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Human Factor in Aviation Safety

Overview

Human error plays a significant role in contributing to many mishaps. Approximately 70%-90% of accidents under complex and high technology system are caused by human error such as Chernobyl, King Cross undergrounds fire, Challenger accidents, Tenerife runway collision, and many more. Understanding and preventing human error can improve system safety and reduce safety risk caused by human error. The training course provide you with a concept of human factor and human applied for aviation setting, human error reduction practices combine with a comprehensive set of tools and techniques required to prevent and reduce human errors that occurred in aviation environment are included in this course. The interactive training workshop is intentionally designed for those who responsible for or concerned with the task-related activities that aims to prevent operational errors, increase safety level, and reduce risks in aviation system.


Objectives

The 2 days interactive training workshop will enable you to learn how to

- Understand a key concept of human error that occurred in aviation systems
- Identify the contributing factors to human error
- Build an effective defence against errors
- Utilize a comprehensive set of tools and techniques required to prevent and reduce human error
- Apply human factor concept in aviation environment
- Understand the human performance and limitations applied for aviation systems
- Develop a structured approach to investigate human error in aviation systems
- Develop a proactive approach to manage human error in aviation

Course Outlines

1. Human Factor in Aviation Systems
2. Human Performance and Limitations
 - Human Information Processing
 - Sensory/Vision/Hearing
 - Perception
 - Attention
 - Memory
 - Decision Making
 - Situation Awareness
 - Workload
 - Stress
 - Fatigue
3. The SHELL Model
 - Liveware : Physical Factors, Physiological Factors, Psychological Factors, Psychosocial Factors
 - Liveware-Liveware
 - Liveware-Software
 - Liveware-Hardware
 - Liveware-Environment
4. Building and inspecting safety defense against error
5. List key contributing factors to human error
 - Personnel Factors/fitness for duty/health
 - Teamwork
 - Information/Documentation/Manual
 - Communication
 - Supervision

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Human Factor in Aviation Safety

- Job and Task
 - Tools and Equipments
 - Working environment
6. Human Error in Aviation Systems
 - Human error contribution to many aircraft accidents (safety cases)
 - Types of Human Error
 7. Safety Culture and Organizational Factors in Aviation
 8. Human factor approach to accident analysis
 - Reason model
 - HFACS model
 9. A system approach to investigate human error
 10. A proactive approach for managing human error
 11. Human error reduction techniques
 12. Hand-on exercises
 13. Practical Case Study

Who should attend

Flight safety and safety officer, flight engineer, maintenance supervisor/manager, maintenance engineer, investigator, and risk officer

Duration

2 days

Key Points about This Course

- You will learn how to understand the application of human factor and human error concept
- You will learn how to understand the human capability and limitations and apply them to prevent human error and accidents/incidents
- You will learn how to understand and apply the application of SHELL model
- You will learn how to inspect and check your safety defence
- You will learn how to identify and classify key contributing factors to human error
- You will learn how to understand the human factor approach to accident analysis in aviation
- You will learn how to set up a structured investigation process to human error
- You will learn how to develop a systematic and proactive system to manage human error in aviation

Learning Outcomes from this course

- You can understand and apply human factor and human error concept approach to aviation system
- You can determine key contributing factors that cause human error
- You can understand the human performance and limitations applied for aviation environment
- You can develop a structured approach to investigate human error in aviation
- You can apply and utilize a comprehensive set of tools and techniques required to prevent and reduce human error
- You can develop a proactive approach to manage human error in aviation