



**Australian Government**

# **AVIY0042 Apply aeronautical knowledge and civil air law to flight dispatch operations**

**Release: 1**

# **AVIY0042 Apply aeronautical knowledge and civil air law to flight dispatch operations**

## **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 apply aeronautical knowledge and civil air law to flight dispatch operations in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes identifying aviation regulations, utilising aviation terminology, applying knowledge of basic aircraft power plants and systems, and applying aerodynamic theory. It also includes applying knowledge of aviation navigation charts, aircraft operations, and performance and planning factors.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to aircraft operational duties of flight dispatch and flight operations support 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 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**

Y – Aircraft Operation and Traffic Management

## **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 Identify aviation regulations

- 1.1 State/territory authority requirements and authorisations required for commercial and air transport operations are explained
- 1.2 Methods of exercising state/territory authority functions are identified
- 1.3 Requirements of an Air Operator Certificate (AOC) are applied
- 1.4 Role of International Air Transport Association (IATA), International Civil Aviation Organisation (ICAO) and other relevant aviation organisations is explained
- 1.5 Role of national aviation regulatory bodies and enterprise organisational structures is explained
- 1.6 Specific state/territory and enterprise regulations relating to dispatch of aircraft are applied to flight dispatch activities
- 1.7 International civil aviation convention provisions are identified

#### 2 Utilise aviation terminology

- 2.1 Standard aeronautical terminology and phraseology is used to describe aviation operations
- 2.2 Flight direction is correctly explained using accepted units of measure and direction
- 2.3 Flight speed, distance and velocity terms are correctly explained and applied to flight dispatch activities
- 2.4 Aviation units of measure are utilised during flight dispatch operations

#### 3 Apply knowledge of basic aircraft power plants and systems

- 3.1 Aircraft propulsion system types, principles and operational differences are followed
- 3.2 Propeller driven aircraft types and principles of operation are explained

- |          |                                                                         |                                                                                                                                             |
|----------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
|          | <b>3.3</b>                                                              | Jet-propelled aircraft types and principles of operation are explained                                                                      |
|          | <b>3.4</b>                                                              | Operator knowledge of aviation fuels and oils usage is applied to flight planning tasks                                                     |
|          | <b>3.5</b>                                                              | Aircraft flight instruments are identified and their purpose explained                                                                      |
| <b>4</b> | <b>Apply basic aerodynamic theory</b>                                   |                                                                                                                                             |
|          | <b>4.1</b>                                                              | Basic aircraft operational states are explained in terms of kinetic and potential energy terms                                              |
|          | <b>4.2</b>                                                              | Standard aerodynamic terminology and phraseology is used to describe flight operations                                                      |
|          | <b>4.3</b>                                                              | Wake turbulence and associated aircraft operational effects are applied to flight dispatch activities                                       |
|          | <b>4.4</b>                                                              | Thrust stream turbulence (jet blast/rotor downwash) hazards to flight operations are identified                                             |
| <b>5</b> | <b>Apply knowledge of aviation navigation charts</b>                    |                                                                                                                                             |
|          | <b>5.1</b>                                                              | Visual chart types and major chart features displayed are explained                                                                         |
|          | <b>5.2</b>                                                              | Controlled airspace (CTA), prohibited, restricted and danger (PRD) areas are identified on appropriate visual charts                        |
|          | <b>5.3</b>                                                              | Appropriate PRD data is determined and extracted for use in operational flight planning tasks                                               |
|          | <b>5.4</b>                                                              | Runway information and operational limitations data is extracted from en route supplements for use in operational flight planning tasks     |
| <b>6</b> | <b>Apply knowledge of aircraft operations, performance and planning</b> |                                                                                                                                             |
|          | <b>6.1</b>                                                              | Aircraft airworthiness requirements and certification documentation are identified and correctly compiled                                   |
|          | <b>6.2</b>                                                              | Aircraft take-off and landing performance data is extracted from authorised sources and correctly used during aircraft performance planning |
|          | <b>6.3</b>                                                              | Aircraft weight and balance planning factors are correctly outlined and used during aircraft loading calculations                           |

## **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 AVIY0010 Apply aeronautical knowledge and civil air law to flight dispatch operations.

## **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 AVIY0042 Apply aeronautical knowledge and civil air law to flight dispatch operations**

## **Modification History**

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## **Performance Evidence**

- applying aeronautical knowledge during flight planning and flight dispatch activities
- applying civil air law during flight planning and flight dispatch activities
- applying knowledge of aircraft operations, performance and planning
- applying knowledge of aviation navigation charts
- applying knowledge of basic aircraft power plants and systems
- identifying international and national aviation organisations and applicable legislation affecting aircraft operation
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- utilising aviation terminology.

## **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:

- aeroplane power plants and aircraft systems, including:
  - air-conditioning and cabin pressurisation systems
  - automatic flight control systems
  - auxiliary power units
  - barometric flight instruments
  - communications systems
  - constant speed units
  - direct reading magnetic compass
  - electrical and ignition systems
  - engine cooling devices
  - engine systems
  - fire protection, detection and warning systems
  - fuel system components
  - gyroscopic flight instruments
  - hydraulic system components

- ice and rain protection
- lubrication system
- propellers
- retractable undercarriage system components
- stall warning devices
- aerodynamic theory, including:
  - terminology
  - Bernoulli's theorem and Coanda theory
  - power requirements
  - manoeuvres
  - performance considerations
  - changes in angle of attack
  - aerodynamic design features
  - lift and drag
  - flight controls and effects
  - climb performance factors
  - descent performance factors
  - turning performance factors
  - stalling, spinning and spiral dives
  - stability and control
  - taxi, take-off and landing
  - effects of structural damage on aircraft performance
- aircraft minimum equipment list (MEL), including:
  - general description
  - use of the MEL by flight dispatchers
  - use of the MEL by maintenance
  - use of the MEL by flight crew
- aircraft operations, performance and planning
- aviation navigation charts
- aviation terminology
- basic aircraft power plants and systems
- domestic civil aviation laws, acts and statutes
- domestic Civil Aviation Safety Regulations (CASRs), orders and instruments
- flight instruments
- relevant WHS and environmental procedures and regulations
- international civil aviation conventions, including:
  - historical significance
  - contracting states
  - sovereignty of airspace
  - rights of commercial flight over contracting states/territories

- issues concerning travelling public
- issues concerning the state/territory
- issues concerning the aircraft manufacturer
- issues concerning the operator
- issues concerning flight crew members
- issues concerning dispatchers
- international civil aviation laws, acts and statutes
- International Civil Aviation Organization (ICAO), including:
  - historical significance
  - annexes to the convention and application
  - publications, Procedures for Air Navigation Services (PANS) and technical publications
  - air navigation plans
  - state/territory responsibility of air worthiness
  - operator responsibility for maintenance of aircraft air worthiness
  - operator responsibility for loading data
- operations and performance, including:
  - take-off and landing performance
  - aeroplane limitations
- operators authority to engage in types of specific air transport operations:
  - categories
  - routes and frequency
  - area of operation
  - terminal, alternate and emergency airports
  - aircraft types, navigation and communication systems
- operations manual (OM), including:
  - authority of the OM
  - format
- relevant sections of CASRs and Civil Aviation Orders pertaining to flight dispatcher functions
- regulatory provisions of a flight manual, including:
  - flight manual authority
  - content, structure and approval
- state/territory-based requirements, including:
  - managerial and technical competencies
  - qualifications, training and competency
  - financial resources
  - equipment
  - maintenance
  - flight manuals
  - OMs

- audit requirements
- operational control
- duty and flight time limitations.

## 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 materials, tools, equipment and personal protective equipment (PPE) currently used in industry.

## Links

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