

HF420 – Experimentation and measures

From the Advanced Master TAS Aero (Aeronautical Engineering)



Highlights

- Hands-on experimental work
- Use of physiological tools

This course focuses on the five main physiological sensors dedicated to measure human performance and mental activity. The students learn the know-how of technical, measurements and signal processing issues for each of these sensors.

All courses and practical works are taught with a view to apply the acquired knowledge to the aeronautical and transportation domains.

Prerequisites

- Master level

Key elements

Dates:

15 – 18 February 2021

Duration:

25 hours

For whom:

Recent graduates, jobseekers and experienced employees

Location:

ISAE-SUPAERO, Toulouse

Course fees: **2 300 €**

Language: **English**

Learning objectives

After completing this course, participants will be able to:

- Understand the operation of five sensors used to assess operators' mental state
- Record and analyze physiological data on human operators
- Be able to interact with experts of the Human Factors and Neuroscience domains to improve flight safety.

Practical information and registration

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Course Content

- Initiation to Experimentation
- Ethics
- Eye-tracking
- Electrocardiography
- Electroencephalography
- Near Infra-Red Spectroscopy
- Application Focuses: Certification, Aviation/Aerospace psychology & medicine

Teaching methods

| Teaching methods | Yes |
|--------------------------------------------|-----|
| Lectures / tutorial | X |
| Collaborative learning | |
| Flipped classroom | |
| Blended learning (online and face to face) | |
| Competency-based | |
| Critical thinking | |
| Learning by doing | X |
| Project-based | |
| Simulation | X |
| Case study | |
| Other: | |

Assessment

- Written exam (100 %)