plan is delivered;
(c) opportunities to actively participate in the discussion are provided to the applicant;
(d) discussion is reviewed to determine whether the aims of the discussion were achieved.

2.2 FIR7.2 – Conduct review

(a) flight review is conducted in accordance with flight review standards as specified in applicable regulations;
(b) assess the pilot's performance against the standards specified in applicable regulations;
(c) remedial training for those elements performed below the specified standard is determined;
(d) remedial training is conducted where applicable.

2.3 FIR7.3 – Complete post-review briefing and administration

(a) post-review briefing is conducted that includes assessment of the pilot's competence against the standards specified in published procedures;
(b) post-review administration is completed.

3. Range of variables

(a) Activities are performed in accordance with published procedures.
(b) Suitable flight review resources may include:
   (i) aircraft;
   (ii) facilities.
(c) Environmental conditions may include:
   (i) weather;
   (ii) hazards and threats such as power lines and masts;
   (iii) terrain.
(d) Assessment of applicant's competence may include:
   (i) strengths;
   (ii) deficiencies;
   (iii) remedial actions;
   (iv) self-awareness and insight;
   (v) self-management.
4. **Underpinning knowledge of the following:**
   (a) principles of instructions (see FIR 1, 2 and 3);
   (b) relevant sections of Civil Aviation legislation;
   (c) common risks that exist when conducting flight reviews;
   (d) common problems that may occur when conducting flight reviews and appropriate action that should be taken in each case;
   (e) assessment and workplace training competency standards;
   (f) principles of adult teaching and learning;
   (g) human performance and limitations factors relevant to the training tasks;
   (h) psychological factors affecting satisfaction of human needs, defence mechanisms and stress management;
   (i) relevant workplace policies and procedures;
   (j) appropriate methods of analysis and training planning;
   (k) lesson planning and development;
   (l) preparation of training resources;
   (m) principles of assessment;
   (n) assessment of behaviour;
   (o) self-assessment and evaluation;
   (p) questioning techniques;
   (q) requirements for completing relevant documentation.

**FIR8 reserved**

**FIR9 Multi-crew training endorsement**

1. **Unit description**
   This unit describes the skills and knowledge required to plan and conduct Multi Crew Cooperation training courses.

2. **Elements and performance criteria**

   2.1 **FIR9.1 – Demonstrate knowledge of competency based training as applied to multi-crew operations**
   (a) understands core philosophy of competency based training;
   (b) conducts training and assessment that is characterised by an emphasis on performance measured against identified competencies;
   (c) assesses trainee on the basis meeting prescribed competency standards;
   (d) states key competencies required by crew to operate effectively in a multi-crew operation.

   2.2 **FIR9.2 – Prepares to deliver training**
   (a) completes administrative tasks as per the training organisation’s requirements and ensures;
      (i) a training plan is prepared or provided, which identifies each performance criteria required to achieve the standard specified for the issue of an endorsement;
      (ii) a trainee performance record is prepared or provided for recording trainee performance against all performance criteria.
      (iii) An assessment guide is prepared or provided to assist the instructor in assessing trainee performance;
(iv) An achievement record is prepared or provided to record the date a trainee is signed off as competent in an particular competency element.

(b) completes personal preparation to deliver training session as scheduled;

(c) checks all training material supplied is complete and up to date and all equipment/classroom/simulator used to deliver training session is available and serviceable;

(d) reviews trainees records prior to training session to understand their experience level and competency level.

2.3 FIR9.3 – Prepares trainees for training session

(a) ensures trainees are not fatigued prior to commencing the training session;

(b) sets trainees tasks to prepare for training session;

(c) clearly communicates session objectives and required elements and performance criteria to meet the required level of competency for the session.

2.4 FIR9.4 – Conducts a multi-crew training session

(a) understands and applies the learning process;

(b) assesses trainee’s performance against the performance criteria

(c) uses role plays by trainees to gain insight to the roles of pilot flying (PF), and pilot monitoring (PM);

(d) structures training sessions that have outcomes that emphasises the importance of working as a highly coordinated team and applying problem solving to real world scenarios;

(e) ensures trainees are using all information available from a range of sources to assist with problem solving;

(f) emphasises non-technical skills rather than manipulative skills during exercises;

(g) uses scenarios to discuss how a breakdown in crew coordination may lead to an undesired aircraft state;

(h) strictly applies correct use of checklists and following SOP’s at all times and a high level of cockpit discipline;

(i) emphasises situational awareness and the importance of application of the TEM model;

(j) highlights effects of automation induced complacency;

(k) ensures trainees are continually aware of automation mode and its correct use and limitations;

(l) identifies to trainees the development of a compromised cockpit authority gradient;

(m) emphasises during periods of high workload and distraction that 1 trainee must be flying the plane at all times and not have attention diverted from this task;

(n) monitors trainees during session for signs of overload and breakdown in learning environment;

(o) ensures session is structured and paced to match differing trainees skill levels.

2.5 FIR9.5 – Conducts post session assessment

(a) analyses trainee performance against the performance criteria performed in the session;

(b) debriefs trainees as a crew and then individually as required;

(c) debriefs trainee from a macro to micro perspective ie. gives a general overview of performance then drills down to specific areas requiring attention to improve competency;

(d) provides a post session plan of action for trainee to address areas requiring attention;
(e) completes debrief on a positive note highlighting areas of good performance.

2.6 **FIR9.6 – Post session administration**

(a) completes trainee performance record in a comprehensive and legible manner;
(b) completes training performance record as soon as practicable after session and definitely before conducting another training session;
(c) determines if the trainee is competent in a particular competency element;
(d) achievement record is completed (when competency in a particular competency element has been achieved).

3. **Range of variables**

(a) Activities are performed in accordance with published procedures.
(b) Single trainee or small groups of trainees.
(c) Classroom or approved flight simulator.
(d) Various SOPs and aircraft types.
(e) Trainees from different cultures.
(f) Sessions covering normal, abnormal and emergency operations.

4. **Underpinning knowledge of the following:**

(a) principles and methods of instruction;
(b) principles of competency based training in aviation;
(c) principles of effective interpersonal communication;
(d) cultural factors related to multi-crew operations.
SIMULATOR INSTRUCTOR RATING

SIR Conduct training in an approved flight simulation training device

1. Unit description
This unit describes the skills and knowledge required to plan and conduct practical flight training in an approved flight simulation training device (FSTD).

2. Elements and performance criteria

2.1 SIR.1 – Plan a learning activity
(a) the learning strategy and learning program are accessed, read and interpreted to determine learning outcomes or objectives to be met and relevant delivery requirements;
(b) limitations of the flight simulation training device are identified;
(c) completes administrative tasks according to the training organisation’s requirements and ensures:
   (i) a training plan is prepared or provided that identifies each performance criteria required to achieve the standard specified for the an endorsement, rating or proficiency check;
   (ii) a trainee performance record is prepared or provided for recording trainee performance against all performance criteria.
   (iii) an assessment guide is prepared or provided to assist the instructor in assessing trainee performance.
(d) an achievement record is prepared or provided to record the date a trainee is signed off as competent in an particular competency element;
(e) technical and human factors requirements for the training environment including safety and emergency procedures are confirmed.

2.2 SIR.2 – Prepare trainee for training activities
(a) availability of suitable resources is confirmed;
(b) ensures trainees are not fatigued prior to commencing the training session;
(c) an introduction to the training environment is provided including training objectives and relevant workplace procedures;
(d) instructional relationships are established between trainer/facilitator and trainees using appropriate communication tools and skills;
(e) trainee is briefed on how the synthetic training activity will be conducted to meet the training objectives;
(f) risk management issues applicable to the training activity are discussed and the trainee’s responsibility for managing relevant risks is confirmed;
(g) trainee’s ability to comprehend and recall the training objectives, underpinning knowledge, handling techniques and planned training activity or scenario are confirmed.

2.3 SIR3 – Guide and facilitate learning in a synthetic environment
(a) liaison with relevant personnel is conducted to determine simulation activity requirements;
(b) learning is facilitated in accordance with the delivery plan using relevant flight simulation training device and facilitation skills;
(c) good practice in facilitating learning in a simulation training environment is demonstrated to ensure an effective and safe transfer of learning to the real world;
(d) technical issues are addressed where required using relevant technical support mechanisms and personnel;
(e) opportunities for authentic learning, practice and formative assessment are built into the learning experience;
(f) pre-loaded automatic demonstrations are employed where appropriate;
(g) abnormal and unusual conditions are monitored and addressed;
(h) variations to activity conditions are implemented where applicable;
(i) handover and takeover procedures for control of the synthetic device are implemented in accordance with workplace procedures;
(j) trainee performance is assessed against the performance criteria.

2.4 **SIR.4 – Monitor learning in a flight simulation training device environment**

(a) trainee progress is monitored and documented in accordance with workplace procedures;
(b) trainee’s cognitive load is assessed, monitored and managed;
(c) support and guidance are provided as appropriate;
(d) trainee is encouraged to develop self-assessment skills;
(e) trainee interaction with others, and participation in training activities, are continuously monitored and interventions are made where appropriate;
(f) opportunities are provided for trainees to reflect on their learning progress;
(g) demonstrates the ability to:
   (i) operate the functional controls of the instructor station;
   (ii) operate the functional controls of the pilot station;
   (iii) freeze the simulator;
   (iv) reposition the simulator to a designated position in space.

2.5 **SIR.5 – Demonstrate a flight sequence:**

(i) narrative coordinated with demonstration;
(ii) demonstrates smooth and accurate flying;
(iii) correct handover and take over techniques are used;
(iv) demonstrate accurate fault analysis;
(v) correct instructional and testing techniques are used throughout exercise.

2.6 **SIR.6 – Conduct post-training activities**

(a) significant details of trainee’s performance are clearly and accurately debriefed;
(b) completes trainee performance record in a comprehensive and legible manner;
(c) completes training performance record as soon as practicable after session and definitely before conducting another training session;
(d) determines if the trainee is competent in a particular competency element;
(e) achievement record is completed (when competency in a particular competency element has been achieved);
(f) playback devices are employed during debriefing to illustrate key learning points when appropriate;
(g) trainee is briefed on the details of the next training event as appropriate;
(h) trainee records are maintained in accordance with workplace procedures;
(i) relevant stakeholders are kept informed about trainee learning progress;
(j) synthetic device faults are recorded and rectified in accordance with workplace procedures;
(k) support and guidance are provided post-synthetic environment activities as appropriate.

2.7 SIR.7 – Review synthetic environment facilitation processes
(a) training session outcomes are evaluated against desired session outcomes;
(b) a review is undertaken post-completion of the learning program, course or qualification;
(c) time is taken to reflect on own performance as a trainer or facilitator, and ways to improve performance are explored;
(d) recommendations for improvements in facilitating training and appropriateness of synthetic systems, tools and resources are identified and documented, and discussed with relevant personnel for future action.

3. Range of variables
(a) Activities are performed in accordance with published procedures.
(b) Number of trainees.
(c) Limitations of the approved flight simulation training device can include:
   (i) fidelity;
   (ii) movement;
   (iii) instrumentation;
   (iv) resolution.
(d) Flight simulation training devices can include:
   (i) full motion simulator;
   (ii) flight training device;
   (iii) synthetic training device;
   (iv) virtual reality training system;
   (v) single, multiple or team operator simulator;
   (vi) simulator;
   (vii) part-task simulator;
   (viii) desktop simulator;
   (ix) operating system;
   (x) associated simulator computer hardware and software.
(e) Risk management issues can include:
   (i) threat and error management;
   (ii) simulation motion sickness;
   (iii) equipment malfunction and failure;
   (iv) smoke or overheat warnings;
   (v) simulator access and egress;
   (vi) emergency communication;
   (vii) loading stops;
   (viii) motion stops;
   (ix) negative learning;
   (x) fidelity and resolution constraints/limitations.
(f) Abnormal/unusual conditions can include:
   (i) hardware malfunction/failure;
   (ii) software malfunction/failure;
(iii) simulation sickness;
(iv) poor/unusual participant performance;
(v) personnel equipment malfunction and failure.

(g) Simulation sickness can include:
   (i) visuomotor dysfunctions;
   (ii) mental disorientation;
   (iii) nausea including vomiting;
   (iv) other symptoms, such as drowsiness, fatigue, and headache.

4. **Underpinning knowledge of the following:**
   (a) fundamentals of instructing, questioning, engaging and motivating trainees;
   (b) IFR and VFR operations and procedures;
   (c) effective use of a course of training, curricula/syllabus and lesson plans;
   (d) training and assessment standards;
   (e) debriefing and feedback techniques;
   (f) techniques for introducing tasks in manageable segments to avoid overloading a trainee;
   (g) common trainee errors and suggested suitable remedial instruction;
   (h) intervention strategies, principles and implications for the synthetic environment;
   (i) sequencing and developing synthetic training activities and their relationship with real-world training activities;
   (j) the application of simulation and synthetic activities, including live, virtual and constructive (LVC) simulations;
   (k) advantages and limitations of synthetic training environments in facilitating learning;
   (l) information communication technology within the simulation and synthetic environment;
   (m) established procedures applicable to simulation operations;
   (n) abnormal conditions, including hardware, software and equipment malfunction and failure and poor or unusual trainee performance;
   (o) human factors implication and risks in the synthetic training environment;
   (p) the effects of simulation sickness;
   (q) functions of single-user, multi-user and distributed user operating systems;
   (r) documentation production and safe storage;
   (s) technical knowledge sufficient to distinguish between a technical problem and a content problem and to respond accordingly;
   (t) relevant learning management systems;
   (u) structure and content of relevant training resources;
   (v) handover and takeover procedures for the control of synthetic device(s).
COMMON FLIGHT STANDARDS

NTS1 NON-TECHNICAL SKILLS 1

1. Unit description
This unit describes the knowledge and skills required to manage a safe flight.

2. Elements and performance criteria
2.1 NTS1.1 – Maintain effective lookout
(a) maintain traffic separation using a systematic visual scan technique at a rate determined by traffic density, visibility and terrain;
(b) maintain radio listening watch and interpret transmissions to determine traffic location and intentions of traffic;
(c) perform airspace-cleared procedure before commencing any manoeuvre.

2.2 NTS1.2 – Maintain situational awareness
(a) monitor all aircraft systems using a systematic scan technique;
(b) collect information to facilitate ongoing system management;
(c) monitor flight environment for deviations from planned operations;
(d) collect flight environment information to update planned operations;

2.3 NTS1.3 – Assess situations and make decisions
(a) identify problems;
(b) analyse problems;
(c) identify solutions;
(d) assess solutions and risks;
(e) decide on a course of action;
(f) communicate plans of action (if appropriate);
(g) allocate tasks for action (if appropriate);
(h) take actions to achieve optimum outcomes for the operation;
(i) monitor progress against plan;
(j) re-evaluate plan to achieve optimum outcomes.

2.4 NTS1.4 – Set priorities and manage tasks
(a) organise workload and priorities to ensure optimum outcome of the flight;
(b) plan events and tasks to occur sequentially;
(c) anticipate events and tasks to ensure sufficient opportunity for completion;
(d) use technology to reduce workload and improve cognitive and manipulative activities.

2.5 NTS1.5 – Maintain effective communications and interpersonal relationships
(a) establish and maintain effective and efficient communications and interpersonal relationships with all stakeholders to ensure the optimum outcome of the flight;
(b) define and explain objectives to stakeholders;
(c) demonstrate a level of assertiveness that ensures the optimum completion of the flight.

3. Range of variables
(a) Single pilot operations.
(b) In an aircraft of the appropriate category.
(c) Simulated conditions can be used where appropriate.
4. Underpinning knowledge of the following:
   (a) effective communication under normal and non-normal circumstances;
   (b) task management.

NTS2 NON-TECHNICAL SKILLS 2

1. Unit description
   This unit describes the knowledge and skills required to recognise, direct and control threats and errors during flight operations.

2. Elements and performance criteria
   2.1 NTS2.1 – Recognise and manage threats
   (a) identify relevant environmental or operational threats that are likely to affect the safety of the flight;
   (b) identify when competing priorities and demands may represent a threat to the safety of the flight;
   (c) develop and implement countermeasures to manage threats.
   (d) monitor and assess flight progress to ensure a safe outcome; or modify actions when a safe outcome is not assured.

   2.2 NTS2.2 – Recognise and manage errors
   (a) apply checklists and standard operating procedures to prevent aircraft handling, procedural or communication errors;
   (b) identify committed errors before safety is affected or the aircraft enters an undesired state;
   (c) monitor the following to collect and analyse information to identify potential or actual errors:
      (i) aircraft systems using a systematic scan technique;
      (ii) the flight environment;
      (iii) other crew;
   (d) implement countermeasures to prevent errors or take action in the time available to correct errors before the aircraft enters an undesired state.

   2.3 NTS2.3 – Recognise and manage undesired aircraft state
   (a) recognise an undesired aircraft state;
   (b) prioritise tasks to ensure an undesired aircraft state is managed effectively;
   (c) apply corrective actions to recover an undesired aircraft state in a safe and timely manner.

3. Range of variables
   (a) Single pilot operations.
   (b) In an aircraft.
   (c) Simulated conditions can be used where appropriate.

4. Underpinning knowledge of the following:
   (a) effective communication under normal and non-normal circumstances;
   (b) threat and error management detailing processes that can be used to identify and mitigate or control threats and errors;
   (c) the application of situational awareness to identifying real or potential environmental or operational threats to flight safety;
   (d) developing and implementing plans of action for the following:
      (i) remove and/or mitigate threats;
(ii) remove and/or mitigate errors;
(e) undesired aircraft states including prevention, identifying and controlling;
(f) how an undesired aircraft state can develop from an unmanaged threat or error;
(g) what aspects of multi-crew operations (if applicable) can prevent an undesired aircraft state;
(h) use of checklists and standard operating procedures to prevent errors.
(i) task management including:
   (i) workload organisation and priority setting to ensure optimum safe outcome of the flight;
   (ii) event planning to occur in a logical and sequential manner;
   (iii) anticipating events to ensure sufficient opportunity is available for completion;
   (iv) using technology to reduce workload and improve cognitive and manipulative activities;
   (v) task prioritisation and protection whilst filtering and managing real time information.
SCHEDULE 3: AERONAUTICAL KNOWLEDGE STANDARDS

PILOT INSTRUCTOR RATINGS

FIRC: Instructor rating – Common

1. Reserved

2. Flight rules
   2.1 Legislation
      (a) Describe the privileges and limitations of the instructor rating and associated training endorsements
      (b) Describe the flight training that must be conducted under the authority of CASR Part 141 or 142.

3. Principles and methods of Instruction
   3.1 Principles of Learning
      3.1.1 Describe the adult learning process.
      3.1.2 Explain what is meant by perception?
      3.1.3 Explain the relative importance of each of the physical senses in learning?
      3.1.4 Explain how the defence mechanisms listed may hinder learning
         (a) Rationalisation
         (b) Flight
         (c) Aggression
         (d) Resignation
      3.1.5 Explain how the level of stress may affect learning?
      3.1.6 Explain the relation between perception and understanding?
      3.1.7 State how positive and negative motivation affects learning?
      3.1.8 Explain the application of the levels of learning?
      3.1.9 Explain how the rate of learning may vary with practice.
      3.1.10 Explain the role of each of the memory systems in terms of the model of information processing.
         (a) Sensory register
         (b) Short term memory
         (c) Long term memory
   3.2 Principles of Instruction
      3.2.1 Explain how a flight instructor could assist the process of perception and understanding
      3.2.2 State examples of how rote learning, understanding of knowledge and correlation apply to flight training
      3.2.3 Identify the outcomes of aeronautical knowledge instruction associated with the 3 domains of learning
         (a) Cognitive (knowledge)
         (b) Affective (attitudes, beliefs and values)
         (c) Psychomotor (physical skills)
      3.2.4 State the factors that may hinder learning with respect to aeronautical knowledge training.
      3.2.5 Explain the advantages and disadvantages of guided discussion in flight training and identify flight training activities for which this technique could be suitable
      3.2.6 Give examples of positive and negative transfer in aeronautical knowledge training.
      3.2.7 Explain the role of each factor listed in the communication process.
3.2.8 Recall how these common barriers affect communication.
   (a) Lack of common experience
   (b) Confusion
   (c) Abstractions

3.2.9 Explain how an instructor may monitor whether communication has been achieved.

3.2.10 Identify adult learning issues applicable to aeronautical knowledge training.

3.2.11 Explain each of the basic steps of the teaching process:
   (a) Preparation
   (b) Presentation
   (c) Application
   (d) Review and Evaluation

3.2.12 State the purpose of behavioural (performance based) outcomes in flight training.

3.2.13 Explain the following attributes of effective outcomes:
   (a) achievable
   (b) observable
   (c) measurable

3.2.14 Explain how to develop the three essential elements of behavioural outcomes:
   (a) Performance (what has to be done)
   (b) Performance criteria
   (c) Conditions

3.2.15 Explain the advantages and disadvantages of the teaching methods listed and give practical examples of situations best suited to each of these techniques in flight training.
   (a) Lecture
   (b) Theory or skill lesson
   (c) Group learning
   (d) Guided discussion
   (e) briefing

3.2.16 Explain the role of the instructor in each of the five steps involved in providing skill practice to trainees.
   (a) explanation
   (b) demonstration
   (c) performance
   (d) supervision
   (e) evaluation

3.2.17 Explain the difference between a training syllabus and competency based standards.

3.3 Lesson Planning and Delivery

3.3.1 Explain the general purpose and content of each of the components of a typical aeronautical knowledge lesson plan:
   (a) aim/motivation/revision
   (b) outcomes
   (c) explanation of principles
   (d) explanation/demonstration of technique
   (e) threat and error management
3.3.2 State the reasons for limiting the duration of lessons and indicate the desirable duration of a typical lesson.

3.3.3 Explain the purpose and content of a training syllabus (or curriculum).

3.3.4 Explain the purpose and use of training aids.

3.3.5 Give examples of training aids particularly suited to aeronautical knowledge training.

3.3.6 Explain the role of the instructor in each of the following phases of review and evaluation.
   - (a) fault analysis (diagnosis)
   - (b) competency assessment
   - (c) trainee self-assessment
   - (d) training effectiveness

3.4 Principles of Questioning

3.4.1 Explain the reasons for questioning trainees.

3.4.2 Explain the characteristics of an effective or open question.

3.4.3 Give examples of good and poor questions.

3.4.4 Explain how oral questions can promote mental activity.

3.4.5 Explain why oral questions maintain student interest during a lesson.

3.4.6 Explain why it is essential that the instructor always confirm answers to questions.

3.4.7 Explain the purposes of oral questions.

3.4.8 Describe the desired qualities of good oral questions.

3.4.9 Describe the procedure to follow when asking a question.

3.4.10 Explain the key points to observe in the handling of student answers.

3.4.11 Explain the key points to observe in the handling of student questions.
SCHEDULE 4: RESERVED
SCHEDULE 5:  FLIGHT TEST STANDARDS
SECTION T PILOT INSTRUCTOR RATINGS

Appendix T.1 Flight instructor rating flight test

1. Flight test requirements

1.1 A flight test that is for the grant of a flight instructor rating must include a test of competency for the purpose of granting of at least one training endorsement.

1.2 A flight instructor rating flight test that is for the grant of an additional training endorsement must include a test of competency in the applicable units, which are prescribed in this appendix, that are relevant to the endorsement the flight test is for.

1.3 An applicant for a flight instructor rating flight test must demonstrate his or her competency, in the units of competency mentioned in clause 3, by doing the following:

(a) conducting aeronautical knowledge training that is relevant to the training endorsement covered by the flight test;
(b) assessing competence that is relevant to the training endorsement covered by the flight test;
(c) conducting flight training that is relevant to the training endorsement covered by the flight test;
(d) for manoeuvres in an aeroplane — performing operations within the flight tolerances specified in table 2 of Schedule 8 of this MOS;
(e) for manoeuvres in a helicopter — performing operations within the flight tolerances specified in table 4 of Schedule 8 of this MOS;
(f) for manoeuvres in a gyroplane — performing operations within the flight tolerances specified in table 4 of Schedule 7 of this MOS.

1.4 For paragraphs 1.3(d), (e) and (f), a sustained deviation outside the applicable flight tolerance is not permitted.

1.5 The aircraft used for a flight instructor rating flight test must be of the appropriate category and be capable of being operated for the kind of operations that are covered each training endorsement the flight test is for.

2. Knowledge requirements

2.1 The applicant is required to demonstrate her or his knowledge of the following topics, except where the topic is not relevant to the flight test:

(a) the privileges and limitations of a flight instructor rating and the training endorsements included in the flight test;
(b) the authority given by the rating and the endorsements included in the flight test and the applicable operational requirements;
(c) proficiency check and flight review requirements;
(d) standardisation and proficiency requirements of Part 141 and Part 142 operators;
(e) preparing a student for training;
(f) principles and methods of instruction;
(g) for each training endorsement covered by the flight test, each of the following:
   (i) aeronautical knowledge;
   (ii) practical training aspects of the units and elements of competency;
   (iii) assessment techniques and standards;
   (iv) common errors experienced by students and methods for resolving them;
   (v) determining a student’s ability to conduct a solo flight;
   (vi) managing a student’s first solo flight;
   (vii) supervision;
   (viii) managing common threats and errors;
(ix) environmental conditions;
(x) if applicable, the flight review requirements and considerations that are relevant to the rating associated with the training endorsement;
(xi) administrative matters which are relevant to the training endorsement.

(h) If the training endorsement authorises the instructor to conduct a flight review, the applicant is required to demonstrate her or his knowledge of conducting a flight review.

1. Practical flight standards

<table>
<thead>
<tr>
<th>Unit code</th>
<th>Unit of competency</th>
<th>Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTS1</td>
<td>Non-technical skills 1</td>
<td>Nil</td>
</tr>
<tr>
<td>NTS2</td>
<td>Non-technical skills 2</td>
<td>Nil</td>
</tr>
<tr>
<td>FIR1</td>
<td>Conduct aeronautical knowledge training</td>
<td>Only element FIR1.2 – <em>Conduct aeronautical knowledge training</em> is required for this unit.</td>
</tr>
<tr>
<td>FIR3</td>
<td>Conduct flight training</td>
<td>This unit is required only if the proficiency check is being conducted in an aircraft. For element FIR3.1 – <em>Plan flight training</em>, the following elements are not required: (a) FIR3.6 – <em>Complete post-training administration</em>; (b) FIR3.7 – <em>Review training</em>.</td>
</tr>
<tr>
<td>FIR9</td>
<td>Multi-crew training endorsement</td>
<td>This unit is only required if the training endorsement applies to a multi-crew operation.</td>
</tr>
</tbody>
</table>
Appendix T.2  Simulator instructor rating flight test

1.  Flight test requirements

1.1 A flight test that is for the grant of a simulator instructor rating must include a test of competency for the purpose of granting at least one training endorsement.

1.2 A simulator instructor rating flight test that is for the grant of an additional training endorsement must include a test of competency in the applicable units, which are prescribed in this appendix, that are relevant to the endorsement the flight test is for.

1.3 An applicant for a simulator instructor rating flight test must demonstrate his or her competency, in the units of competency mentioned in clause 3, by doing the following:
   (a) conducting aeronautical knowledge training that is relevant to the training endorsement covered by the flight test;
   (b) assessing competence that is relevant to the training endorsement covered by the flight test;
   (c) conducting flight training that is relevant to the training endorsement covered by the flight test;
   (d) for manoeuvres in a Flight simulation training device (FSTD) that is for an aeroplane — within the flight tolerances specified in table 2 of Schedule 8 of this MOS;
   (e) for manoeuvres in an FSTD that is for a helicopter — within the flight tolerances specified in table 4 of Schedule 8 of this MOS.

1.4 For paragraphs 1.3(d), (e) and (f), a sustained deviation outside the applicable flight tolerance is not permitted.

1.5 The FSTD used for a flight instructor rating flight test must appropriate and capable of being operated for the kind of operations that are covered by each training endorsement the flight test is for.

2.  Knowledge requirements

2.1 The applicant is required to demonstrate her or his knowledge of each of the following topics, except where the topic is not relevant to the flight test:
   (a) the privileges and limitations of a simulator instructor rating and each training endorsement covered by the flight test;
   (b) the authority given by the rating and the endorsements included in the flight test and the applicable operational requirements;
   (c) proficiency check and flight review requirements;
   (d) standardisation and proficiency requirements of Part 141 and Part 142 operators;
   (e) preparing a student for training;
   (f) principles and methods of instruction;
   (g) using FSTDs for training and assessment including limitations and advantages;
   (h) for each training endorsement covered by the flight test, the following:
      (a) aeronautical knowledge;
      (b) practical training aspects of the units and elements of competency;
      (c) assessment techniques and standards;
      (d) common errors experienced by students and methods for resolving them;
      (e) determining a student’s ability to conduct a solo flight;
      (f) managing a student’s first solo flight;
      (g) supervision;
      (h) managing common threats and errors;
      (i) environmental conditions;
(j) if applicable, the flight review requirements and considerations that are relevant to the rating associated with the training endorsement;

(i) Administrative matters which are relevant to the training endorsement.

2.1.2 If the training endorsement authorises the instructor to conduct a flight review, the applicant is required to demonstrate her or his knowledge of conducting a flight review.

3. Practical flight standards

<table>
<thead>
<tr>
<th>Unit code</th>
<th>Unit of competency</th>
<th>Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTS1</td>
<td>Non-technical skills 1</td>
<td>Nil</td>
</tr>
<tr>
<td>NTS2</td>
<td>Non-technical skills 2</td>
<td>Nil</td>
</tr>
<tr>
<td>SIR</td>
<td>Conduct training in an approved flight simulation device</td>
<td>Nil</td>
</tr>
<tr>
<td>FIR1</td>
<td>Conduct aeronautical knowledge training</td>
<td>Only element FIR1.2 – <em>Conduct aeronautical knowledge training</em> is required for this unit.</td>
</tr>
<tr>
<td>FIR9</td>
<td>Multi-crew training endorsement</td>
<td>This unit is only required if the training endorsement applies to a multi-crew operation.</td>
</tr>
</tbody>
</table>
SCHEDULE 8: FLIGHT TOLERANCES

Table 2: Aeroplane general flight tolerances – professional level

1. Applicability
   The flight tolerances in this subsection apply to the following licences and ratings:
   (a) Commercial pilot licence
   (b) Multi-crew pilot licence
   (c) Air transport pilot licence
   (d) Pilot instructor rating
   (e) Instrument rating
   (f) Private IFR rating
   (g) Flight examiner rating
   (h) Aerial application rating
   (i) Low level rating
   (j) Aircraft type rating

3. Requirements
   3.1 A person is required to perform flight manoeuvres within the flight tolerances mentioned in this table to be assessed as competent in the associated unit of competency.

4. Flight tolerances

<table>
<thead>
<tr>
<th>Flight Path or Manoeuvre</th>
<th>Flight Tolerances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxing Aircraft</td>
<td>±1.5 metres of centreline</td>
</tr>
<tr>
<td>Nominated Heading</td>
<td>±5°</td>
</tr>
<tr>
<td>Climb Airspeed</td>
<td>-0 / +5kts</td>
</tr>
<tr>
<td>Level off from climb and descent</td>
<td>±100ft</td>
</tr>
<tr>
<td>Straight and level</td>
<td>Altitude ±100ft</td>
</tr>
<tr>
<td></td>
<td>IAS ±10kts or ±M.02 Not below minimum approach speed</td>
</tr>
<tr>
<td>Power Descent Airspeed</td>
<td>±10kts</td>
</tr>
<tr>
<td>Glide</td>
<td>-5 / +10kts</td>
</tr>
<tr>
<td>Turns</td>
<td>Angle of Bank ±5°</td>
</tr>
<tr>
<td>Turns onto nominated headings</td>
<td>Heading ±5°</td>
</tr>
<tr>
<td>Steep Turn</td>
<td>Heading ±10</td>
</tr>
<tr>
<td></td>
<td>Height ±100 Ft</td>
</tr>
<tr>
<td>Final Approach Airspeed</td>
<td>-0 / +5kts</td>
</tr>
<tr>
<td>Landing</td>
<td>Touchdown ±60m</td>
</tr>
<tr>
<td></td>
<td>For ATPL, within the published</td>
</tr>
<tr>
<td>Flight Path or Manoeuvre</td>
<td>Flight Tolerances</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>touchdown zone relevant to the runway landing distance available.</td>
</tr>
<tr>
<td>Centreline tracking</td>
<td>±2m</td>
</tr>
<tr>
<td>Asymmetric flight</td>
<td>Heading – initial ±20°</td>
</tr>
<tr>
<td></td>
<td>Heading - sustained ±5°</td>
</tr>
<tr>
<td></td>
<td>IAS -0 +5 kts</td>
</tr>
<tr>
<td>Limited panel instrument flying</td>
<td>Heading ±15°</td>
</tr>
<tr>
<td></td>
<td>IAS ±10kts or ±M0.02</td>
</tr>
<tr>
<td></td>
<td>Height ±200ft</td>
</tr>
</tbody>
</table>
### Table 4: Helicopter general flight tolerances – professional level

#### 2 Applicability

The flight tolerances in this subsection apply to the following licences and ratings:

(a) Commercial pilot licence  
(b) Multi-crew pilot licence  
(c) Air transport pilot licence  
(d) Pilot instructor rating  
(e) Private IFR rating  
(f) Instrument rating  
(g) Flight examiner rating  
(h) Aerial application rating  
(i) Low level rating  
(j) Aircraft type rating

#### 5. Requirements

5.1 A person is required to perform flight manoeuvres within the flight tolerances mentioned in this table to be assessed as competent in the associated unit of competency.

#### 6. Flight tolerances

<table>
<thead>
<tr>
<th>Flight Path or Manoeuvre</th>
<th>Flight Tolerances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hover</td>
<td>±0.5 metre of hover point</td>
</tr>
<tr>
<td>Ground taxi/Hover taxi and manoeuvring</td>
<td>±1 metre of track</td>
</tr>
<tr>
<td></td>
<td>±5° of nominated heading</td>
</tr>
<tr>
<td></td>
<td>±20% of nominated height</td>
</tr>
<tr>
<td>Climbing</td>
<td>-0 +5 kts nominated IAS</td>
</tr>
<tr>
<td>Level off from climb and descent</td>
<td>±100ft of nominated altitude</td>
</tr>
<tr>
<td>Straight and level</td>
<td>Altitude ±100ft</td>
</tr>
<tr>
<td></td>
<td>IAS ±5kts</td>
</tr>
<tr>
<td></td>
<td>Heading ±5° of nominated heading</td>
</tr>
<tr>
<td>Power Descent Airspeed/Autorotation</td>
<td>IAS ±5kts</td>
</tr>
<tr>
<td></td>
<td>Heading ±5° of nominated heading</td>
</tr>
<tr>
<td>Turns</td>
<td>Angle of bank Angle of bank ±5°</td>
</tr>
<tr>
<td></td>
<td>Altitude ±100ft of nominated altitude</td>
</tr>
<tr>
<td>Exit turn onto a heading</td>
<td>Initial ±15° of heading</td>
</tr>
<tr>
<td></td>
<td>Sustained ±5° of heading</td>
</tr>
<tr>
<td>Level speed in IMC – U/A recovery</td>
<td>Not less than Vmin IMC</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Final approach airspeed</td>
<td>-0__+10 kts</td>
</tr>
<tr>
<td>Landing (normal)</td>
<td>Within a 5 metre diameter circle of nominated point</td>
</tr>
<tr>
<td>Multi-engine – one engine disengaged</td>
<td>Heading: ±5° of nominated heading</td>
</tr>
<tr>
<td>Control helicopter during advanced manoeuvres – steep turns</td>
<td>altitude: ±100 ft</td>
</tr>
<tr>
<td></td>
<td>Exit on specified heading: ±15° initially, then ±5°</td>
</tr>
<tr>
<td>Autorotation – single engine helicopter</td>
<td>Heading: ±5° Able to turn into the last known wind direction and maintain heading within tolerance</td>
</tr>
<tr>
<td>Advanced manoeuvre – authoritative flight</td>
<td>Descent at nominated heading: ±5°</td>
</tr>
<tr>
<td></td>
<td>Steep turn altering heading: 360° using 45° bank</td>
</tr>
<tr>
<td>Advanced manoeuvre – power recovery</td>
<td>Rotor RPM: Within limitation</td>
</tr>
</tbody>
</table>