

Title	Demonstrate knowledge of flight navigation general (aeroplane and helicopter) for an airline transport pilot licence		
Level	6	Credits	10

Purpose	People credited with this unit standard are able, for an airline transport pilot licence in accordance with Subject No 38, to demonstrate knowledge of: the fundamentals of air navigation; aeronautical charts; navigation calculations; navigational procedures—IFR; flight management; and GNSS.
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Classification	Aviation > Aircraft Operation
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Available grade	Achieved
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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 38, for an airline transport pilot licence (aeroplane and helicopter). Credit will be awarded upon meeting the requirements of the CAA-approved assessment or examination.
- 2 An airline transport pilot licence permits the holder to conduct aircraft operations as pilot-in-command in an aircraft requiring a co-pilot.
- 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 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 an airline transport pilot licence (aeroplane and helicopter).

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the fundamentals of air navigation in accordance with Subject No 38.

Performance criteria

- 1.1 The form of the earth is defined and identified in accordance with industry texts and standards.
- 1.2 The direction of the earth is defined and explained in accordance with industry texts and standards.
- 1.3 Distance on the earth is defined, explained, and determined in accordance with industry texts and standards.
- 1.4 Speed and velocity are defined, stated, and explained in accordance with industry texts and standards.
- 1.5 Position referencing is described in accordance with industry texts and standards.
- 1.6 Altimetry is explained in accordance with industry texts and standards.
- 1.7 Time is explained and converted in accordance with industry texts and standards.
- 1.8 Visibility is defined, described, and explained in accordance with industry texts and standards.

Outcome 2

Demonstrate knowledge of aeronautical charts in accordance with Subject No 38.

Performance criteria

- 2.1 The principles and properties of aeronautical charts are explained in accordance with industry texts and standards.
 - Range may include but is not limited to – Mercator projection, Lambert's conformal projection.
- 2.2 Scale is defined and calculated in accordance with industry texts and standards.
- 2.3 Charts are interpreted and navigation information is derived in accordance with industry texts and standards.

Outcome 3

Demonstrate knowledge of navigation calculations in accordance with Subject No 38.

Performance criteria

- 3.1 Computations are demonstrated in accordance with industry texts and standards.
- 3.2 Relative velocity calculations are demonstrated in accordance with industry texts and standards.
- 3.3 Triangle of velocities calculations are demonstrated in accordance with industry texts and standards.

Outcome 4

Demonstrate knowledge of navigational procedures—IFR in accordance with Subject No 38.

Performance criteria

- 4.1 Plotting and measurement of a great circle track are demonstrated in accordance with industry texts and standards.
- 4.2 Enroute diversion calculations are demonstrated in accordance with industry texts and standards.

Outcome 5

Demonstrate knowledge of flight management in accordance with Subject No 38.

Performance criteria

- 5.1 Flight management procedures are carried out in accordance with industry texts and standards.

Outcome 6

Demonstrate knowledge of GNSS in accordance with Subject No 38.

Performance criteria

- 6.1 Use and reliability of Global Positioning System (GNSS) are explained in accordance with industry texts and standards.

Replacement information

This unit standard replaced unit standard 15360.

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	21 January 2011	31 December 2018
Review	2	20 October 2016	31 December 2027
Review	3	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>.