

## 113 年度 IATA 疲勞風險管理訓練 (FRMS) 計畫書

一、目標：依據 IATA-ICAO-IFALPA Fatigue Management Guide for Airline Operators, 2nd Edition, 2015; ICAO Annex 6, Parts 1 and II; ICAO Annex 19; ICAO Doc 9966 Manual for the Oversight of Fatigue Management Approaches; and ICAO Doc 9859 Safety Management Manual (SMM)授課，了解當前業界疲勞管理相關規定，降低疲勞對飛安的影響。

二、時間及地點：

(一) 時間：民國 113 年 5 月 22 日至 24 日，為期 3 天。

(二) 地點：台北 IATA 訓練中心。

三、對象及人數：

會員單位推薦人選 (薦選人員資格請詳閱附錄)，本會由其中選派適當人員參訓 (最多五員)。

四、執行：

(一) 飛安基金會

1. 負責全案作業執行。
2. 提供學費。

(二) 送訓單位

1. 推薦適當人選。
2. 提供訓練必要之支援。

(三) 受訓學員

1. 獲得單位主管簽署同意受訓並按計畫參訓。
2. 撰寫心得並於本會報告。完訓者擔任本會儲備講師。

五、工作進度管制表：

完成日期	工作項目
3 月 21 日	「疲勞風險管理訓練 (FRMS) 計畫書」核定後頒佈執行

3 月 22 日	開始受理報名。
4 月 19 日	報名截止。
4 月 26 日	完成受訓人員審查，並通知參訓單位及個人。
5 月 8 日	線上行前說明會。
5 月 22 日－24 日	訓期。
1 月 8 日	結訓報告。

六、一般規定：

- (一) 本課程學費由本會提供。
- (二) 報名費新臺幣 5,000 元須於收到本會確認函一週內繳交。
- (三) IATA 訓練中心授證。
- (四) 若學員於訓期開始前兩週內取消報名因而產生之任何處理費用皆由該學員自行負擔。
- (五) 承辦人及連絡電話：馬以茜 02-25455801

七、經費：由飛安基金會相關經費項下支出。

附錄：Fatigue Risk Management Systems (FRMS)  
課程內容說明。



# Fatigue Risk Management Systems (FRMS)

 Classroom and In-Company Course (3 days/24 hours)

Benefit from the latest guidance on aviation fatigue management from the IATA Fatigue Risk Management Systems (FRMS) Task Force. Learn how to implement and maintain the fatigue management approach which applies to your company. The course is based on the: IATA-ICAO-IFALPA Fatigue Management Guide for Airline Operators, 2nd Edition, 2015; ICAO Annex 6, Parts 1 and II; ICAO Annex 19; ICAO Doc 9966 Manual for the Oversight of Fatigue Management Approaches; and ICAO Doc 9859 Safety Management Manual (SMM).

## Objectives

Upon completion of this course you will be able to:

- Be up-to-date on the latest information on fatigue, and how to mitigate the effect of fatigue on aviation safety
- Recognize current industry requirements and documentation relating to fatigue management
- Understand the implications of the two different approaches to fatigue management and recognize which applies to your organization
- Implement fatigue management and meet regulatory requirements

## Target audience

- Air Crew
- Airline Operations Managers
- Safety Managers from Airlines and Civil Aviation Authorities

## Key topics

- The relationship between fatigue and safety in aviation
- Lessons from science: sleep science; circadian rhythms; shift work; jet lag; use of bio-mathematical models; measuring crew member fatigue
- Comparison of an FRMS with the traditional methods of air crew fatigue risk management
- The benefits of introducing an FRMS
- How to implement an FRMS
- FRMS policy and documentation including numerous examples of FRMS policy statements
- The steps in Fatigue Risk Management processes
- FRMS safety assurance processes
- FRMS promotion including Training programs
- FRMS Implementation
- How to build the culture of trust for a collaborative approach to FRMS implementation
- Measuring crew member fatigue
- Investigating fatigue in reports, incidents, accidents
- EASA regulations and applications

## Activities

- Case Studies and examples

## Certificate awarded

An IATA Certificate is awarded upon successful completion of the course and final examination.

You can also apply this course towards an IATA Diploma in Safety Management in Civil Aviation.



# Fatigue Risk Management Systems (FRMS)



## Course schedule

### Day 1

- **Introduction to Fatigue Risk Management**
  - How fatigue affects human performance
  - Fatigue risks in aviation and their mitigation
  - ICAO Annexes, documents and SARPs
- **Sleep science**
  - REM and non-REM sleep
  - Factors affecting sleep, sleep quality
- **Sleep loss**
  - Sleep requirements, loss, disorders, tips
  - Effect of continued hours of wakefulness
- **Circadian rhythms**
  - Effects on the human body and performance
  - Window of Circadian Low (WOCL)
  - Individual variability, high risk patterns, jet lag
- **FRMS processes**
  - Operational knowledge and experience
  - Stakeholder responsibilities
  - The two different approaches to fatigue management: prescriptive; and FRMS
  - **Prescriptive approach:** the State takes responsibility for establishing prescriptive limitations and requirements for fatigue management; oversees Service Providers to ensure they are managing their fatigue risk to an acceptable level using existing SMS processes

### Day 3

- **Implementing FRMS**
  - How to implement an FRMS in phases
- **Investigating fatigue in reports, incidents and accidents**
  - How to conduct an investigation, content
  - Fatigue indicators
  - Sources of evidence
  - Fatigue factor analysis

### Day 2

- **FRMS processes (continued)**
  - **FRMS approach** in which common elements between an FRMS and an SMS are integrated
  - FRMS components and processes: safety policy and objectives; risk management; documentation; safety assurance, promotion
  - Operational activities of an FRMS
  - Forming a Fatigue Safety Action Group (FSAG)
  - Comparison of crew fatigue on short haul, night cargo/ freighter, long haul operations
  - Collecting data for the FRMS
  - Identifying fatigue hazards: prior experience; evidence-based scheduling; fatigue software
  - The proactive hazard identification process
  - How to measure sleep, crew member fatigue using subjective and objective measures
  - Risk assessment process, severity classification, risk mitigation, operational controls and mitigations
  - FRMS safety assurance process
  - Monitoring FRMS safety performance
  - Hazard reporting and investigation
  - Audits and surveys
  - FRMS safety performance indicators, targets
  - FRMS promotion process, training, Communications Plan essentials

### Day 3 (continued)

- **EASA regulations and applications**
  - Subpart Q, changes of February 2016
  - How to assess what is needed in your organization to meet requirements
  - Minimum FRM requirements
  - Controlled rest
  - Review in order to meet requirements
  - Case study

This course can be customized for your company and delivered at the location of your choice.  
Request in-company training

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Contact us for more information: [www.iata.org/training-contact](http://www.iata.org/training-contact)  
Register: [www.iata.org/training/courses/pages/tcvt33.aspx](http://www.iata.org/training/courses/pages/tcvt33.aspx)