HF420 - Experimentation and measures

From the Advanced Master TAS Aero (Aeronautical Engineering)

Key elements

Period: **Early February**

Estimated duration: **25 hours**

For whom:
Recent graduates, jobseekers and experienced employees

Location:
ISAE-SUPAERO, Toulouse

Language: **English**

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.

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.

Prerequisites

- Master level

Information and registration

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Course Content

- Initiation to Experimentation
- Ethics
- Eye-tracking
- Electrocardiography
- Electroencephalography
- Near Infra-Red Spectroscopy
- Application Focuses: 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 %)