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

**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.

**Highlights**
- Hands-on experimental work
- Use of physiological tools

**Key elements**

Dates:
February 6 to 10, 2023 (exam February 10, 2023)

Duration: 25 hours

For whom:
Recent graduates, jobseekers and experienced employees

Location:
ISAE-SUPAERO, Toulouse

Course fees: €2,300

Language: **English**

Information and registration
Jessica ALIX - 05 61 33 83 91 – info.exed@isae-supero.fr
Course Content

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

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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<tr>
<td>Competency-based</td>
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<tr>
<td>Critical thinking</td>
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<tr>
<td>Learning by doing</td>
<td>X</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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<td>Other:</td>
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Assessment

- Written exam (100 %)