

# INTERNATIONAL REDUCED VERTICAL SEPARATION MINIMUM (RVSM)

## JEPPESEN FLIGHT CREW TRAINING COURSE LAYOUT & SYLLABUS

### COURSE LAYOUT

#### INTRODUCTION

This training module is intended for pilots who are seeking to become RVSM-certified. It will train professional aviation personnel on all relevant aspects, requirements and procedures involved in the operations within International Reduced Vertical Separation Minimum (RVSM) airspace. It meets the specific regulations set forth by the Federal Aviation Administration (FAA), the European Union under EU OPS and Eurocontrol, the International Civil Aviation Organization (ICAO), and the International Air Transportation Association (IATA).

The emphasis for this course is on United States, North Atlantic, and European RVSM airspace.

#### BACKGROUND

RVSM airspace is special qualification airspace. The operator and the aircraft used by the operator must be approved by the appropriate regulatory authority. The operator, the pilot and the aircraft must be RVSM-certified in order for them to fly under these conditions. A corporate officer or owner must be designated as responsible for the status of RVSM equipment and pilot training.

#### COMPONENTS

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

- RVSM Overview
- RVSM Qualifications and Approval
- RVSM Equipment
- Ground Operations (Pre-flight Operations)
- In-flight Operations
- Communications
- Contingencies and Diversions
- International RVSM

#### DURATION

The course takes an average student approximately 1.5 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). At the end of 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](mailto:captain@jeppesen.com)

#### **Europe and Asia**

+49 6102 5070 or e-mail [fra-services@jeppesen.com](mailto:fra-services@jeppesen.com)

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## COURSE SYLLABUS

### TOPIC 1: RVSM OVERVIEW

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

- Differentiate between conventional and RVSM airspace
- List the benefits of RVSM
- Recognize the critical nature of reduced vertical separation
- Prepare to fly in RVSM airspace

Topics include:

- Pre-RVSM airspace
- RVSM airspace boundaries
- The worldwide status of RVSM airspace.
- The benefits of RVSM, including fuel efficiency and higher traffic volume
- Human factors in RVSM

### TOPIC 2: RVSM QUALIFICATIONS AND APPROVAL

After completing the topic on RVSM Qualifications and Approval, you will be able to:

- Identify how pilots, operators, and aircraft qualify to operate in RVSM airspace
- Comply with requirements to maintain RVSM qualifications
- Identify how to operate when an operator is not RVSM-approved
- Define the Height-Monitoring Program within European RVSM

Topics include:

- Obtaining initial RVSM qualifications for pilots, operators, and aircraft systems and equipment
- Maintaining RVSM qualifications
- Handling non-RVSM-approved operations, such as transitioning through RVSM airspace
- Describing the Height Monitoring Element (HME) and the Total Vertical Error Monitoring Unit (TMU)
- Participating in the Height-Monitoring Program

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## TOPIC 3: RVSM EQUIPMENT

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

- Identify RVSM equipment requirements
- Recognize the importance of using altimetry equipment correctly in RVSM airspace

Topics include:

- System requirements, including independent altitude measurement systems
- When to set the altimeters and the importance of cross-checking them
- ACAS/TCAS requirements and collision avoidance

## TOPIC 4: GROUND OPERATIONS (PRE-FLIGHT OPERATIONS)

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

- Implement the flight planning process for flying in RVSM airspace
- Perform the pre-flight checks

Topics include:

- Qualifying the aircraft
- Verifying the MEL for RVSM airspace
- Checking the weather on your route
- Performing fuel analysis
- Pre-flight planning including examining maintenance records
- Ensuring RVSM compliance by performing an altimeter accuracy check and checking the static ports
- Completing the FAA and ICAO flight plan forms

## TOPIC 5: IN-FLIGHT OPERATIONS

After completing the topic on In-flight Operations, you will be able to:

- Recognize the importance of setting and cross-checking the altimeter correctly
- Follow the entrance requirements for RVSM airspace
- Identify the procedures for requesting and receiving clearances from ATC

Topics include

- Resetting the altimeter during climb and descent
- The procedures to enter into RVSM airspace, including checking the altimeter and transponder
- Communicating with ATC and the possible delays in communication

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## TOPIC 6: COMMUNICATIONS

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

- Describe the types of communication radios required in RVSM airspace
- Provide position, meteorological, and RVSM status reports to ATC using correct ATC phraseology and format

Topics include:

- VHF radios
- HF radios
- SATCOM
- Identifying correct radios on Jeppesen orientation charts
- Special frequencies for air-to-air and emergency communications
- Providing position and meteorological reports to ATC
- Using proper ATC phraseology in RVSM airspace

## TOPIC 7: CONTINGENCIES AND DIVERSIONS

After completing the topic on Contingencies and Diversions, you will be able to:

- Define the types of contingencies that can occur
- Recognize the PIC's responsibilities in RVSM and DRVSM airspace
- Follow the procedures for predictable and unpredictable contingencies

Topics include:

- Definable in-flight contingencies, including meteorological problems causing a change in flight plan
- Where to locate procedures on Jeppesen orientation charts in order to handle definable in-flight contingencies
- Contingency procedures in RVSM and DRVSM airspace
- Handling unpredictable contingencies and diversions
- Post-flight procedures

## TOPIC 8: INTERNATIONAL RVSM

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

- Define Minimum Navigation Performance Specification (MNPS)
- Define Required Navigation Performance (RNP)
- Identify region-specific areas with different RVSM requirements

Topics include

- Describing MNPS
- Defining MNPS airspace and the different navigation requirements in areas of the world
- Describing RNP
- Standards for RNP and where to locate those standards on Jeppesen orientation charts
- Using Jeppesen resources such as orientation charts and high-altitude chart panels