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

Explanatory notes

1 Resources may include but are not limited to – International Civil Aviation Organization. 2013. Doc 9859, *Safety Management Manual*. 3rd ed. ICAO, available at http://www.icao.int/icao/en/download.htm.

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

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

4 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.

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

6 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 evidence requirements

Outcome 1

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

Evidence requirements

1.1 The philosophy of safety management is described in accordance with industry texts and standards.

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

1.2 Factors affecting system safety are described in accordance with industry texts and standards.

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 in accordance with industry texts and standards.

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.

Evidence requirements

2.1 The purpose of hazard identification is described in accordance with industry texts and standards.

2.2 Principles of risk assessment are described in accordance with industry texts and standards.

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

2.3 Principles of risk mitigation are described in accordance with industry texts and standards.

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

2.4 Risk communication procedures are described in accordance with industry texts and standards.

Outcome 3

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

Evidence requirements

3.1 Types of incident reporting systems used within aviation environments are described in accordance with industry texts and standards.

Range mandatory, voluntary, confidential.

3.2 Principles for effective incident reporting systems are described in accordance with industry texts and standards.

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 in accordance with industry texts and standards.

Range international – ICAO Accident/Incident Data Reporting (ADREP), European Co-ordination Centre for Aviation 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.

Evidence requirements

4.1 Types of safety investigations are described in accordance with industry texts and standards.

Range state investigations, in-house investigations.

4.2 The scope of safety investigations is described in accordance with industry texts and standards.

4.3 Sources of information relevant to a safety investigation are described in accordance with industry texts and standards.

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

4.4 Investigation methodology is described in accordance with industry texts and standards.

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

4.5 Methods of conveying safety recommendations are described in accordance with industry texts and standards.

Outcome 5

Demonstrate knowledge of safety performance monitoring.

Evidence requirements

5.1 The requirements for feedback on safety performance to complete the safety management cycle are described in accordance with industry texts and standards.

5.2 Systems to identify the safety health of an organisation are described in accordance with industry texts and standards.

5.3 Safety oversight monitoring is described in accordance with industry texts and standards.

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.

Evidence requirements

6.1 The purpose of safety audits is described in accordance with industry texts and standards.

6.2 The make-up and roles of the safety audit team are described in accordance with industry texts and standards.

6.3 Planning and preparation requirements are described in accordance with industry texts and standards.

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 in accordance with industry texts and standards.

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

6.5 Follow-up action on completion of a safety audit is described in accordance with industry texts and standards.

Planned review date	31 December 2021

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	N/A

Consent and Moderation Requirements (CMR) reference	0169

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

Please note
Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact ServiceIQ qualifications@serviceiq.org.nz if you wish to suggest changes to the content of this unit standard.