



Australian Government

AVIF0020 Manage human factors and situational awareness in an aviation operational environment

Release: 2

AVIF0020 Manage human factors and situational awareness in an aviation operational environment

Modification History

Release 2. This is the second release of this unit of competency in the AVI Aviation Training Package.

Application

This unit involves the skills and knowledge required to manage human factors and situational awareness in an aviation operational environment in compliance with relevant regulatory, requirements and organisational practices.

It includes managing human performance and communicating effectively within an aviation environment. It also includes maintaining situational awareness, assessing situations and making decisions, setting priorities and managing tasks, and working with others in managing situational awareness.

This unit addresses non-technical skill requirements (mental, social and personal-management abilities) related to safety management duties of aviation operators and contributes to safe and effective performance in complex operational environments.

Operations are conducted as part of aviation operational 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, legislative, regulatory or certification requirements are applicable to this unit.

Pre-requisite Unit

Not applicable.

Competency Field

F – Safety Management

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Manage human performance

PERFORMANCE CRITERIA

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

1.1 Pre- and post-operational personal condition is managed to ensure safe and effective performance

1.2 Individual performance when conducting system operations is monitored against workplace standards, procedures and requirements

1.3 Degradation of physiological condition is recognised and appropriate strategies are implemented to ensure safe task outcome

1.4 Degradation of psychological condition is recognised and appropriate strategies are implemented to ensure safe task outcome

1.5 Sources of stress are identified and managed to maintain a safe operating environment

1.6 Limitations to personal performance are communicated to others where necessary to maintain a safe operating environment

2 Communicate effectively

2.1 Effective listening skills are applied

2.2 Questions are used to gain additional information and to clarify understanding

2.3 Information received is clarified as required, interpreted, and accurately communicated or reported with due observation of ethics and protocols required of the operational environment

2.4 Communication is undertaken in varying situations with culturally diverse, familiar and unfamiliar individuals, teams and crews

2.5 Appropriate protocols and procedures are followed when using communications systems during routine and contingency operations

2.6 Responses are sought from and provided to others in a timely manner

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| 3 Maintain situational awareness | 3.1 Continuous monitoring of all critical factors relevant to the safe completion of task is undertaken |
| | 3.2 Effective visual scan is applied, personnel interaction is maintained, and radio, inter-personnel communication, traffic information is used appropriately |
| | 3.3 Trends towards unsafe situations are recognised and appropriate corrective action is employed in accordance with workplace procedures and regulatory requirements |
| | 3.4 Breakdown in situational awareness is identified and appropriate corrective action is implemented to regain control |
| 4 Assess situations and make decisions | 4.1 Operational threats, errors and undesired system states are identified and analysed |
| | 4.2 Operational risks are assessed and reported in accordance with workplace procedures and regulatory requirements |
| | 4.3 Potential solutions are identified and control measures are determined and implemented |
| | 4.4 Determined plan of action is communicated and tasks are allocated to others as appropriate |
| | 4.5 Plan of action is implemented and monitored to achieve optimum outcomes |
| | 4.6 Plan of action and implementation process are re-evaluated and amended as required to achieve optimum task outcomes |
| | 4.7 Extended operational changes resulting from action plan and related risks are monitored and managed to ensure a safe task outcome |
| 5 Set priorities and manage tasks | 5.1 Priorities and workload are organised to ensure completion of all tasks relevant to operational safety and effectiveness |
| | 5.2 Critical events and tasks are anticipated and managed to ensure completion within available time constraints |
| | 5.3 System automation is used to reduce workload and to improve ability to perform mental and manipulative activities safely |

	5.4	Fixation on single actions/functions is minimised
	5.5	Degraded human performance factors are identified and appropriate actions are taken to manage degraded performance of self or in others when necessary
6 Work with others in managing situational awareness	6.1	Collaboration with others is undertaken to ensure safe completion of task
	6.2	Effective and efficient communications and interpersonal relationships are established and maintained with all stakeholders to ensure safe task outcome
	6.3	Team members are encouraged to participate in and contribute to safe task outcome
	6.4	Appropriate action is taken in conjunction with others to cooperatively correct any identified unsafe situations that may develop during the task

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

AVI Training Package Companion Volume Implementation Guide available on VET Net: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>

Assessment Requirements for AVIF0020 Manage human factors and situational awareness in an aviation operational environment

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 and performance criteria on at least one occasion and include:

- applying effective listening techniques
- applying effective questioning techniques to obtain and clarify information while communicating with others
- identifying symptoms of deterioration in own physiological condition that might endanger the safety of operations and taking appropriate corrective action
- identifying symptoms of deterioration in own psychological condition that might endanger safety of operations and taking appropriate corrective action
- maintaining compliance with relevant regulatory requirements including avoiding alcohol and drugs before and when conducting operations
- managing and controlling stress before and when conducting operations
- managing aspects of lifestyle that may impact on personal performance
- managing and monitoring own physical performance
- managing and monitoring own psychological performance
- operating electronic communications equipment to required protocol
- reading, interpreting and following relevant instructions, regulations, procedures, information and signs
- recognising degraded human performance factors and applying appropriate management techniques
- setting priorities and managing workload to ensure safe task completion in available time
- 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:

- aspects of lifestyle that may adversely influence personal physiological condition
- aspects of lifestyle that may adversely influence personal psychological condition
- decision-making processes relevant to operations

- effective communication techniques
- effects of stress on human performance and ways of managing and controlling stressors that may impact on operations, including:
 - concepts of fatigue
 - environmental stress symptoms, causes and effects
 - ergonomics of control systems and instruments
 - principles of stress management
 - short- and long-term stressor effects on performance
 - stress and arousal interaction
- factors that may influence human performance during operations
- human performance and its limitations
- the senses, memory and situational awareness
- relevant work health and safety (WHS) and regulations applicable to operations
- relevant sections of national regulatory and legislative requirements, including:
 - human factors limitations
 - physical examination requirements
 - medical clearances, where necessary
- requirements for reporting and documenting safety incidents and safety critical errors that may have occurred during an operation
- team coordination, including:
 - basic principles of team coordination
 - verbal and non-verbal communication factors
 - barriers to communication
 - listening skills
 - assertion skills
 - factors affecting decision-making processes
 - poor team coordination factors
- communication, including:
 - attitude
 - personality
 - judgement
- leadership style
- leadership qualities
- visual scanning techniques.

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 this is not appropriate, assessment must occur in simulated workplace operational situations that reflect 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
- acceptable means of simulation assessment
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry.

Links

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