**King Schools Online**
**Internet Learning Programs**

# HIGH-ALTITUDE PHYSIOLOGY

## SYLLABUS

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# High-Altitude Physiology Course
## *Pilot Training Syllabus*

**INTRODUCTION**
The King Schools Online *High-Altitude Physiology Course* is ideal for pilots who want to understand or refresh on the physiological effects they may incur from flying at altitudes in the flight levels, and how to cope with potential hazards.

This course:

- Satisfies the IS-BAO (International Standards for Business Aviation Operation) standard for recurrent high-altitude physiological training
- Is suitable for initial or recurrent training
- Provides a training record as evidence of initial or recurrent study
- Is offered only through individual Internet study

**COURSE ELEMENTS AND STRUCTURE**
The King Schools Online *High-Altitude Physiology Course* contains four major subject areas (Labs) with two or more distinct Lessons per Lab. Following each Lesson's study materials, the pilot sees a quiz containing multiple-choice and/or True/False questions. There are approximately 20 questions in the course. Most pilots will require approximately 45 minutes to complete this course.

**COMPLETION STANDARDS**
Lesson completion requires accessing each lesson page of study materials and correctly answering all questions in the quiz associated with that Lesson. An individual Lab is finished after completing all of the Lessons contained in that Lab. Pilots complete the course when all the Labs are checked off with a completion date on the course main menu.

**CERTIFICATE OF COMPLETION**
A Completion Certificate individualized for the pilot enrolled in the course may be accessed at the "Print Your Course Complete Materials and Endorsement" icon on the main menu after the entire course has been completed. Pilots clicking the "Print Your Course Complete Materials and Endorsement" icon before the coursehas been completed receive a message saying that the certificate will be available after the entire course is completed.

**ENROLLMENT PROCEDURES**
A pilot may individually order and enroll in the course, or flight departments may order multiple courses and receive a "key" for each course ordered. The flight department then assigns a key to each pilot requiring training. Each pilot registers individually at *https://ilearn.kingschools.com* for the course.

**COURSE STUDY**
The pilot first enrolls in the course, and then logs in to access the course Labs and Lessons. If the pilot has insufficient time to complete the course in one session, the pilot may log out. The program records all Lesson and Lab completions and every question answered. When returning to the course, the pilot may resume at the last point of progress.

# LAB 1

## RESPIRATION AND HYPOXIA

**LESSON**

**1 Respiration Is Otherwise Known As Breathing**

Lesson Objective: To learn how the partial pressure of oxygen and the saturation levels in the blood are affected by higher cabin altitudes.

**2 Hypoxia Is Lack of Sufficient Oxygen to Tissues**

Lesson Objective: To learn about the symptoms of hypoxia and what conditions may contribute to your having hypoxia.

# LAB 2

## USING SUPPLEMENTAL OXYGEN

**LESSON**

**1 Supplemental Oxygen Increases the Oxygen in Each Breath**

Lesson Objective: To learn the cabin altitudes appropriate for reliance on oxygen masks and pressure breathing systems.

**2 Pressure Changes on the Body Can Cause Problems**

Lesson Objective: To learn about the potential effects on your body of altitude changes when the aircraft is not pressurized, including gas expansion and gas bubble formation, and about preventive measures.

**3 Using Oxygen Can Be a Pain**

Lesson Objective: To learn the effects of the prolonged use of supplemental oxygen and why using supplemental oxygen is often not the most desirable solution to flight at high altitudes.

# LAB 3

## PRESSURIZATION

**LESSON**

**1 Pressurizing the Cabin Solves a Lot of Problems**

Lesson Objective: To learn how pressurization systems work.

**2 How You Operate a Pressurization System**

Lesson Objective: To learn the controls and gauges for a pressurization system, and how to manage a pressurization system in flight.

**3 Dealing with Depressurization**

Lesson Objective: To learn why an aircraft might depressurize, what physical phenomena occur when it does, and what you should do in response; and to be knowledgeable about your duration of consciousness without supplemental oxygen (the Time of Useful Consciousness).

# LAB 4

## FAA OXYGEN REGULATIONS (SIMPLIFIED)
## 14 CFR 91.211

**LESSON**

**1 Requirements Based on Cabin Altitude**

Lesson Objective: To learn the regulatory oxygen requirements based on the pressure altitude of the aircraft cabin.

**2 Requirements Based on Flight Level**

Lesson Objective: To learn the regulatory oxygen requirements based on the flight level at which the aircraft is flying.