

**Course Level**

**FVP**

**Flight Validation Pilot**

Modules	Duration	Tuition Fee	Location	Instructors
<b>Validation Process and IFP Criteria</b>	2 weeks	CHF 4000	Interlaken	Beat Zimmermann evtl. Robert Bukovics, Romano Germann
<b>Geodesy</b>	2 days	CHF 1100	University of Zürich	Dr. Maurizio Scaramuzza
<b>ARINC 424</b>	3 days	CHF 1600	University of Zürich	Martin Zillig
<b>Practical (Simulator)</b>	5 days	CHF 4000	Frankfurt Airport, LH SIM Center	Josef Anschau, Emre Gümüs, Pieter-Bas Oortman, Pascal Wegmann, Michael Hopp

Questions at a glance	Answer
<b>ICAO recognised?</b>	No, there is no such thing as an ICAO recognition for training. ANI is a State-approved training provider and complies with all ICAO training regulations.
<b>Certificate?</b>	ANI Certificate, FVPs require a State Approval
<b>Pre-requisites?</b>	Yes. Please see below for details.
<b>Daily schedule?</b>	9.00 - 16.00 or as communicated by the instructor
<b>Weekly schedule?</b>	Monday morning to Friday afternoon
<b>Do I have to do all modules?</b>	State policies will describe what is mandatory for you. We do however strongly recommend to do all modules. It will provide the best basis for the job.

## **1. Flight Validation Pilot Training**

While the task „Flight Validation Pilot“ may not really be something new, the fact that ICAO has released clear requirements for competencies of FVPs together with a clearly defined Validation process for Flight Procedure Design is relatively recent. Together with some key members of the International Committee for Airspace Standards and Calibration (ICASC), the ANI has established a training program that many States have taken as the reference to train their FVPs and to establish State requirements for training of Flight Validation Pilots. The Competency Framework for Flight Validation Pilots can be found in ICAO doc. 9906. The ANI has developed a modular approach to the training to allow participants to split the training if required.

### **1.1. Validation Process and IFP Module**

In this Module, the Quality Assurance Processes as required by Annex 11, PANS-OPS vol. 2 and doc. 9906 vol. 1 and 5 are covered. Once the process is understood, the pilots need to be trained to be able to understand a Flight procedure Design Report issued by a Procedure Designer. To achieve that, key elements in Procedure Design criteria are explained. With practical examples the pilot will learn, why a certain solution was chosen for a particular procedure. The goal of the module is that the FVP will be able to understand the IFP Report, identify the potential impact on Flight OPS and the critical elements that need to be validated in a Flight Validation.

### **1.2. ARINC 424 module**

The quality of the navigation database is crucial for the quality of a procedure, hence one of the FVP's task will be to validate the navigation database to ensure it reflects the procedure in the IFP report and the draft chart. For that reason it is important that the FVP is able to understand ARINC 424 code and also understand limitations of database coding. Finally the FVP must be aware of Avionics issues, i.e. a particular system not being able to fly the procedure as coded.

### **1.3. Geodesy Module**

Data are eventually converted back and forth between different coordinate reference systems, it is thus important to be able to identify such conversion problems when they occur. The Geodesy module will enable the pilot to understand the various complexities associated with different coordinate reference systems and handling geospatial data.

### **1.4. Practical Module**

Now, this is the FVP's home territory! In this module the FVP has the chance to consolidate what was learnt in the theory in the environment where he or she performs at his best - the Flight Deck. ANI instructors will use practical examples of IFP Reports, which the FVP must analyze, understand, discuss and then prepare his Flight Validation activities. What does he want to check in flight, are there any critical elements that must be confirmed acceptable from a Flight OPS perspective? Then the students will go to one of the Airbus simulators in the Lufthansa Simulator Center in Frankfurt (which Simulator is used depends on availability. It can be A320, A330, A340 or A380). In the Simulator, first the database is validated and then the procedure is flown according to the program established by the FVP student. In the end, the validation flight's outcome is discussed

and a report prepared. By attending this practical module, the new FVP will learn a structured approach to his task in real life and develop a sense for practical issues in Flight procedure Design.

An important part of Flight Validation is recording. Our students learn to set up cameras in the cockpit easily with off-the-shelf products and film the PFD, the Nav Display, the FMS and the outside view. With an open source software tool they will learn how to cut the recorded material into one synchronized video.

## **2. Pre-requisites**

### **2.1. The pre-requisites for being approved as an FVP by a State are:**

- Commercial Pilot Licence (CPL)
- Instrument Rating (IR)
- The experience necessary for an ATPL (typically 1500 hours for fixed wing, 1000 hours for helicopter)

Or as defined by the State (some States have more stringent requirements).

These are however not pre-requisites for attending the course.

### **2.2. The pre-requisites for attending the ANI FVP training program are:**

Ideally participants are licensed pilots with CPL and IR. It is nevertheless also possible that the course be attended by Flight Inspection Engineers if they would like to add to their skill set. If you are not a pilot and would like to attend the course, please get in touch with ANI before registering.