

# Air Traffic Management Safety Investigation and Analysis

## Course Outline

This advanced course provides you with guidance on best practices in systemic safety investigation and analysis techniques in an air traffic management (ATM) operational environment. It covers relevant human factors theories and practices and examines key issues relating to safety investigation and analysis in the ATM environment. This course is developed following ICAO documents. This course is offered as a compulsory module under the Diploma in Aviation Safety Management, and an elective module under the Diploma in Civil Aviation Management.

## What You Will Learn

Upon completion of this course, you will be able to:

- Apply witness interviewing skills and techniques
- Identify key issues in safety investigation and analysis in an ATM environment
- Understand best practices in systemic safety investigation and analysis techniques in ATM

## Who Should Attend

This course is beneficial to ATM managers, supervisors, safety managers, investigators, trainers, and inspectors from civil aviation administrations, air navigation service providers, and military air traffic service providers who are or will be involved in ATM safety management and investigation.

## Language

English

## What Is Covered

- Introduction to ATM safety investigation and analysis

- ICAO Annex 13 (Aircraft Accident and Incident Investigation)
- Analysis techniques
- Managing human error and just culture
- Organizational accidents
- The SHEL model (Software, Hardware, Environment, Liveware)
- The Reason model and Systemic Occurrence Analysis Methods (SOAM)
- Human performance limitations
- Stress and fatigue
- Threat and error management
- Information processing
- Situational awareness
- Decision-making
- Witness interviewing techniques
- Theory and practice
- SOAM
- Human Involvement
- Contextual conditions
- Organizational and system factors
- Barriers to accident prevention
- Investigative issues and reporting requirements
- Investigator qualities
- Human bias
- Data organization tools
- Traps and tips for investigators
- Effective findings and recommendations
- Interviewing skills practical sessions
- SOAM application
- Case studies
- Practice and consolidation of safety investigation and analysis techniques
- Syndicate work to further refine safety investigation and analysis techniques

For program inquiries, please email [saa@caas.gov.sg](mailto:saa@caas.gov.sg).

Find out more about SAA courses at <https://saa.caas.gov.sg>.

