



Australian Government

**AVIH0021 Operate remotely piloted
aircraft systems under night visual line of
sight (NVLOS)**

AVIH0021 Operate remotely piloted aircraft systems under night visual line of sight (NVLOS)

Modification History

Release	Comments
1	This unit of competency was first released in AVI Aviation Training Package Release 12.0.

Application

This unit involves the skills and knowledge required to operate remotely piloted aircraft systems (RPAS) flight under night visual line of sight (NVLOS) in compliance with the relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes determining aircraft meets requirements for NVLOS flights, obtaining and using current operational documents, preparing flight plans for NVLOS flights and determining operational requirements.

This unit addresses aviation technical skill requirements and 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 commercial and military aircraft activities across a variety of operational contexts within the Australian aviation industry.

Work is performed independently or under limited supervision as a single operator or within a team environment.

Licensing/Regulatory Information

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

Pre-requisite unit(s)

Not applicable.

Competency field(s)

H - Route Planning and Navigation

Unit sector(s)

Not applicable

Elements and Performance Criteria

Elements		Performance criteria	
Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	Determine aircraft meets requirements for NVLOS flights	1.1	Determine aircraft requirements for NVLOS flights
		1.2	Check flight and navigation instruments, minimum electrical lighting, navigational equipment and any other requirements fitted to aircraft to ensure they are suitable and serviceable for NVLOS flight
2	Obtain and use current operational documents	2.1	Obtain and check operational documents applicable to flight for currency
		2.2	Interpret and apply relevant information contained in documents for flight planning and management
		2.3	Ensure documents required for flight are accessible to the pilot during flight
3	Prepare flight plan for NVLOS flights	3.1	Select and prepare charts suitable for intended NVLOS flight according to legislative requirements
		3.2	Obtain, analyse and apply relevant information to prepare flight plan detailing tracks, distances, times, altitudes and fuel requirements to reach destination
		3.3	Identify hazards, assess risks and implement hazard management
		3.4	Obtain, interpret and apply meteorological, airway facilities, area of operation and Notice to Airman information applicable to planning and conducting flight
		3.5	Plan routes to optimise options in engine failure and energy supply
		3.6	Check airspace requirements and charts according to NVLOS flight operations

4	Determine operational requirements	4.1	Determine power requirements due to weather and navigation aid availability according to operational requirements
		4.2	Calculate total fuel requirements according to workplace procedures
		4.3	Meet minimum illumination requirements for take off and landing including alternates
		4.4	Check area of operations and potential hazards during daylight hours

Range of conditions

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

Assessment Requirements for AVIH0021 Operate remotely piloted aircraft systems under night visual line of sight (NVLOS)

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include

- adapting to differences in equipment and operating environment in accordance with standard operating procedures (SOPs)
- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant aeronautical knowledge
- applying relevant legislation and workplace procedures
- communicating effectively with others
- completing relevant documentation
- determining alternate landing area requirements and suitability for a night visual flight to a specified destination given relevant information, including Notice to Airmen (NOTAM)
- determining fuel quantity required for a night visual flight
- determining holding requirements due to weather, traffic or traffic advisory
- determining currency of operational documents
- interpreting and determining meteorological forecasts required for a night visual flight
- extracting and applying relevant information from operational documents
- identifying and correctly using relevant equipment
- implementing contingency plans
- implementing work health and safety (WHS) and relevant regulations
- interpreting and following operational instructions and prioritising work
- interpreting navigation charts
- modifying activities depending on workplace contingencies, situations and environments
- monitoring and anticipating operational problems and hazards and taking appropriate action
- operating electronic communications equipment to required protocol
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs

- reporting and/or rectifying problems, faults and malfunctions promptly in accordance with workplace procedures
- selecting and using required personal protective equipment (PPE) conforming to industry and WHS standards
- selecting suitable navigation aids/systems
- working collaboratively with others
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- airspace requirements and procedures under night visual line of sight (NVLOS) conditions
- critical point (CTA) and point of no return (PNR)
- documents required to be carried on a night visual flight
- factors affecting NVLOS en route performance, range and endurance
- environmental conditions and hazards
- human and physiological considerations for NVLOS operations
- limits of NVLOS operations
- limitations and errors of navigations aids/systems
- meteorological considerations for a NVLOS flight
- NVLOS licensing and training requirements
- NVLOS organisational requirements and training
- NVLOS considerations and procedures to reduce potential hazards
- NVLOS route planning requirements
- pilot medical fitness and qualifications necessary for night visual flight
- privileges of NVLOS rating
- procedures for flight plan amendments and revised estimates for a night visual flight
- relevant sections of Civil Aviation Safety Regulations (CASRs) and Civil Aviation Orders pertaining to NVLOS and flight planning requirements
- relevant WHS and environmental procedures and regulations
- requirements for an alternate landing area
- specification of aircraft electrical lighting, radio communication and navigation equipment required for night visual flight

- specification of aircraft flight instruments required for night visual flight
- speed restrictions for night visual flight
- use of navigational aids
- validity of a given meteorological forecast for a night visual flight.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and PPE currently used in industry.

Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
AVIH0007 Operate remote pilot aircraft systems under night visual line of sight (NVLOS)	Not equivalent	

Links

Companion volumes, including implementation guides, are found on the national training register - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>.