



9196

EXPLORATION OF AVIATION
(9)

15S/15E/15M

10S/10E/10M

A Pilot Ground School Course

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Course Description

This optional course can be taught as either a half- or a full-credit course. Students have the opportunity to explore the field of aviation, focusing on ground school training for pilots.

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

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

SLO 9.1.1.1 Demonstrate an understanding of safe practices.

SLO 9.1.1.2 Demonstrate adherence to safe practices.

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

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

No applicable SLOs.

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 9.3.1.1 Demonstrate the appropriate use and management of materials, tools, and equipment.

SLO 9.3.1.2 Demonstrate the ability to follow operating procedures when using simulators.

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

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

SLO 9.4.1.1 Demonstrate an awareness of aerodynamics and its relationship to flight.

SLO 9.4.1.2 Demonstrate an awareness of the theory of flight, including Bernoulli's principle.

SLO 9.4.1.3 Demonstrate an awareness of the four forces that act on an airplane: thrust, drag, weight, and lift.

SLO 9.4.1.4 Demonstrate an awareness of the following: wing design, lift, pressure differentials, angle of attack, centre of pressure, and stalls.

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

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

SLO 9.5.1.1 Demonstrate an awareness of engines.
SLO 9.5.1.2 Demonstrate an awareness of four-stroke internal combustion engines.
SLO 9.5.1.3 Demonstrate an awareness of airframes.
SLO 9.5.1.4 Demonstrate an awareness of fuel systems.
SLO 9.5.1.5 Demonstrate an awareness of controls and control surfaces.
SLO 9.5.1.6 Demonstrate an awareness of instruments.

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.

SLO 9.7.1.1 Demonstrate an awareness of maps and charts.
SLO 9.7.1.2 Demonstrate an awareness of map and chart symbols and scales.
SLO 9.7.1.3 Demonstrate an awareness of the calculations related to time, speed, distance, and fuel consumption.
SLO 9.7.1.4 Demonstrate an awareness of flight planning.
SLO 9.7.1.5 Demonstrate an awareness of flight logs.

GLO 7.2: Demonstrate an understanding of aerodromes and airports.

SLO 9.7.2.1 Demonstrate an awareness of aerodromes and airports.

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 9.8.1.1 Demonstrate an awareness of the vocabulary associated with aviation.

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

SLO 9.8.2.1 Demonstrate the ability to read, understand, and communicate numerically.

SLO 9.8.2.2 Apply numeracy skills and knowledge to aviation.

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

SLO 9.8.3.1 Demonstrate an awareness of the scientific knowledge and skills that relate to aviation.

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.

No applicable SLOs.

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

No applicable SLOs.

Goal 10: Demonstrate **employability skills**.

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

SLO 9.10.1.1 Demonstrate regular and punctual attendance.

SLO 9.10.1.2 Communicate respectfully and effectively with others.

SLO 9.10.1.3 Take responsibility for own actions.

SLO 9.10.1.4 Demonstrate adaptability, initiative, and effort.

SLO 9.10.1.5 Demonstrate teamwork skills.

SLO 9.10.1.6 Demonstrate the ability to stay on task and use time effectively.

SLO 9.10.1.7 Demonstrate the responsible use of wireless communication devices.

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

No applicable SLOs.

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

No applicable SLOs.

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 9.11.1.1 Demonstrate an awareness of the contributions that aviation has made to society.

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.

SLO 9.12.1.1 Demonstrate an awareness of the scope of the aviation industry locally, regionally, nationally, and internationally.

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

SLO 9.12.2.1 Demonstrate an awareness of education and employment opportunities in the aviation industry.

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 9.13.1.1 Demonstrate an understanding of the evolution of aviation.
