

AVI50415 Diploma of Aviation

(Instrument rating)

– Silver course

Summary of Evidence included in portfolio “Summary table”

List here any evidence you have ticked, and/or other evidence you are providing for this unit of competency, so that your RTO assessor can refer to it in your portfolio, please ensure that your item numbers are consistent with that of your portfolio documentation.

Item no.	Unit of competency / Performance Criteria	Source of the Evidence	Description of Evidence	Date	Verified / Assessor Initial
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AVIF0007 Implement threat and error management strategies

Units of Competency

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 implement threat and error management strategies, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and National operating standards.

It includes recognising and managing actual and potential threats, recognizing and managing actual and potential errors, and recognising and managing undesired aircraft states.

This unit addresses aviation non-technical skill requirements (metal, social and personal – management abilities) of the flight crew, and contributes to safe and effective performance in complex aviation operational environments.

Operations are conducted as part of recreational, commercial and military activities across a variety of operational context 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

F – Safety

Unit Sector

Not applicable.

Elements and Performance criteria

See below

Resource

https://training.gov.au/TrainingComponentFiles/AVI/AVIF0007_R1.pdf

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.

Operational threats include one or more of the following:	<ul style="list-style-type: none"> • events or errors that: • occur outside the influence of the flight crew • increase the operational complexity of the flight • require crew attention and management if safety margins are to be maintained
Errors must include one or more of the following:	<ul style="list-style-type: none"> • individual or group actions or inactions that: • lead to a deviation from individual, group or organisational intentions or expectations • reduce safety margins • increase the probability of adverse operational events on the ground and/or during flight
Undesired aircraft states must include one or more of the following:	<ul style="list-style-type: none"> • incorrect aircraft systems configuration associated with a reduced margin of safety • inappropriate flight mode awareness and selection • misapplication of flight controls • pilot induced aircraft position • pilot induced speed deviation

Unit Mapping Information

No equivalent unit

Links

Companion Volume Implementation Guide at:

http://companion_volumes.vetnet.education.gov.au/Pages/TrainingPackage.aspx?pid=21

Assessment Requirements

Modification History

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

Performance Evidence – see assessment requirements PDF

Knowledge Evidence – see assessment requirements PDF

Assessment conditions – see assessment requirements PDF

Unit of competency – PDF

Assessment requirements – PDF

<https://training.gov.au/Training/Details/AVIF0007>



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AVIF0007 Implement threat and error management strategies

Element Elements describe the essential outcome	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.	Evidence to support my achievement of competence	
		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
1. Recognise and manage actual and potential threats	1.1 Potential environmental or operational threats likely to affect flight safety are identified		
	1.2 Actual environmental or operational threats that affect flight safety are identified		
	1.3 Competing operational priorities and task demands that may represent a threat to flight safety are identified		
	1.4 Countermeasures to manage threats are identified and implemented		
	1.5 Flight progress and effect of countermeasures are monitored and assessed to ensure a safe outcome		
	1.6 Alternative countermeasures are identified and implemented, and effectiveness of countermeasures is re-evaluated for effectiveness		



Element Elements describe the essential outcome	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.	Evidence to support my achievement of competence	
		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
2. Recognise and manage actual and potential errors	2.1 Checklists and standard operating procedures are implemented to prevent aircraft handling, procedural or communication errors		
	2.2 Committed errors are identified and responded to before aircraft enters an undesired state		
	2.3 Aircraft systems are monitored using a systematic scan technique to collect and analyse flight information for potential or actual error recognition purposes		
	2.4 Flight operating environment is monitored to collect and analyse flight information for potential or actual error recognition purposes		
	2.5 Individual or team performance is monitored to recognise potential or actual error occurrence		
	2.6 Countermeasure implementation and supervision are undertaken to prevent errors before aircraft enters an undesired state		
	2.7 Countermeasure implementation and supervision are undertaken to correct errors after aircraft enters an undesired		



Element Elements describe the essential outcome	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.	Evidence to support my achievement of competence	
		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
3. Recognise and manage undesired aircraft states	3.1 Undesired aircraft states are recognised		
	3.2 Individual and team tasks are prioritised to ensure an undesired aircraft state is managed effectively		
	3.3 Corrective actions to recover from an undesired aircraft state are applied in a safe and timely manner		
	3.4 Undesired aircraft states are reported and recorded as required in accordance with applicable workplace procedures		



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AVIF0008 Manage safe flight operations

Units of Competency

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 implement threat and error management strategies, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and National operating standards.

It includes recognising and managing actual and potential threats, recognising and managing actual and potential errors, and recognising and managing undesired aircraft states.

This unit address aviation non-technical skill requirements (mental, social and personal-management abilities) of flight crew, and contributes to safe and effective performance in complex aviation operational environments. 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

F – Safety

Unit Sector

Not applicable.

Elements and Performance criteria

See below

Resource

https://training.gov.au/TrainingComponentFiles/AVI/AVIF0008_R1.pdf

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

No equivalent unit



Links

Companion Volume Implementation Guide at:

http://companion_volumes.vetnet.education.gov.au/Pages/TrainingPackage.aspx?pid=21

Assessment Requirements

Modification History

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

Performance Evidence – see assessment requirements PDF

Knowledge Evidence – see assessment requirements PDF

Assessment conditions – see assessment requirements PDF



AVIF0008 Manage safe flight operations

Element Elements describe the essential outcome	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.	Evidence to support my achievement of competence	
		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
1. Maintain effective lookout	1.1 Systematic visual scan techniques are applied at a rate determined by traffic density, visibility and terrain to maintain traffic separation		
	1.2 Radio listening watch is maintained and transmissions are interpreted to determine traffic location and intention		
	1.3 Airspace-cleared procedures are performed before commencing any manoeuvre		
2. Maintain situational awareness	2.1 All aircraft systems are monitored using a systematic scan technique		
	2.2 Information is collected to facilitate ongoing system management		
	2.3 Flight environment is monitored for deviations from planned operations		
	2.4 Flight environment information is collected to update planned operations		



Element Elements describe the essential outcome	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.	Evidence to support my achievement of competence	
		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
3. Assess situations and make decisions	3.1 Problems affecting flight performance are identified and analysed		
	3.2 Potential solutions to flight performance problems are identified		
	3.3 Potential solutions and risks are assessed		
	3.4 Course of action is determined and communicated to flight crew, passengers and/or other personnel, as required		
	3.5 Tasks are allocated and actioned to implement optimal course of action outcomes		
	3.6 Tasks are monitored for progress against determined course of action		
	3.7 Plan is re-evaluated as required to achieve optimal outcomes		
4. Set priorities and manage tasks	4.1 Task workload and priorities are organised to ensure optimum outcome of the flight		
	4.2 Events and tasks are planned to occur sequentially		
	4.3 Events and tasks are anticipated to ensure sufficient opportunity for completion		
	4.4 Technology is used to reduce workload and improve cognitive and manipulative activities		



Element Elements describe the essential outcome	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.	Evidence to support my achievement of competence	
		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
5. Maintain effective communication and interpersonal relationships	5.1 Effective and efficient communication and interpersonal relationships are established and maintained with all stakeholders to ensure optimum flight outcome		
	5.2 Objectives are defined and explained to stakeholders		
	5.3 Appropriate levels of assertiveness are applied that ensure the optimum completion of a flight		



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AVIW5018 Operate and manage aircraft systems

Units of Competency

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 implement threat and error management strategies, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and National operating standards.

It includes it includes establishing serviceability to flight instruments and instrument power sources, operating an aircraft using full instrument procedures and recovering from unusual attitudes using full instrument procedures.

It also includes operating an aircraft using limited instrument procedures, recovering from unusual attitudes using limited instrument procedures, re – establishing visual flight, and performing steep turns.

This unit addresses technical skill requirements (physical, mental and task management abilities) related to equipment and system operations of flight or ground operations personnel, 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

W – Equipment and Systems Operations

Unit Sector

Not applicable.

Pre-requisite Unit

Not applicable



Elements and Performance criteria

See below

Resource

<https://training.gov.au/Training/Details/AVIY0001>

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 AVIW5018A Operate and manage aircraft systems.

Links

Companion Volume implementation guides are found in VETnet

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

Assessment Requirements

Modification History

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

Performance Evidence – see assessment requirements PDF

Knowledge Evidence – see assessment requirements PDF

Assessment conditions – see assessment requirements PDF



AVIW5018 Operate and manage aircraft systems

Element	Performance Criteria	Evidence to support my achievement of competence	
		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
1. Operate and manage aircraft systems during normal flight	1.1 Aircraft systems, sub-systems (equipment) and devices applicable to aircraft type and task are operated and managed		
	1.2 Aircraft systems, sub-systems (equipment) and devices are monitored using a systematic scan technique		
	1.3 Aircraft systems and flight environment information is analysed to identify actual and potential threats or errors		
	1.4 Automated aircraft systems are utilised to manage cockpit workload		
	1.5 Hazards are identified, risks are assessed and hazard management is implemented		
	1.6 Checklist procedures are completed as appropriate to aircraft system		



Element	Performance Criteria	Evidence to support my achievement of competence	
		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
2. Manage aircraft systems during abnormal and emergency procedures	2.1 Non-normal or emergency situations are recognised		
	2.2 Control of aircraft flight path is maintained during abnormal and emergency response procedures		
	2.3 Affected aircraft system or sub-system is identified and confirmed		
	2.4 Checklist procedures are recalled and implemented during abnormal and emergency situations using appropriate techniques		
	2.5 Appropriate non-normal or emergency procedures are performed in accordance with relevant workplace and emergency procedures, and regulatory requirements		
	2.6 Course of action is decided, implemented, evaluated and revised to achieve safest outcomes		
	2.7 Location and operation of emergency systems applicable to aircraft type are explained		

AVIY0001 Operate aircraft using aircraft flight instruments

Unit of Competency

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 implement threat and error management strategies, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and National Operating standards.

It includes operating and managing aircraft systems during normal flight, and managing aircraft systems during abnormal and emergency procedures.

This unit addresses aviation technical skill requirements (physical, mental and task management abilities) related to equipment and system operations of flight or ground operations personnel, 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

Y – Aircraft Operation and Traffic Management

Unit Sector

Not applicable.

Elements and Performance Criteria

See below

Resource

<https://training.gov.au/Training/Details/AVIY0001>

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.

Aircraft must include one or more of the following:	<ul style="list-style-type: none">• fixed wing• helicopter• other commercial or military aircraft
Unusual attitudes and upset situations must include:	<ul style="list-style-type: none">• high and low-nose attitudes• unbalanced flight• various power settings• various aircraft configurations• varying angles of bank

Unit Mapping Information

This unit replaces but is not equivalent to:

- AVIY5020A Conduct full instrument panel manoeuvres
- AVIY5021A Conduct limited instrument panel manoeuvres

Links

Companion Volume implementation guides are found in VETnet

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=4725260a-Oaf3-4daf-912b-ef1c2f3e5816>

Assessment Requirements

Modification History

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

Performance Evidence – see assessment requirements PDF

Knowledge Evidence – see assessment requirements PDF

Assessment conditions – see assessment requirements PDF

AVIY0001 - Operate aircraft using aircraft flight instruments

Element	Performance Criteria	Evidence to support my achievement of competence	
		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
1.Establish serviceability of flight instruments and instrument power sources	1.1 Serviceability of flight instrument, pitot/static system and instrument power sources is determined before flight		
	1.2 Functional checks of flight and navigational instruments are performed before departure		
2. Operate aircraft using full instrument procedures	2.1 Flight instrument and instrument power sources are monitored and pilot cautions, warnings and indications are reacted to in accordance with full instrument procedures		
	2.2 Power and attitude are set and maintained by reference to full instrument panel to achieve straight and level performance during normal cruise		
	2.3 Power and attitude are set and maintained by reference to full instrument panel to achieve nominated climb performance		
	2.4 Power and attitude are set and maintained by reference to full instrument panel to achieve nominated descent performance		
	2.5 Power, attitude and bank during climb, descent and straight and level flight are set and maintained by reference to full instrument panel to achieve rate one turns onto a nominated heading		
	2.6 Aircraft is balanced and trimmed to maintain nominated aircraft altitude, heading, speed and/or climb/descent performance within flight tolerances		
	2.7 Aircraft is levelled at nominated altitude, from climb or descent during straight or turning flight		

Element	Performance Criteria	Evidence to support my achievement of competence
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		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
3. Recover from unusual attitudes using instrument procedures	3.1 Unusual attitudes and upset situations are recognised and identified		
	3.2 Controlled flight is resumed by reference to flight instruments using a full instrument panel		
	3.3 Straight and level attitude is achieved without excessive oscillations at the horizon		
	3.4 Aircraft is recovered to above lowest safe altitude (LSALT)		
4. Operate aircraft using limited instrument procedures	4.1 Flight instrument and instrument power sources are monitored and pilot cautions, warnings and indications are reacted to in accordance with limited instrument procedures		
	4.2 Aircraft is transitioned from full instrument operating procedures to limited instrument operating procedures while maintaining safe flight profiles		
	4.3 Power and attitude are set and maintained by reference to limited instrument panel to achieve straight and level performance during normal cruise		
	4.4 Power and attitude are set and maintained by reference to limited instrument panel to achieve nominated climb performance		
	4.5 Power and attitude are set and maintained by reference to limited instrument panel to achieve nominated descent performance		
	4.6 Power, attitude and bank during climb, descent, straight and level flight are set and maintained by reference to limited instrument panel to achieve rate one turns onto a nominated heading		
	4.7 Aircraft is balanced and trimmed to maintain nominated aircraft altitude, heading, speed and/or climb/descent performance within flight tolerances		
	4.8 Aircraft is levelled at nominated altitude, from climb or descent during straight or turning flight		

Element	Performance Criteria	Evidence to support my achievement of competence	
		Current and Recent Evidence - including mapping	Historical evidence (more than 2-3 years old) – including mapping
5. Recover from unusual attitudes using limited instrument procedures	5.1 Unusual attitudes and upset situations are recognised and identified		
	5.2 Controlled flight is resumed by reference to flight instruments using limited instrument panel		
	5.3 Straight and level attitude is achieved without excessive oscillations at the horizon		
	5.4 Aircraft is recovered to above LSALT		
6. Re- establish visual flight	6.1 Aircraft is transitioned from visual flight conditions to instrument flight conditions while aircraft control is maintained		
	6.2 Aircraft is manoeuvred to re-establish visual flight		
	6.3 Plan is implemented to ensure flight continues within visual meteorological conditions (VMC)		
7. Perform steep turns	7.1 Power, attitude and bank are set to maintain level flight by reference to full instrument panel that achieves a steep turn		
	7.2 Nominated angle of bank is maintained		
	7.3 Aircraft turn is exited onto nominated heading		
	7.4 Aircraft is balanced and trimmed to maintain nominated aircraft altitude, heading, speed and/or climb/descent performance within flight tolerances		

