HAD501 - Payload & sensors for UAVs
From the MS HADA
(Helicopter, Aircraft and Drone Architecture)

This module illustrates the various payloads and sensors embedded on UAVs fitting with operational missions.

Highlights

- EO/IR sensors for UAVs
- Laser imaging techniques
- Navigation through vision

Prerequisites

Master level

Key elements

Dates: February 6 to 10, 2023
Duration: 24 hours
For whom: recent graduates, jobseekers and experienced employees
Location: ISAE-SUPAERO, Toulouse
Course fees: €2,300
Language: English

Learning objectives

After completing this course, participants will be able to:

- Recognize different kinds of sensors for UAVs;
- Use laser imaging techniques.

Practical information and registration

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Course content

• Introduction to usual sensors and payload for UAVs
• Review of EO/IR sensors, radars
• Review of laser range finders, LiDAR, laser imaging techniques
• Review of passive imaging techniques
• Image processing
• Autonomous navigation based on visual sensors: an introduction to navigation through vision and SLAM
• Payload and sensors for UAVs: Applications
• Visit of DELAIR company

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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<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>Simulation</td>
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<td>Case study</td>
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Assessment

• Written exam