The objective of this course is to provide engineers with a high-level multi-disciplinary approach to understand human behavior and performance.

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

**Prerequisites**
- Master level

**Highlights**
- Unique Neuroergonomics approach
- Introduction to several cognitive functions

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**Learning objectives**

After completing this course, participants will be able to:
- Understand the psychological and biological processes that underlie human performance & mental states
- Be able to interact with experts of the Human Factors and Neuroscience domains to improve flight safety.

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**Key elements**

Dates:
- 16 - 19 November 2020

Duration:
- 25 hours

For whom:
- Recent graduates, jobseekers and experienced employees

Location:
- ISAE-SUPAERO, Toulouse

Course fees: 2 300 €

Language: English

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**Practical information and registration**

Natalia Perthuis - 05 61 33 80 47 – info.exed@isae-supero.fr
HF400 – Understanding human behavior
From the Advanced Master TAS Aero (Aeronautical Engineering)

Course Content

- Introduction to Neuroscience and Biopsychology: Central Nervous System
- Sensation v. Perception, Visual and Auditory Perception
- Vigilance, Fatigue & Rhythms
- Attention & Executive Control
- Learning & Memory
- Emotions, Stress & Decision Making
- Executive Functions & Mental Flexibility
- Application Focuses: Pilot/Autopilot Conflict; Airline Pilot Experience

Teaching methods

<table>
<thead>
<tr>
<th>Teaching methods</th>
<th>Yes</th>
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<tbody>
<tr>
<td>Lectures / tutorial</td>
<td>X</td>
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<tr>
<td>Collaborative learning</td>
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<tr>
<td>Flipped classroom</td>
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<td>Blended learning (online and face to face)</td>
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<td>Learning by doing</td>
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<td>Project-based</td>
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<td>Simulation</td>
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<td>Case study</td>
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Assessment

- Written test (60%)
- Marked Practicals (40%)