

SUMMARY

This course contains a complete review of Crew Resource Management (CRM) concepts required for regulatory compliance.

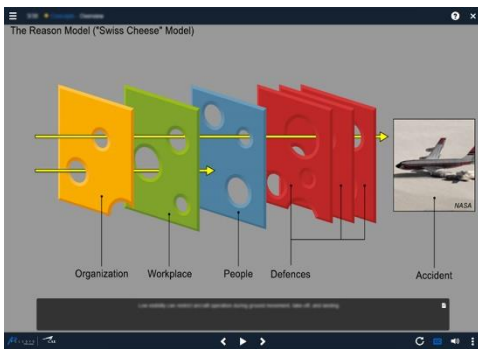
The course encompasses a vast array of CRM concepts such as decision processes, Human Factors, Threat and Error Management, Black Swan Events, Reliability and Resilience, Startle and Surprise, and several Case Studies.

TARGET POPULATION

The Pelesys Crew Resource Management (CRM) course is designed for Flight Crew and Cabin Crew requiring initial or recurrent training.

REGULATORY COMPLIANCE

- ICAO / EASA / FAA / Transport Canada
- Maintenance compliance with IOSA standards



Versions Available:
Standard
Johari Window (optional
chapter)

Course Length:
2 hr 30 min
2 hr 40 min

LESSON 01: History and Evolution

In this lesson we will cover the basic the basic concepts of Crew Resource Management (CRM), its history and the evolution of CRM training programs.

- CRM history
- CRM evolution
- Current CRM components

LESSON 02: Human Factors – Reliability (Human Performance)

In this lesson we cover Human Reliability including:

- Definitions
- Resilience vs. Reliability
- Dependability
- Assessing Human Reliability
- Scientific Tool and Processes such as PRA, ASEP, SHEAN, HEART,
- HFACS

LESSON 03: Human Factors - Science

In this lesson we cover methods used to study Human Factors, including:

- Definition of Human Factors
- Nature of Error
- Reason and SHEL(L)

LESSON 04: Human Factors - Automation

In this lesson we cover aircraft automation and its relationship to Human Factors, including:

- Automation design philosophies
- Difference in automation design and function
- Automation documentation
- Autopilot systems limitations
- Human limitations in an automated system affecting:
 - Skill degradation
 - Situational awareness including:
 - Mode errors
 - Mode awareness
 - Automation surprise

LESSON 05: Human Factors – Health 1

In this lesson we cover the role health plays on human factors, including:

- Fatigue
- Mental Health
- Substance use and abuse
- System-induced incapacitation

LESSON 06: Human Factors – Health 2

In this lesson we continue to cover human health factors, including:

- Stress
- System-induced incapacitation

LESSON 07: Human Factors – Health 3

In this lesson we continue to cover the role health plays on human factors, related to:

- High-altitude flying

LESSON 08: Threat and Error Management

In this lesson we cover threat and error management, including:

- Management of threats
- Management of errors
- The Threat and Error Management (TEM) Model

LESSON 09: Leadership

In this lesson we cover leadership and followership, including:

- Types of leadership
- Flight deck authority
- Leadership challenges on the modern flight deck
- The role of followership

LESSON 10: Decision and Judgment

In this lesson we cover decision and judgment, including:

- Definitions
- Judgment
- Decision-making
- Decision taxonomy
- Decision Bias

LESSON 11: Startle and Surprise

In this lesson we cover the effects and differences of startle and surprise, including:

- Startle effects in the brain
- Effects of startle response
- Surprise management
- ROC method (Relax, Observe, Confirm) of handling surprise
- Surprise and startle training

LESSON 12: Black Swan and Resilience

In this lesson we cover the role resilience plays in Black Swan events, including:

- The definition of Black Swan Event
- Developing resilience
- Personal discipline
- Competency-based training and its role in training for resilience
- Anticipating
- Flight crew risk assessment techniques

LESSON 13: Case Studies

In this lesson we cover some Case Studies involving CRM related incidents and accidents, including:

- US Airways Flight 1549
- Comair Flight 5191
- United Airlines Flight 232
- Air France Flight 447
- TransAsia Flight 235

LESSON 14: Johari Window (Optional Module)

In this lesson we cover the application and main dynamics of the Johari Window, including:

- Johari Window
- Areas of information
- Region and cultural dynamics
- Power gradient

LEARNING TIME AND RUN TIME

This course has a learning time of: (run time plus additional time per page to account for understanding learning points)

- 2 hr 30 min (Standard) / 2 hr 40 min (Johari)

This course has a run time of: (the base time for each page to be completed)

- 1 hr 25 min (Standard) / 1 hr 31 min (Johari)

Exam Generation System (EGS) Banked Questions

The total amount of banked questions for this course is:

Lesson Title	Standard Questions
History, Principles and Objectives	1
Human Factors - Reliability (Human Performance)	8
Human Factors - Science	11
Human Factors - Automation	8
Human Factors - Health 1	6
Human Factors - Health 2	6
Human Factors - Health 3	10
Threat and Error Management	10
Leadership and Followership	10
Decision and Judgment	10
Startle and Surprise	10
Black Swan	10
Johari Window (optional)	2
	102

REFERENCE MATERIAL

This course provides the core elements of the CRM training, ground school component outlined in the:

ICAO

- ICAO DOC 9683 – Human Factors Training Manual CH 1.4.15P 13689-2 - Crew Resource Management (CRM)
- GM4 ORO.CC.115(e) Crew resource management (CRM) training
- AMC1 ORO.CC.115(e) Conduct of training courses and associated checking

FAA

- FAA Advisory Circular 120-51E
- FAA Title 14 CFR Ch. III 460.15 Human Factors
- FAA Advisory Circular AC No 120-51E
- United Kingdom CAA CAP 720

TC

- Transport Canada Advisory Circular AC 700-042

This course material may be supplemented when used in conjunction with the Pelesys Advanced Leadership course.

The operator remains responsible for obtaining approval from the regulatory authority.

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