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

Key elements
Dates: 31 Jan. - 4 Feb. 2022
Duration: 22 hours
For whom: recent graduates, jobseekers and experienced employees
Location: ISAE-SUPAERO, Toulouse
Course fees: 2 000 €
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.

Prerequisites
Master level

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
Natalia Perthuis - 05 61 33 80 47 – info.exed@isae-supaero.fr
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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