



Australian Government

AVIF0007 Implement threat and error management strategies

Release: 1

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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 addresses 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.

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

F – Safety

Unit Sector

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 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
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 state
3 Recognise and	3.1 Undesired aircraft states are recognised

manage undesired aircraft states

- 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

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:
- 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:
- 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:
- 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 guides are found in VETNet -

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

Assessment Requirements for AVIF0007 Implement threat and error management strategies

Modification History

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Performance Evidence

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

- applying active listening techniques to others in the operational environment
- 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
- delegating duties and tasks
- determining and implementing appropriate countermeasures
- giving and receiving instructions related to implementing threat and error management strategies
- implementing contingency plans
- implementing work health and safety (WHS)/occupational health and safety (OHS) procedures and relevant regulations
- interpreting relevant instructions, regulations, procedures and information
- maintaining situational awareness
- making timely operational decisions
- modifying activities depending on operational contingencies, risk levels and environments
- operating and adapting to differences in communications equipment in accordance with standard operating procedures
- planning own work, predicting consequences and identifying improvements
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- responding to feedback from other flight or ground crew
- reporting and rectifying identified problems, faults or malfunctions promptly, in accordance with workplace procedures
- supervising others when implementing threat and error management strategies
- 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, performance criteria and range of conditions and include knowledge of:

- application of situational awareness to identifying real or potential environmental or operational threats to aviation safety
- aspects of multi-crew operations that can prevent an undesired aircraft state
- effective communication during normal, abnormal and emergency situations
- leadership and supervision strategies
- recognition techniques and management strategies for:
 - actual and potential threats
 - actual and potential errors
 - undesired aircraft states
- relevant sections of Civil Aviation Safety Regulations (CASRs) and Civil Aviation Orders related to threat and error management (TEM)
- removing and mitigating errors
- removing and mitigating threats
- safety philosophies
- task management:
 - workload organisation and priority setting to ensure optimum safe outcome of a flight
 - event planning to occur in a logical and sequential manner
 - anticipating events to ensure sufficient opportunity is available for completion
 - using technology to reduce workload and improve cognitive and manipulative activities
 - task prioritisation and protection while filtering and managing real time information
- TEM model:
 - principles and components of TEM
 - definition of threats
 - definition of errors
 - undesired aircraft states
 - TEM countermeasures.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

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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.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to:

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

Links

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