Title	**Demonstrate knowledge of meteorology for commercial aircraft operations**		
Level	**5**	**Credits**	**15**

Purpose	People credited with this unit standard are able to demonstrate knowledge of meteorology for commercial aircraft operations in accordance with Subject No 20.

Classification	Aviation > Aircraft Operation

Available grade	Achieved

Guidance Information

1 This unit standard is aligned with the relevant parts of the prescribed syllabi of the Civil Aviation Authority of New Zealand (CAA) for Subject No 20 for a commercial pilot licence. Credit will be awarded on meeting the requirements of the CAA-approved assessment or examination.

2 Commercial aircraft operations are those which are performed for hire or reward.

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 – aircraft flight manuals, CAA Rules, CAA Advisory Circulars, CAA Flight Test Standards Guides, operator exposition.

7 For the purpose of this unit standard, *knowledge* refers to the knowledge, understanding, and application of the subject matter.

8 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.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of meteorology for commercial aircraft operations in accordance with Subject No 20.

Performance criteria

1.1 The atmosphere is described and explained in accordance with industry texts and standards.

Range may include but is not limited to – composition, ozone, tropopause, insolation, stratosphere.

1.2 Atmospheric pressure is described and explained in accordance with industry texts and standards.

1.3 Temperature and heat exchange processes are described and explained in accordance with industry texts and standards.

1.4 Atmospheric moisture is defined and described in accordance with industry texts and standards.

1.5 The wind is described and explained in accordance with industry texts and standards.

Range may include but is not limited to – Coriolis force, Buys Ballot's law.

1.6 Stability of air is described and explained in accordance with industry texts and standards.

1.7 Local winds are described and explained in accordance with industry texts and standards.

Range may include but is not limited to – sea breeze, pseudo sea breeze, land breeze, katabatic and anabatic wind.

1.8 Inversions are described and explained in accordance with industry texts and standards.

1.9 Cloud is described and explained in accordance with industry texts and standards.

1.10 Precipitation is defined and described in accordance with industry texts and standards.

1.11 Visibility is described and explained in accordance with industry texts and standards.

1.12 Fog is defined and described in accordance with industry texts and standards.

1.13 Fronts and depressions are described and explained in accordance with industry texts and standards.

1.14 Thunderstorms are explained and described in accordance with industry texts and standards.

1.15 Icing is explained and described in accordance with industry texts and standards.

1.16 Causes of turbulence and its effects on flying are described and explained in accordance with industry texts and standards.

1.17 Tropical meteorology is described and explained in accordance with industry texts and standards.

Range may include but is not limited to – tropical Hadley cell, South Pacific Convergence Zone, Walker Circulation.

1.18 The General Circulation is explained and described in accordance with industry texts and standards.

1.19 Hazardous meteorological conditions are described and explained in accordance with industry texts and standards.

1.20 New Zealand climatology is described in accordance with industry texts and standards.

1.21 Meteorological services, reports, and forecasts for aviation are decoded, interpreted, and assessed in accordance with industry texts and standards.

Replacement information	This unit standard replaced unit standard 15350.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

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	18 February 2011	31 December 2018
Review	3	20 October 2016	31 December 2027
Review	4	28 September 2023	31 December 2027

Consent and Moderation Requirements (CMR) reference	0169

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.