Publications and Training Solutions
Course Syllabus: 523-0816678

COURSE TITLE: Satellite Based Augmentation System (SBAS) with Vertical Guidance Operator/Pilot Training

PREREQUISITES:

Students should have a basic knowledge of aircraft avionics systems and a working command of the English language. Students should be familiar with MS Windows® based Operating Systems.

PURPOSE:

This course provides students with the knowledge to recognize the given system's purpose, components, functions, and features. The student will also be able to identify descriptions of system components, identify operational functions of the system, and perform procedures related to the system's functional operation, specifically a normal Localizer Performance with Vertical Guidance (LPV) approach.

OBJECTIVES: Upon completing this course, the student should be able to:

1. Identify Satellite Based Augmentation System (SBAS) description, equipment, Service Providers and approaches.
2. Identify Flight Management System (FMS) component updates.
3. Identify SBAS operations.
4. Perform LPV approaches.

COURSE LENGTH: 1 Hour

REFERENCES:

1. N/A

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COURSE OUTLINE

0. Introduction

    A. Course Objectives

    B. General Navigation

    C. Disclaimer

1. Overview

    A. Introduction

    B. SBAS Description

    C. SBAS Service Providers

    D. Equipment

        i. Ground Segment

        ii. Space Segment

        iii. User Segment

    E. SBAS Approaches

    F. Summary/Test

2. FMS Updates

    A. Introduction

    B. Control Display Unit (CDU) Menu Items

        i. Global Navigation Satellite System (GNSS) Control

        ii. Flightplan (FPLN)

        iii. ARRIVAL

        iv. Multifunction Display (MFD) MENU

        v. GNSS1 Postion (POS)

        vi. PROGRESS

        vii. FMS CONTROL

    C. CDU Messages

      D. Summary/Test

3. **Operations**

      A. Introduction

      B. FMS Functionality

      C. SBAS-Vertical Navigation (VNAV) Approaches

      D. Localizer Performance with Vertical Guidance (LPV) Approaches

      E. Baro-VNAV Approaches

      F. Loss of Integrity

      G. Limitations

      H. Summary/Test

4. **Scenario**

      A. Introduction

      B. Select Approach

      C. Select Arrival

           i. Verify and Execute LPV Approach

EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Global Positioning System	GPS-4000S	822-2189-001
Control Display Unit (CDU)	CDU-3000	822-0884-493
Adaptive Flight Display (AFD)	AFD-3010E	822-1753-353
Adaptive Flight Display (AFD)	AFD-3010	822-1084-353
Flight Management Computer (FMC)	FMC-3000	822-0883-025
Flight Guidance Panel (FGP)	FGP-3000	822-1107-103