Course syllabus

Drone Applications in the EASA Specific Category
Drönartillämpningar inom EASAs specifika kategori

TFRH05, 15.0 credits, G2 (First Cycle)

Valid for: 2025/26
Faculty: Faculty of Engineering LTH
Decided by: PLED FLY
Date of Decision: 2025-04-22
Effective: 2025-09-15

General Information

Main field: Aeronautical Sciences **Depth of study relative to the degree requirements:** First cycle, has less than 60 credits in first-cycle course/s as entry requirements
Language of instruction: The course will be given in English

Aim

Drones are fantastic tools that can be used for a multitude of tasks. In some business sectors they are already standard equipment but many more applications are in our future. This course aims at giving the student a good understanding of drone operations and solutions for todays societal and environmental challenges. Some drone applications can require operations with a higher risk; for example transporting goods, flying over urban areas, flying beyond visual line of sight or using drones of heavy weight. Drone operations that are of a higher risk need to comply with the rules in the specific category of the EU drone regulations. For operations in the specific category, there will be a need for remote pilots with adequate competency. This course will give students the required basic competency for operations within the specific category.

Learning outcomes

Knowledge and understanding
For a passing grade the student must

- After the course, the student shall have knowledge to obtain a certificate of theoretical competence corresponding to Article 8, of Commission Implementing Regulation (EU) 2019/947, and GM to UAS.SPEC.050, (EU) 2019/947.
- 1. Air safety (Airmanship and aviation safety)
- 2. Aviation regulations and UAS regulation
- 3. Navigation/Charts
- 4. Human performance limitations
- 5. Operational procedures
- 6. UAS General Knowledge
- 7. Meteorology
- 8. SORA Methodology, Technical and operational mitigations for air risks
- 9. Drone applications in society
- After succesful completion and examination of the course, the student receives a proof of examination of Basic Competency for operations in the specific category, as described in UAS.SPEC.050, (EU) 2019/947.

Competences and skills
For a passing grade the student must

- Understanding of Human performance and limitations in flight operations
- Applying aeronautical knowledge to handle risks in complex flight environments
- Manage UAS flight path and automation
- Ability to manage aeronautical communication
- Ability to apply operational procedures (normal, contingency and emergency procedures, flight planning, pre-flight and post-flight inspections);
- Workload management
- Leadership, teamwork and self-management
- Problem solving and decision making
- Situational awareness
- Coordination or handover

Judgement and approach
For a passing grade the student must

- Independent and self-knowing application of skills to plan safe and efficient flights with regard to operational environment
- Operating within regulatory framework

Contents

The course covers flight theory and practical training with a focus on unmanned aerial systems (UAS) and its integration into the aviation system, and covers the Swedish Transport Agency's and EASA's described requirement of remote pilot competency for operations in the SPECIFIC category. The practical training covers both rotor-equipped and fixed-wing unmanned aircraft systems and includes, in addition to flying, also basic maintenance of unmanned aircraft. The content of the practical education is based on the same components as the blocks in the theoretical education.

The theoretical education is divided into a number of theoretical blocks as described in the list below:
1. Air safety (Airmanship and aviation safety)
2. Aviation regulations and UAS regulation
3. Navigation/Charts
4. Human performance limitations
5. Operational procedures
6. UAS knowledge
7. Meteorology
8. SORA Methodology, Technical and operational mitigations for air and ground risks
9. Article 8-competency
10. Drone applications in society

Examination details

Grading scale: UG - (U, G) - (Fail, Pass)
Assessment: Assessment is done through a written examination of the theoretical part of the course. The practical part of the course is examined through a final practical examination.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Modules
Code: 0123. **Name:** Artikel 8 and GM to UAS.SPEC.050.
Credits: 10.0. **Grading scale:** UG - (U, G). **Assessment:** 75% correct on exam. **The module includes:** Theoretical competence corresponding to Article 8, of Commission Implementing Regulation (EU) 2019/947, and GM to UAS.SPEC.050, (EU) 2019/947.
Code: 0223. **Name:** Evaluation Flight for Basic Competency within Specific.
Credits: 5.0. **Grading scale:** UG - (U, G). **Assessment:** Demonstrates all competencies required for operations within the SPECIFIC category. **The module includes:** Practical competences corresponding to Article 8, of Commission Implementing Regulation (EU) 2019/947, and GM to UAS.SPEC.050, (EU) 2019/947.

Admission

Admission requirements:

- TFRH01 (or FLYF20) The Technology and Applications of Drone Systems, or corresponding work experience.

The number of participants is limited to: No

Reading list

Contact

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