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.

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

Information and registration

info.exed@isae-supraero.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>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures / tutorial</td>
<td>X</td>
</tr>
<tr>
<td>Collaborative learning</td>
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<tr>
<td>Flipped classroom</td>
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<tr>
<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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<tr>
<td>Project-based</td>
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<tr>
<td>Simulation</td>
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<tr>
<td>Case study</td>
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<tr>
<td>Other:</td>
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Assessment

- Written exam (100 %)