HAD501 - Payload & sensors for UAVs

From the MS HADA
(Helicopter, Aircraft and Drone Architecture)

Key elements

Period: **February**

Estimated duration: **25 hours**

For whom: **recent graduates, jobseekers and experienced employees**

Location: **ISAE-SUPAERO, Toulouse**

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

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

Teaching methods	Yes
Lectures / tutorial	X
Collaborative learning	
Flipped classroom	
Blended learning (online and face to face)	
Learning by doing	
Project-based	
Simulation	X
Case study	X

Assessment

- Written exam