



9201

FLIGHT SIMULATION LAB
(11C)

30S/30E/30M

A Pilot Ground School Course

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Course Description

Students focus on following correct procedures while performing flight training exercises as they fly simulated aircraft. This provides them with the opportunity to incorporate the theory that they have previously learned. As part of their experience flying simulated aircraft, students learn required radio procedures.

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

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

SLO 11C.1.1.1 Demonstrate an understanding of safe practices.

SLO 11C.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.

SLO 11C.2.1.1 Demonstrate an understanding of flight safety procedures, including checklists.

SLO 11C.2.1.2 Demonstrate the ability to follow aircraft safety procedures, including the use of checklists.

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 11C.3.1.1 Demonstrate the appropriate use and management of materials, tools, and equipment.

SLO 11C.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 11C.4.1.1 Demonstrate an understanding of aerodynamics and its relationship to flight while flying a simulated aircraft.
- SLO 11C.4.1.2 Demonstrate an understanding of the theory of flight while flying a simulated aircraft.
- SLO 11C.4.1.3 Demonstrate an understanding of the four forces that act on an airplane (thrust, drag, weight, and lift), and the ability to manipulate those forces while flying a simulated aircraft.
- SLO 11C.4.1.4 Demonstrate an understanding of wing design, lift, pressure differentials, angle of attack, centre of pressure, and stalls, and demonstrate the ability to manipulate them while flying a simulated aircraft.
- SLO 11C.4.1.5 Demonstrate an understanding of the **relationships** among wing design, lift, pressure differentials, angle of attack, centre of pressure, and stalls, and demonstrate the ability to manipulate those relationships while flying a simulated aircraft.
- SLO 11C.4.1.6 Demonstrate the ability to recognize torque, slipstream, gyroscopic effect, and asymmetric thrust, and to take appropriate action.

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

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

- SLO 11C.5.1.1 Demonstrate the ability to use controls, control surfaces, and instruments to fly a simulated aircraft.

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 11C.7.1.1 Demonstrate the ability to correct in-flight navigational errors.
 - SLO 11C.7.1.2 Demonstrate the ability to locate one's position when lost.
 - SLO 11C.7.1.3 Demonstrate the ability to use on-board navigational tools.
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GLO 7.2: Demonstrate an understanding of **aerodromes and airports.**

- SLO 11C.7.2.1 Demonstrate an understanding of aerodromes and airports (including features such as location, symbols, numbering of runways, and identification codes), while flying simulated aircraft.
 - SLO 11C.7.2.2 Demonstrate the ability to follow appropriate operational procedures, including radio communication, between aircraft and aerodromes/airports while flying a simulated aircraft.
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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 11C.8.1.1 Demonstrate an understanding of the vocabulary associated with flying a simulated aircraft.
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GLO 8.2: Describe and apply **numeracy** knowledge and skills related to aviation.

- SLO 11C.8.2.1 Demonstrate the ability to read, understand, and communicate numerically, as it pertains to flight.
 - SLO 11C.8.2.2 Apply numeracy skills and knowledge to flight.
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GLO 8.3: Describe and apply knowledge and skills from the **sciences** that relate to aviation.

- SLO 11C.8.3.1 Demonstrate an awareness of the scientific knowledge and skills that relate to flight.

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 11C.9.1.1 Demonstrate airmanship while flying a simulated aircraft.

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

SLO 11C.9.2.1 Demonstrate adherence to air law while flying a simulated aircraft.

Goal 10: Demonstrate **employability skills**.

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

SLO 11C.10.1.1 Demonstrate regular and punctual attendance.

SLO 11C.10.1.2 Communicate respectfully and effectively with others.

SLO 11C.10.1.3 Take responsibility for own actions.

SLO 11C.10.1.4 Demonstrate adaptability, initiative, and effort.

SLO 11C.10.1.5 Demonstrate teamwork skills.

SLO 11C.10.1.6 Demonstrate the ability to stay on task and use time effectively.

SLO 11C.10.1.7 Demonstrate the responsible use of wireless communication devices.

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

SLO 11C.10.2.1 Demonstrate the knowledge and skills required to solve complex problems involved in flying a simulated aircraft.

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.

No applicable SLOs.

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

SLO 11C.11.2.1 Demonstrate an awareness of aircraft fuel consumption and impact on the environment.

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**.

No applicable SLOs.
