

<b>Title</b>	<b>Demonstrate flying skills for a commercial pilot licence (helicopter)</b>		
<b>Level</b>	<b>5</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People credited with this unit standard are able, for a commercial pilot licence (helicopter), to demonstrate: on-the-ground preparation; pre-flight preparation; Air Traffic Service procedures; take-off procedures; in-flight skills; joining, landing and go-round procedures; and technical functions.
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<b>Classification</b>	Aviation > Aircraft Operation
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<b>Available grade</b>	Achieved
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<b>Entry information</b>	
<b>Critical health and safety prerequisites</b>	Industry requirements are that the candidate must meet the eligibility requirements of the Civil Aviation Act 1990 and the Civil Aviation Rules Part 61 for a commercial pilot licence.

### Explanatory notes

- 1 The test flight covered by this unit standard must be demonstrated in accordance with the Civil Aviation Rules Part 61 and 91, and other relevant rules, published by the Civil Aviation Authority of New Zealand (CAA), PO Box 3555, Wellington 6140, and their subsequent amendments.
- 2 This unit standard is aligned with the relevant parts of the prescribed syllabi of the CAA for a commercial pilot licence (helicopter). Credit will be awarded on meeting the requirements of the CAA-approved assessment or examination.
- 3 Definitions, abbreviations, and acronyms used in this unit standard are to be found in:
  - a *Civil Aviation Rules Part 1* on the CAA website at <https://www.caa.govt.nz>, and
  - b *Aeronautical Information Publication (AIP)* published by Aeronautical Information Management (AIM), PO Box 294, Wellington 6140 or on the AIM website at <http://www.aip.net.nz>.
- 4 All references to the CAA refer specifically to the Civil Aviation Authority of New Zealand.
- 5 Industry standards and recommended practices are those set in place by the CAA.
- 6 Industry texts may include but are not limited to – helicopter flight manuals, CAA Rules, CAA Advisory Circulars, CAA Flight Test Standards Guides, operator exposition.

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## Outcomes and evidence requirements

### Outcome 1

Demonstrate on-the-ground preparation for a commercial pilot licence (helicopter).

### Evidence requirements

- 1.1 Personal factors are demonstrated in accordance with industry texts and standards.
- Range fitness to fly, grooming, deportment, punctuality, personal presentation.
- 1.2 Logbook is up-to-date, summarised and certified in accordance with industry texts and standards.
- 1.3 Privileges, medical, and currency requirements for a CPL (helicopter) are described in accordance with industry texts and standards.
- 1.4 AIP Volume 4 and VNC are interpreted and explained in accordance with industry texts and standards.
- 1.5 Aircraft documents are explained in accordance with industry texts and standards.
- Range Certificate of Airworthiness, aircraft technical log, helicopter flight manual and associated pilot's operating handbook, airworthiness directives.
- 1.6 Weather data, NOTAMs, and AIP supplements are obtained and correctly interpreted in accordance with industry texts and standards.
- Range includes but is not limited to – making a sound go/no-go decision.
- 1.7 Helicopter performance calculations are completed in accordance with industry texts and standards.
- Range includes but is not limited to – power limit for the day, effects of seasonal and atmospheric conditions on hover ceiling, sound decision being made on helicopter's capability, height/velocity graph.
- 1.8 Fuel management requirements are calculated in accordance with industry texts and standards.
- Range calculations of fuel requirements include but are not limited to – reserves, contingency, establishing the quantity of fuel on board, endurance, operation of fuel pump, mixture control.

- 1.9 Helicopter loading is calculated in accordance with industry texts and standards.
- Range includes but is not limited to – weight limitations, balance for take-off and landing, load distribution, centre of gravity, securing of baggage, carriage of asymmetric external loads.

## Outcome 2

Demonstrate pre-flight preparation for a commercial pilot licence (helicopter).

### Evidence requirements

- 2.1 The pre-flight interior and external inspections are completed in accordance with industry texts and standards.
- Range includes but is not limited to – fuel and oil check, securing baggage, location and use of emergency equipment.
- 2.2 Passengers are supervised and briefed in accordance with industry texts and standards.
- Range includes but is not limited to – safe areas for approaching, location and operation of emergency equipment, use and operation of seat belts and shoulder harness, operation of all doors and hatches, keeping hands and feet clear of controls, conditions permitting smoking, operation of intercommunication equipment, actions in event of an emergency landing.
- 2.3 Engine is started in accordance with the aircraft flight manual and industry texts and standards.
- Range includes but is not limited to – rotor engagement, use of external power source, area clear, main and tail rotor clear, instrument check, clutch engagement, actions in the event of a fire.
- 2.4 Engine checks, run-up, and operation are completed in accordance with industry texts and standards.
- 2.5 Pre lift-off procedures are completed in accordance with industry texts and standards.

## Outcome 3

Demonstrate Air Traffic Service procedures for commercial pilot licence (helicopter).

### Evidence requirements

- 3.1 Air Traffic Service procedures are carried out in accordance with AIP and CAA Rules.

**Outcome 4**

Demonstrate take-off procedures for a commercial pilot licence (helicopter).

**Evidence requirements**

4.1 Lift-off to hover is demonstrated in accordance with industry texts and standards.

4.2 Hover manoeuvring is demonstrated in accordance with industry texts and standards.

4.3 Take-off is demonstrated in accordance with industry texts and standards.

Range includes but is not limited to – take-off direction, normal, crosswind, limited power (cushion creep), limited power (running), towering.

**Outcome 5**

Demonstrate in-flight skills for a commercial pilot licence (helicopter).

**Evidence requirements**

5.1 Climbing is demonstrated in accordance with industry texts and standards.

5.2 Straight and level flight is demonstrated in accordance with industry texts and standards.

5.3 Turns are demonstrated in accordance with industry texts and standards.

Range medium turns, steep turns.

5.4 Use of a magnetic compass is demonstrated in accordance with industry texts and standards.

5.5 Autorotation is demonstrated in accordance with industry texts and standards.

Range includes but is not limited to – straight-in autorotation, 180-degree autorotation.

5.6 Quick stops are demonstrated in accordance with industry texts and standards.

Range includes but is not limited to – maintenance of RPM, maintenance height within limits (as nominated by the flight examiner).

5.7 Low flying is demonstrated in accordance with industry texts and standards.

Range includes but is not limited to – maintenance of lookout for wires and obstacles.

5.8 Mountainous terrain flying is demonstrated in accordance with industry texts and standards.

Range includes but is not limited to – determination of wind direction; circuit and approach terminating in a hover, or landing on a ridge or knoll; circuit and approach terminating in a hover, or landing at a point in a valley with no natural horizon; level turns in a valley with no natural horizon.

5.9 Slope operations are demonstrated in accordance with industry texts and standards.

Range includes but is not limited to – recognition of when slope is too steep, recognition of hazards in slope operations.

5.10 Confined area flying is demonstrated in accordance with industry texts and standards.

Range includes but is not limited to – reconnaissance; consideration of power required; consideration of power available; density altitude, wind direction; terrain; obstructions; size, shape, and surface of the area.

5.11 Descent is demonstrated in accordance with industry texts and standards.

## Outcome 6

Demonstrate joining, landing, and go-round procedures for a commercial pilot licence (helicopter).

### Evidence requirements

6.1 Circuit is joined in accordance with industry texts and standards.

6.2 Approach and landing are demonstrated in accordance with industry texts and standards.

Range includes but is not limited to – control of airspeed/ground speed, establishing recommended approach angle and rate of closure, normal approach in hover in ground effect; within one metre of designated aiming point; normal, limited power (running), zero speed, go-round.

6.3 Steep approach is demonstrated in accordance with industry texts and standards.

Range includes but is not limited to – avoidance of situations that could lead to vortex ring state.

## Outcome 7

Demonstrate technical functions for a commercial pilot licence (helicopter).

**Evidence requirements**

- 7.1 Carriage of sling loads is demonstrated in accordance with industry texts and standards.
- Range includes but is not limited to – helicopter weight and balance in relation to carriage of sling loads.
- 7.2 Engine failure in the hover is demonstrated in accordance with industry texts and standards.
- 7.3 Shutdown is demonstrated in accordance with industry texts and standards.
- 7.4 Emergency and hazard procedures are demonstrated in accordance with industry texts and standards.
- 7.5 Radiotelephony tuning and procedures are demonstrated in accordance with industry texts and standards.
- 7.6 Lookout is demonstrated in accordance with industry texts and standards.
- Range includes but is not limited to – ground and air for collision avoidance, remaining in VMC to comply with VFR, situational awareness.
- 7.7 Flight orientation is demonstrated in accordance with industry texts and standards.
- Range includes but is not limited to – identifying airspace boundaries.
- 7.8 Pilot judgement is demonstrated in accordance with industry texts and standards.

<b>Planned review date</b>	31 December 2021
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	18 June 2010	31 December 2018
Revision	2	9 December 2010	31 December 2018
Review	3	20 October 2016	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0169
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Please note**

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses

of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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### **Comments on this unit standard**

Please contact ServiceIQ [qualifications@serviceiq.org.nz](mailto:qualifications@serviceiq.org.nz) if you wish to suggest changes to the content of this unit standard.