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

**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.

**Key elements**
- **Dates:** 29 November - 3 December 2021
- **Duration:** 25 hours
- **For whom:** Recent graduates, jobseekers and experienced employees
- **Location:** ISAE-SUPAERO, Toulouse
- **Course fees:** 2 300 €
- **Language:** English

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

**Practical information and registration**
Natalia Perthuis - 05 61 33 80 47 – info.exed@isae-supero.fr
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>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures / tutorial</td>
<td>X</td>
</tr>
<tr>
<td>Collaborative learning</td>
<td></td>
</tr>
<tr>
<td>Flipped classroom</td>
<td></td>
</tr>
<tr>
<td>Blended learning (online and face to face)</td>
<td></td>
</tr>
<tr>
<td>Learning by doing</td>
<td>X</td>
</tr>
<tr>
<td>Project-based</td>
<td></td>
</tr>
<tr>
<td>Simulation</td>
<td></td>
</tr>
<tr>
<td>Case study</td>
<td>X</td>
</tr>
</tbody>
</table>

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