

AVIATION WEATHER

JEPPESEN FLIGHT CREW TRAINING COURSE LAYOUT & SYLLABUS

COURSE LAYOUT

INTRODUCTION

This course will train professional aviation personnel on meteorology to ensure a practical knowledge of weather phenomena, including the principles of frontal systems, icing, fog, thunderstorms, and windshear. The course emphasizes practical concepts and critical decision-making to enable students to retain and use the information in the real world.

BACKGROUND

Per the Code of Federal Regulations Title 14 Parts 91 (§ 91.1065 and § 91.1101) and 135 (§ 135.345 and § 135.351), initial, transition, recurrent and upgrade ground training for pilots must include instruction in at least the following, as applicable to their duties:

- Enough meteorology to ensure a practical knowledge of weather phenomena, including the principles of frontal systems, icing, fog, thunderstorms, and wind shear
- Knowledge and procedures for
 - Recognizing and avoiding severe weather situations
 - Escaping from severe weather situations, in case of inadvertent encounters, including low-altitude wind shear
 - Operating in or near thunderstorms (including best penetrating altitudes), turbulent air (including clear air turbulence), icing, hail and other potentially hazardous meteorological conditions

COMPONENTS

Following the regulatory requirements and parameters described above, the Aviation Weather course covers the following lessons.

- Fog
- Thunderstorms
- Wind Shear
- Turbulence
- Icing

DURATION

The course takes an average student approximately 3.5 hours to complete including the required exam.

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COURSE LAYOUT *(CONTINUED)*

FEATURES & FUNCTIONS

It is the ultimate goal of Jeppesen to provide courseware that increases efficiencies. Thus this module is designed in an interactive, engaging and practical fashion using scenarios that emphasize critical decision-making in operations.

There are multiple topics within a lesson and multiple lessons within the course (see details below). Within each topic, students answer optional questions and answers in order to determine their level of understanding. Students may also quit a lesson or an exam in the middle and return to the same location at a later time. Finally, students may review the content as many times as is desirable during the subscription year.

At the end of the course, there is a required exam. The exam presents multiple randomized questions from a pool of possible questions. To pass, the student must score 80% or better. At the end of the exam, the student and his or her manager may review the exam at the question level in order to make the exam correctable to 100%.

CERTIFICATE OF COMPLETION

The Jeppesen Learning Center automatically generates a certificate of completion once the student completes all instructional material and passes the exam at 80% or better. The system sends the certificate via email and the student has access to it online as well.

LEARNING MANAGEMENT SYSTEM & ADMINISTRATION

The Jeppesen Learning Center maintains training history records for students and their managers. You may run a training history report at any time during your subscription year to validate your training records.

ENROLLMENT

To enroll in the course, please contact your local Jeppesen Regional Sales Manager (RSM). If you do not know your Jeppesen RSM, please contact:

The Americas

800.553.7750 or 303.3284244 or e-mail captain@jeppesen.com

Europe and Asia

+49 6102 5070 or e-mail fra-services@jeppesen.com

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COURSE SYLLABUS

LESSON 1: FOG

After completing the topic on fog, you will be able to:

- Define the nature of fog
- Explain the causes of fog
- Describe the types of fog
- Explain the types of fog reports that aviation personnel use
- Read METARS
- Describe the sources of weather reports

Topics include:

- How fog is formed
- Fog conditions
- The five types of fog and their characteristics
- Aviation Routine Weather Reports (METARS)
- Pre-flight and in-flight weather reports

LESSON 2: ICING

After completing the lesson on icing, you will be able to:

- Define the types of ice
- Identify the types of ice form
- Classify ice by intensity
- Explain how to minimize the effects of icing
- Describe how ice-induced stalls occur

Topics include:

- The four types of ice: clear, rime, mixed, and frost
- How each type of ice appears
- Understanding the intensity of ice and the proper response to that intensity
- Minimizing the effects of icing during the different phases of flight
- Identifying ice-induced wing and tailplane stalls
- Actions to take as the result of an ice-induced stall

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LESSON 3: THUNDERSTORMS

After completing the lesson on thunderstorms, you will be able to:

- Describe how thunderstorms form
- Classify the types of thunderstorms
- Describe the hazards associated with thunderstorms
- Explain how to use RADAR to identify thunderstorms
- Describe what to do before and after entering a thunderstorm

Topics include:

- Key ingredients of thunderstorms
- Stages of thunderstorms
- Thunderstorm hazards including lightening, turbulence, microbursts, and so on
- Using RADAR to detect and avoid thunderstorms
- Actions the pilot should take prior to and after entering a thunderstorm

LESSON 4: TURBULENCE

After completing the lesson on turbulence, you will be able to:

- Identify the types of turbulence
- Recognize and report PIREPS correctly
- Describe the causes of turbulence
- Recognize the effects of turbulence on the controls

Topics include:

- Identifying the types and intensity of turbulence
- Proper procedures to use to manage turbulence

LESSON 5: WIND SHEAR

After completing the lesson on wind shear, you will be able to:

- Describe the characteristics and causes of wind shear
- Explain microburst characteristics
- Evaluate the weather for wind shear probability
- Identify takeoff and approach precautions to combat wind shear

Topics include

- The severity of wind shear
- How and where wind shear occurs
- Estimating the probability of wind shear
- Avoiding microbursts
- Wind shear detection and warning systems
- Takeoff, approach, and recovery procedures