



**Australian Government**

# **AVIH4013 Navigate aircraft under night visual flight rules**

**Release: 1**

# **AVIH4013 Navigate aircraft under night visual flight rules**

## **Modification History**

Release 1. This is the first release of this unit of competency in the AVI Aviation Training Package.

## **Application**

This unit involves the skills and knowledge required to navigate an aircraft under night visual flight rules (NVFR), in compliance with the relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes selecting, operating and monitoring navigation aids and systems, navigating aircraft at night, conducting diversions to revised routes or alternate aerodromes at night, and making visual approaches and departures at night. It also includes complying with air traffic control (ATC) rules and procedures for NVFR flights, and managing hazardous weather conditions.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to route planning and navigation duties of flight crew, and contributes to safe and effective performance in complex aviation operational environments.

Operations are conducted as part of recreational, commercial and military aircraft activities across a variety of operational contexts within the Australian aviation industry.

Work is performed independently or under limited supervision within a single-pilot or multi-crew environment.

Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Use for Defence Aviation is to be in accordance with relevant Defence Orders, Instructions, Publications and Regulations.

## **Pre-requisite Unit**

Not applicable.

## **Competency Field**

H – Route Planning and Navigation

## **Unit Sector**

Not applicable.

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### 1 Select, operate and monitor navigation aids/systems

#### 2 Navigate aircraft at night

#### 3 Conduct a diversion

### PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1 Navigation aids and systems appropriate for planned NVFR flight are selected and operated
- 1.2 Ground-based and satellite-based navigational systems confidence and integrity checks are conducted, continuously monitored and maintained
- 2.1 External aircraft, cockpit and instrument lighting are configured and adjusted to allow reference to documentation, instruments and lookout
- 2.2 Aircraft position fix is determined visually or with reference to navigation aid and systems using ground-based and/or satellite-based navigational systems
- 2.3 Tracks are intercepted to and from stations and waypoints visually or with reference to navigation aids and systems using ground-based and satellite-based navigational systems
- 2.4 Track is maintained within tolerances specified in published procedures
- 2.5 Timings and fuel usage rates are assessed, revised and recorded in navigation log
- 2.6 Situational awareness is maintained using a recognised navigation work cycle
- 2.7 Station passage is recognised
- 2.8 Global navigation satellite system (GNSS)/distance measuring equipment (DME) arc procedure is performed within tolerances specified in published procedures
- 2.9 Planned route above lowest safe altitude (LSALT) is maintained
- 2.10 Route and destination weather conditions are monitored and appropriate actions are executed
- 2.11 Descent point calculations are completed
- 3.1 Requirement for an unplanned diversion is recognised and

- to revised route or alternate aerodrome at night**
- 3.2 Route to alternate aerodrome, navigation aid and /or revised track is determined
  - 3.3 Planned route height above LSALT is maintained
  - 3.4 Flight planned route is diverted to track to alternate aerodrome or navigation aid
  - 3.5 Operational information for alternate aerodrome/s is reviewed and applied in accordance with regulations and published procedures
  - 3.6 Fuel plan is reviewed and amended in accordance with regulations and published procedures
- 4 Make visual departure at night**
- 4.1 Obstacle clearance is maintained visually at all times during departure until reaching LSALT
  - 4.2 Departure track is intercepted within 5 nautical miles (nm) of aerodrome
  - 4.3 Take-off and departures are conducted from aerodromes remote from ground lighting using instruments as the primary reference and ensuring after take-off checks are performed at a safe height
- 5 Make visual approach at night**
- 5.1 Descent below LSALT is conducted in accordance with published procedures
  - 5.2 Track is maintained to destination aerodrome
- 6 Comply with ATC rules and procedures for NVFR flights**
- 6.1 Separation from other air traffic under NVFR is maintained
  - 6.2 Airspace requirements are complied with
  - 6.3 Two-way communication is maintained with air traffic services and other aircraft
  - 6.4 ATC clearances and/or radar vectoring instructions are complied with
- 7 Manage hazardous weather conditions**
- 7.1 Hazardous weather conditions are identified and risk management processes are applied to maintain safety of flight
  - 7.2 Hazardous weather avoidance procedures are applied
  - 7.3 Aircraft systems are employed to mitigate the effects of

hazardous weather

## **Foundation Skills**

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## **Range of Conditions**

Range is restricted to essential operating conditions and any other variables essential to the work environment.

## **Unit Mapping Information**

This unit replaces and is equivalent to AVIH4013A Navigate aircraft - NVFR.

## **Links**

Companion Volume implementation guides are found in VETNet -

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>