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

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| 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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| Entry information | |
| Critical health and safety prerequisites | 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). |

Explanatory notes

- 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.

Outcomes and evidence requirements

Outcome 1

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

Evidence requirements

- 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.

Evidence requirements

- 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.

Evidence requirements

- 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.

Evidence requirements

- 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.

Evidence requirements

- 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.

Evidence requirements

- 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.

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| Planned review date | 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 | 21 January 2011 | 31 December 2018 |
| Review | 2 | 20 October 2016 | N/A |

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| Consent and Moderation Requirements (CMR) reference | 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.

Comments on this unit standard

Please contact ServiceIQ qualifications@serviceiq.org.nz if you wish to suggest changes to the content of this unit standard.