THE1 - Helicopter understanding
From the MS HADA
(Helicopter, Aircraft and Drone Architecture)

Key elements

Dates: 8 - 12 March 2021
Duration: 27 hours
For whom: recent graduates, jobseekers and experienced employees
Location: AIRBUS HELICOPTERS, Marignane
Course fees: 2 300 €
Language: English

Highlights

- Rotorcraft flight mechanics
- Rotorcraft design
- Helicopter aeroacoustics

This module provides a broad overview of all helicopter aerodynamic principles and a thorough dive into rotorcraft knowledge.

Prerequisites

- General knowledge in flight mechanics
- Basics of aerodynamics

Learning objectives

After completing this course, participants will be able to:

- explain and discuss the aerodynamic principles of rotors, flight qualities, performance levels, noise pollution and pre-design methods.

Practical information and registration
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Course content
• Introduction to rotorcraft
• Principles of helicopter Aerodynamics
• Introduction to rotor dynamics
• High-speed helicopters and hybrid configurations
• Rotorcraft pre-design methods
• Main rotor & tail rotor sizing
• Helicopter flight mechanics
• Helicopter handling qualities
• Helicopter performance assessment methods
• Flight & mission performance
• Rotorcraft noise certification
• Principles of rotorcraft aeroacoustics
• Main rotor noise, tail rotor noise, engine noise
• Ground noise footprint

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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<tr>
<td>Project-based</td>
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<td>Simulation</td>
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<td>Case study</td>
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Assessment
Written exam