Title	**Demonstrate knowledge of safety management systems for an aviation environment**		
Level	**5**	**Credits**	**8**

Purpose	People credited with this unit standard are, for an aviation environment, able to demonstrate knowledge of: the basics of safety management; risk management procedures; hazard and incident reporting; the purpose and method for conducting safety investigations; safety performance monitoring; and the principles and methods for conducting safety audits.

Classification	Aviation > Aircraft Operation

Available grade	Achieved

Guidance Information

1 Resources may include but are not limited to:
International Civil Aviation Organization. 2018. Doc 9859, *Safety Management Manual*. 4th ed. ICAO, available at https://store.icao.int/en/safety-management-manual-doc-9859;
Civil Aviation Safety Authority. 2014. *Safety management system resource kit*. 2nd ed. CASA available at https://www.casa.gov.au/search-centre/safety-kits/resource-kit-develop-your-safety-management-system.

2 Evidence presented for assessment against this unit standard must be in accordance with industry texts and standards.

3 All references to the CAA refer specifically to the Civil Aviation Authority of New Zealand.

4 Industry standards and recommended practices are those set in place by the CAA.

5 Industry texts may include but are not limited to – ICAO Safety Management Manual, CAA Rule Part 100 and other Rules, CAA Advisory Circulars, operator expositions.

6 For the purpose of this unit standard, *knowledge* refers to the knowledge, understanding, and application of the subject matter.

7 The term *safety health* is an indication of an organisation's resistance to unexpected conditions or acts by individuals. It reflects the systemic measures put in place by the organisation to defend against the unknown and is an indication of the organisation's ability to adapt to the unknown, effectively reflecting the safety culture of the organisation.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the basics of safety management within an aviation environment.

Performance criteria

1.1 The philosophy of safety management is described.

Range may include but is not limited to – core business function, systems approach, system safety.

1.2 Factors affecting system safety are described.

Range may include but is not limited to – active failures, latent conditions; equipment faults; human error; system design.

1.3 Safety management concepts are described.

Range may include but is not limited to – cornerstones of safety management, strategies for safety management, key safety management activities, safety management process.

Outcome 2

Demonstrate knowledge of risk management procedures.

Performance criteria

2.1 The purpose of hazard identification is described.

2.2 Principles of risk assessment are described.

Range problem definition, probability of adverse consequences, severity of the consequences of occurrence, risk acceptability.

2.3 Principles of risk mitigation are described.

Range defence analysis, risk mitigation strategies, brainstorming, evaluating risk mitigation options.

2.4 Risk communication procedures are described.

Outcome 3

Demonstrate knowledge of hazard and incident reporting for an aviation environment.

Performance criteria

3.1 Types of incident reporting systems used within aviation environments are described.

Range mandatory, voluntary, confidential.

3.2 Principles for effective incident reporting systems are described.

Range may include but is not limited to – trust, non-punitive, inclusive reporting base, independence, ease of reporting, acknowledgement, promotion.

3.3 Incident reporting systems are described.

Range international – ICAO Accident/Incident Data Reporting (ADREP), European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS);
state voluntary – Aviation Safety Reporting System (ASRS), Confidential Human Factors Incident Reporting Programme (CHIRP);
company reporting systems.

Outcome 4

Demonstrate knowledge of the purpose and method for conducting safety investigations within an aviation environment.

Performance criteria

4.1 Types of safety investigations are described.

Range state investigations, in-house investigations.

4.2 The scope of safety investigations is described.

4.3 Sources of information relevant to a safety investigation are described.

Range may include but is not limited to – physical examination, documentation, recordings (flight data, Air Traffic Service radar and voice), interviews, direct observations, simulations, specialist advice.

4.4 Investigation methodology is described.

Range may include but is not limited to – Integrated Safety Investigation Methodology (ISIM).

4.5 Methods of conveying safety recommendations are described.

Outcome 5

Demonstrate knowledge of safety performance monitoring.

Performance criteria

5.1 The requirements for feedback on safety performance to complete the safety management cycle are described.

5.2 Systems to identify the safety health of an organisation are described.

5.3 Safety oversight monitoring is described.

Range international level, state level, organisational level, inspections, surveys, quality assurance, safety audits.

Outcome 6

Demonstrate knowledge of the principles and methods for conducting safety audits.

Performance criteria

6.1 The purpose of safety audits is described.

6.2 The make-up and roles of the safety audit team are described.

6.3 Planning and preparation requirements are described.

Range pre-audit activity may include but is not limited to – feasibility of proposed schedule, information required, criteria, production of checklists;
audit plan may include but is not limited to – purpose, area to be audited, planned activities, schedule.

6.4 Conduct of the safety audit is described.

Range includes but is not limited to – procedures, interviews, observations, reports.

6.5 Follow-up action on completion of a safety audit is described.

Planned review date	31 December 2028

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 June 2010	31 December 2018
Review	2	20 October 2016	31 December 2027
Review	3	28 September 2023	N/A

Consent and Moderation Requirements (CMR) reference	0028

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Ringa Hora Services Workforce Development Council qualifications@ringahora.nz if you wish to suggest changes to the content of this unit standard.