9202
HUMAN FACTORS (12A)

40S/40E/40M

A Pilot Ground School Course

9202 Human Factors (12A)
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Course Description

This course focuses on human factors in aviation, including the pilot and the operating environment, aviation psychology, pilot decision making, and aviation physiology.

Goal 1: Describe and apply appropriate **health** and **safety** practices.

> **GLO 1.1:** Describe and apply appropriate **health** and **safety** practices.

SLO 12A.1.1.1   Demonstrate an understanding of safe practices.

SLO 12A.1.1.2   Adhere to safe practices.

Goal 2: Demonstrate an understanding of **human factors** in aviation.

> **GLO 2.1:** Demonstrate an understanding of **human factors** in aviation.

SLO 12A.2.1.1   Demonstrate an understanding of the physical human factors as they relate to flight safety.

SLO 12A.2.1.2   Demonstrate an understanding of aviation physiology as it relates to flight safety.

SLO 12A.2.1.3   Demonstrate an understanding of the pilot and the operating environment as they relate to flight safety.

SLO 12A.2.1.4   Demonstrate an understanding of aviation psychology as it relates to flight safety.

SLO 12A.2.1.5   Demonstrate an understanding of the pilot–equipment/materials relationship as it relates to flight safety.

SLO 12A.2.1.6   Demonstrate an understanding of interpersonal relations as they relate to flight safety.

Goal 3: Demonstrate the use and management of **materials, tools, and equipment**.

> **GLO 3.1:** Demonstrate the use and management of **materials, tools, and equipment**.

SLO 12A.3.1.1   Demonstrate the appropriate use and management of materials, tools, and equipment.

Goal 4: Demonstrate an understanding of **flight** and **aerodynamics**.

GLO 4.1: Demonstrate an understanding of **flight** and **aerodynamics**.

No applicable SLOs.

Goal 5: Demonstrate an understanding of **engines, airframes, systems,** and **instruments**.

GLO 5.1: Demonstrate an understanding of **engines, airframes, systems,** and **instruments**.

No applicable SLOs.

Goal 6: Demonstrate an understanding of **meteorology** and the atmosphere.

GLO 6.1: Demonstrate an understanding of **meteorology** and the atmosphere.

No applicable SLOs.

Goal 7: Demonstrate an understanding of **navigation, aerodromes,** and **airports**.

GLO 7.1: Demonstrate an understanding of **navigation.**

No applicable SLOs.

GLO 7.2: Demonstrate an understanding of **aerodromes** and **airports**.

No applicable SLOs.

Goal 8: Describe and apply transferable **cross-curricular** knowledge and skills (of literacy, numeracy, and the sciences) as they apply to aviation.

GLO 8.1: Describe and apply **literacy** knowledge and skills related to aviation.

SLO 12A.8.1.1   Demonstrate the ability to read, understand, and communicate using language, signs, symbols, and images.

GLO 8.2: Describe and apply **numeracy** knowledge and skills related to aviation.

SLO 12A.8.2.1 Demonstrate the ability to read, understand, and communicate numerically, as applied to human factors.

GLO 8.3: Describe and apply knowledge and skills from the **sciences** that relate to aviation.

SLO 12A.8.3.1 Demonstrate an understanding of scientific principles, including human anatomy and physiology, as they relate to human factors.

Goal 9: Demonstrate an understanding of the **ethical and legal standards** that pertain to aviation.

GLO 9.1: Demonstrate an understanding of the **ethical standards** that pertain to aviation.

SLO 12A.9.1.1 Demonstrate an understanding of the importance of treating others in an ethical manner.

GLO 9.2: Demonstrate an understanding of **air law**.

SLO 12A.9.2.1 Demonstrate an understanding of the relationship between human factors and air law.

SLO 12A.9.2.2 Analyze accident reports and identify those air law violations that might have contributed to the incident.

Goal 10: Demonstrate **employability skills**.

GLO 10.1: Demonstrate basic **employability skills**.

SLO 12A.10.1.1 Demonstrate regular and punctual attendance.

SLO 12A.10.1.2 Communicate respectfully and effectively with others.

SLO 12A.10.1.3 Take responsibility for own actions.

SLO 12A.10.1.4 Demonstrate adaptability, initiative, and effort.

SLO 12A.10.1.5 Demonstrate teamwork skills.

SLO 12A.10.1.6 Stay on task and use time effectively.

SLO 12A.10.1.7 Demonstrate the responsible use of wireless communication devices.

GLO 10.2: Demonstrate **critical thinking** skills.

SLO 12A.10.2.1 Read and analyze accident case study reports to determine how human factors might have contributed to the accident.

GLO 10.3: Demonstrate an understanding of **culture** in the workplace.

SLO 12A.10.3.1 Demonstrate an understanding of workplace culture.

SLO 12A.10.3.2 Analyze accident reports and identify those workplace cultural factors that might have contributed to the incident.

Goal 11: Demonstrate an understanding of **sustainability** as it pertains to aviation.

GLO 11.1: Demonstrate an understanding of the impact of the aviation industry on **human sustainability** and on the health and well-being of aviation workers and passengers.

SLO 12A.11.1.1 Demonstrate an understanding of those human factors that have long-lasting health implications for workers in the aviation industry.

GLO 11.2: Demonstrate an understanding of the aviation industry's **sustainability practices** and impact on the environment.

No applicable SLOs.

Goal 12: Demonstrate an understanding of the **scope** of, and **education and employment opportunities** in, the aviation industry.

GLO 12.1: Demonstrate an understanding of the **scope** of the aviation industry.

No applicable SLOs.

GLO 12.2: Demonstrate an understanding of **education and employment opportunities** in the aviation industry.

No applicable SLOs.

Goal 13: Demonstrate an understanding of the **evolution** of aviation, including its **technological progression and emerging trends**.

GLO 13.1: Demonstrate an understanding of the **evolution** of aviation, including its **technological progression and emerging trends**.

SLO 12A.13.1.1 Demonstrate an understanding of the evolution of human factors, including technological progression and emerging trends.