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

Key elements

Dates: 25 - 29 January 2021
Duration: 18 hours
For whom: recent graduates, jobseekers and experienced employees
Location: ISAE-SUPAERO, Toulouse
Course fees: 1800 €
Language: English

Highlights

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

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

Learning objectives

After completing this course, participants will be able to:

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

Prerequisites

Master level

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

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<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