Title	**Describe and use a Global Positioning System (GPS) for a specified Visual Flight Rules (VFR) aviation activity**		
Level	**3**	**Credits**	**3**

Purpose	People credited with this unit standard are able to describe GPS for a specified aviation activity; use of GPS in VFR flight planning; and VFR-GPS assisted competency in flight.

Classification	Aviation > Aircraft Operation

Available grade	Achieved

Guidance Information

1 The flight covered by this unit standard must be demonstrated in accordance with the Civil Aviation Rules Part 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 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.

3 Evidence presented for assessment against this unit standard must be in accordance with industry texts and standards.

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, manufacturers' handbooks, 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 Rule Part 61 for a private pilot licence.

Outcomes and performance criteria

Outcome 1

Describe GPS for a specified aviation activity.

Performance criteria

1.1 Principles and components of GPS are described.

Range includes but is not limited to – system architecture and control; aircraft GPS equipment; triangulation, range measurement, position fixing.

1.2 GPS navigation system performance is described.

Range includes but is not limited to – Technical Standard Order (TSO) and non-TSO units; Receiver Autonomous Integrity Monitoring (RAIM); GPS errors and limitations.

1.3 GPS installation is described.

Range aerials include but are not limited to –, connections, mountings; power includes but is not limited to – sources, integrity, back-up.

1.4 GPS operational procedures are described.

Range includes but is not limited to – mode knowledge, access; set up menus; alerts.

1.5 Simple GPS operations are described.

Range includes but is not limited to – displays, ‘Go To’ mode, ‘Nearest’ mode, data entry, checks.

1.6 Complex GPS operations are described.

Range includes but is not limited to – route creation, pre-flight route verification, aviation database and updates;
user created database includes but is not limited to – airfields, way points, position autostore;
route selection and operation include but are not limited to – activate, invert, edit.

Outcome 2

Demonstrate use of GPS in VFR flight planning.

Performance criteria

2.1 Integration of VFR flight planning and operations with GPS is demonstrated.

Range includes but is not limited to – standard VFR flight planning, flight route entry into GPS, standard flight plan cross-checks with GPS, in-flight VFR–GPS cross-checks.

Outcome 3

Demonstrate VFR-GPS assisted competency in flight.

Performance criteria

3.1 Simple and complex GPS functions are demonstrated in flight.

Range includes but is not limited to – 'Go To' route operations, route selection and manipulation.

3.2 Route reversal on leg is demonstrated.

3.3 'Nearest' navaid is selected.

3.4 Visual navigation cross-check of data is completed.

3.5 Look-out and standard VFR operational procedures are demonstrated.

Planned review date	31 December 2028

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
Review	2	20 October 2016	31 December 2027
Review	3	28 September 2023	N/A

Consent and Moderation Requirements (CMR) reference	0028

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

Comments on this unit standard

Please contact Ringa Hora Services Workforce Development Council qualifications@ringahora.nz if you wish to suggest changes to the content of this unit standard.