Safety Training (including HF) Syllabus – Integrated Combined Training

Scope: This syllabus collaborates EASA regulations Part 145.A.30(e), CAMO.A.305(g) & AMC/GM, FAA AC 120-72A, ICAO Doc9824 AN/450, ICAO Annex 19, ICAO Doc 9859 HF Elements & CAA UK Regulation (EU) No. 1321/2014 Part 145.A.30(e), CAMO.A.305(g) & AMC/GM, and ICAO Doc9824 AN/450 - Human Factors Guidelines for Aircraft Maintenance Manual along with experience and best practices to provide essential Human Factors (HF) training for all levels of maintenance and support organizations. It emphasizes the interaction between HF principles and the organization's specific safety reporting and SMS systems aligning the learner with a rounded appreciation of incidents, impacts, considerations, and how SMS, Risk and Human Factors combine in each day and how we all play a part in the management of safety.

Topics Covered:

Introduction to Safety Management and Human Factors

- Goals and Foundations of Safety Management Systems (SMS)
- The Importance of Human Factors in Aviation Safety
- Safety statistics and incident analysis (with specific examples relevant to your organization and the aviation industry)
- Introduction to Safety Risk Management:
- Hazard identification (aligned with your organization's specific hazard identification process)
- Safety risk assessment and mitigation techniques
- Measuring and monitoring the effectiveness of SMS

Human Error, Performance, and Limitations

- Error models and classification (skill-based, decision-based, perceptual errors, violations)
- Types of errors in maintenance tasks, potential consequences, and how to avoid them
- Understanding human reliability and strategies for error prevention
- Human performance capabilities:
- Vision (limitations, visual illusions, enhancing visual inspections)
- Hearing (limitations, noise hazards, protecting hearing)
- Information processing (attention, perception, situational awareness, memory, decision-making)
- Limitations:
- Health, fitness, and how they impact work performance
- Substance abuse (alcohol, medication, drugs) and their effects on safety
- Stressors (sources, signs, and coping mechanisms)
- Fatigue (causes, effects, shift work considerations, fatigue management strategies)
- Workload (managing workload, task prioritization)
- Physical work limitations (repetitive tasks, awkward postures, preventing injuries, and mitigating the risk of complacency)

Organizational and Environmental Factors

- Safety Culture:
- Just culture (principles, reporting, trust)
- Organizational commitment to safety and adaptability
- Creating a positive and proactive safety reporting culture
- Environmental Factors:
- The impact of peer pressure, time pressure, and workload
- Managing distractions and interruptions
- Environmental stressors (noise, fumes, lighting, climate, temperature, motion, vibration) and their impact on performance
- Procedures and Documentation:
- Importance of accurate, up-to-date technical documentation
- Potential for mismatch between procedures and actual practice
- Critical maintenance tasks and error-trapping methods (independent inspections, checklists, etc.)
- Communication:
- Effective communication principles
- Shift handovers and information dissemination best practices
- Overcoming cultural differences in communication
- Teamwork and Leadership:
- Roles, responsibilities, and effective teamwork for safety
- Positive leadership and supervision styles
- Decision-making within teams (situational awareness, assertiveness, shared decision-making)

Organizational Safety Program – note this is a rounded knowledge of the SMS and options typically in use, this is combined with your specific system through your manuals or read and signs as examples to complete the learner experience.

- Safety policy, objectives, and just culture principles
- Error and hazard reporting mechanisms
- Investigation process and error analysis techniques
- Implementing corrective actions
- Feedback mechanisms and safety promotion

Knowledge Checks: Quizzes or short written assessments after each module

This course is intended to be a learning course with **8 -10 learning hours**.

This course covers only **theoretical knowledge** and while picture and video might be used as required it shall not be intended for practical assessment or instruction.

Online Questions are based on modular learning and shall be presented following completion of a module – it shall be possible to progress modules without completing the associated questions although no certificate or course completion will be considered without all module questions accomplished to a minimum **pass rate of 75%**.

Queries and concerns on examination material shall only be addressed by examination manager.

Combined Syllabus is defined in and taken from following regulation and guidance:

- EASA regulations Part 145.A.30(e), CAMO.A.305(g) & AMC/GM,
- FAA AC 120-72A,
- ICAO Doc9824 AN/450, ICAO Annex 19,
- ICAO Doc 9859 HF Elements &
- CAA UK Regulation (EU) No. 1321/2014 Part 145.A.30(e) AMC/GM & UK CAP 716; CAMO.A.305(g)