



Australian Government

AVIM5002 Conduct aeronautical knowledge training

Release: 1

AVIM5002 Conduct aeronautical knowledge training

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 conduct aeronautical knowledge training, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes planning aeronautical knowledge training, conducting aeronautical knowledge training, and reviewing aeronautical knowledge training.

This unit addresses aviation non-technical skill requirements (physical, mental and task-management abilities) related to training and assessment duties of flight instructors, 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 as a single operator or within a team environment.

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 in accordance with relevant Defence Orders and Instructions.

Pre-requisite Unit

Not applicable.

Competency Field

M – Training and Assessment

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

1 Plan aeronautical knowledge training

- 1.1 Trainee readiness for training is confirmed
- 1.2 Training objectives, including threat and error management (TEM), training plan and other appropriate training resources are identified
- 1.3 Hazards are identified, risks are assessed and hazard management is implemented
- 1.4 Lesson and delivery method appropriate to training objectives are planned
- 1.5 Assessment procedures are specified
- 1.6 Theory training with flight training lessons are appropriately scheduled and integrated
- 1.7 Availability of facilities, equipment, training aids and reference materials is confirmed

2 Conduct aeronautical knowledge training

- 2.1 Learning environment and motivation suitable to trainee characteristics is established
- 2.2 Materials are presented
- 2.3 Training objectives are stated
- 2.4 Lesson plan is followed and modified as required to achieve training objectives and to transfer of knowledge
- 2.5 New knowledge is linked to previous knowledge and is presented in a meaningful and logical framework
- 2.6 Training aids are used to illustrate and enhance explanations
- 2.7 Accurate technical knowledge is presented clearly and to the required standard
- 2.8 Opportunities for trainee participation and practise are provided
- 2.9 Applicable TEM issues are discussed

- 2.10 Trainee ability to apply TEM principles to the material presented is confirmed
 - 2.11 Achievement of training objectives is confirmed by questioning, review and other suitable methods
 - 2.12 Feedback on trainee performance is provided
 - 2.13 Trainee self-assessment skills are developed
 - 2.14 Training objectives are completed in time available
 - 2.15 Training is conducted effectively and safely
- 3 Review aeronautical knowledge training**
- 3.1 Training objectives and transfer of knowledge are achieved
 - 3.2 Training delivery and effectiveness using self-assessment, peers and supervisors is reviewed
 - 3.3 Records of assessment and progress of trainee are maintained and reviewed in accordance with established 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.

Unit Mapping Information

This unit replaces and is equivalent to AVIM5002A Conduct aeronautical knowledge training.

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 AVIM5002 Conduct aeronautical knowledge training

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:

- achieving transfer of knowledge and training objectives
- adapting to differences in equipment and operating environment in accordance with standard operating procedures
- applying crew resource management (CRM) principles applicable to flight training and the role of the instructor in assisting the trainee to develop these skills
- applying precautions and required action to minimise, control or eliminate identified training hazards
- applying relevant aeronautical knowledge
- applying situational awareness and methods of developing and monitoring trainee situational awareness skills in terms of:
 - monitoring current environmental factors
 - evaluating their possible effects on the flight
 - anticipating the need for alternative actions
- assessing learning and performance
- communicating effectively with others
- completing relevant documentation
- demonstrating flight instructor role modelling
- developing an appropriate training plan that includes threat and error management (TEM)
- evaluating instructional effectiveness
- identifying and correctly using relevant equipment
- implementing work health and safety (WHS)/occupational health and safety (OHS) procedures and relevant regulations
- maintaining and reviewing assessment records and trainee progress
- managing an environment that fosters learning and performance
- modifying activities depending on workplace contingencies, situations and environments
- monitoring work activities in terms of planned schedule
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- reporting and/or rectifying problems, faults or malfunctions promptly, in accordance with workplace procedures

- responding appropriately to cultural differences in the workplace
- selecting and using required personal protective clothing and equipment conforming to industry and WHS/OHS standards
- 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:

- adult learning principles
- application of instructional principles to airborne instruction
- attributes of effective learning outcomes:
 - achievable
 - observable
 - measurable
- barriers to effective communication:
 - lack of common experience
 - confusion
 - abstractions
- crew resource management (CRM) principles
- debriefing and feedback techniques
- how to develop the essential elements of behavioural outcomes:
 - performance (what has to be done)
 - performance criteria
 - conditions
- effective communication process:
 - source
 - symbols
 - receiver
- effective use of a course of training, curricula/syllabus and lesson plans
- flight rules for flight instructor ratings:
 - legislation

- privileges and limitations
- fundamentals of instructing, questioning, engaging and motivating learners
- how goal fixation affects good decision making
- lesson planning and development:
 - purpose and content of each of the components of a typical aeronautical knowledge lesson plan:
 - aim/motivation/revision
 - outcomes
 - explanation of principles
 - explanation/demonstration of technique
 - TEM
 - practice
 - review
 - reasons to limit the duration of lessons and desirable duration of a typical lesson
 - purpose and content of a training syllabus (or curriculum)
 - purpose and use of training aids
 - role of the instructor for each phase of review and evaluation:
 - fault analysis (diagnosis)
 - competency assessment
 - trainee self-assessment
 - training effectiveness
- operational concept of TEM in relation to flight training in terms of:
 - managing threats
 - managing errors
 - managing undesired aircraft state
- positive and negative learning transfer
- principles and methods of instruction:
 - principles of learning:
 - adult learning process
 - learning as a behavioural change
 - sensory perception
 - factors affecting perception and understanding
 - motivation, positive and negative
 - attitudes, discipline and responsibility
 - levels of learning:
 - rote
 - understanding
 - application
 - correlation
 - factors that hinder the learning process:

- rationalisation
 - flight
 - aggression
 - resignation
- stress levels and impact on learning
- relationship between perception and understanding
- positive and negative motivation
- levels of learning
- how rate of learning varies with practice
- transfer, habit formation
- reinforcement
- memory systems and information processing models:
 - sensory register
 - short-term memory
 - long-term memory
- principles of instruction:
 - role of the instructor
 - rote learning, understanding of knowledge and correlation, and application to flight training
 - learning domains:
 - cognitive (knowledge)
 - affective (attitudes, beliefs and values)
 - psychomotor (physical skills)
 - factors that hinder learning
 - advantages and disadvantages of guided discussion
 - positive and negative transfer
 - communication process factors:
 - source
 - symbols
 - receiver
 - communication barriers
 - monitoring whether communication has been achieved
 - adult learning issues
 - steps to the teaching process
 - behavioural (performance-based) outcomes and purpose in flight training
 - attributes of effective outcomes
 - advantages and disadvantages of various teaching methods
 - role of instructor in steps towards skill practice
 - training syllabus and competency-based standards
- principles of flight

- principles of questioning:
 - reasons for questioning
 - characteristics of effective or open questioning techniques
 - oral questions for mental stimulation
 - confirming answers
 - desired qualities of good oral questions
 - procedure to follow when asking
 - key points when handling learner answers and questions
- purpose of behavioural outcomes
- relevant WHS/OHS and environmental procedures and regulations
- relevant sections of national and state/territory regulatory requirements and codes of practice
- requirements for completing relevant documentation
- risk management principles applicable to emergency procedure simulations in flight
- role of psychology in flying instruction:
 - satisfaction of human needs
 - defence mechanisms
 - dealing with stress, abnormal reactions to airborne stress situations
 - psychological problems of trainee and experienced pilots
- role of instructor in providing skill practice to trainees:
 - explanation
 - demonstration
 - performance
 - supervision
 - evaluation:
 - fault analysis (diagnosis)
 - competency assessment
 - trainee self-assessment
 - training effectiveness
- scenario-based training and its advantages in aeronautical knowledge training
- suitable procedures for developing trainee TEM skills
- suitable procedures for making decisions in-flight and for developing trainee decision-making skills
- task prioritisation system to assist the development of trainee task management skills in terms of:
 - aircraft control
 - navigation
 - communication
- teaching methods, including advantages and disadvantages:
 - lecture, theory and skill lessons, guided discussion, briefing
 - behavioural objectives, their importance and formulation

- teaching process:
 - preparation
 - presentation
 - application
 - review and evaluation
- three types of stress likely to affect trainee performance and methods of assisting trainees to cope with stress:
 - physical
 - physiological
 - psychological
- training syllabus and competency-based standards
- use and abuse of teaching aids.

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.

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

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.

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