



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Applications of Unmanned Aerial Vehicle [S2LiK1-BSP>OZBSP]

Course

Field of study Aerospace Engineering	Year/Semester 1/2
Area of study (specialization) Unmanned Aerial Vehicles	Profile of study general academic
Level of study second-cycle	Course offered in Polish
Form of study full-time	Requirements compulsory

Number of hours

Lecture 30	Laboratory classes 0	Other (e.g. online) 0
Tutorials 0	Projects/seminars 15	

Number of credit points

3,00

Coordinators

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Lecturers

Prerequisites

Knowledge: The student has a basic knowledge of UAV construction, aviation law and the rules of UAV flights Skills: The student is able to analyze complex processes: identify and describe their component parts. Social competences: The student is able to cooperate in a group, assuming various roles in it. The student is able to determine the priorities important in solving the tasks set before him. The student shows independence in solving problems, gaining and improving the acquired knowledge and skills.

Course objective

To acquaint students with issues related to the applications of unmanned aerial vehicles

Course-related learning outcomes

Knowledge:

1. has detailed knowledge related to selected issues in the field of manned and unmanned aircraft construction, in the field of on-board equipment, control systems, communication and registration systems, life support systems, automation of individual systems
2. has detailed knowledge related to selected issues in the field of manned and unmanned spacecraft construction, in the field of on-board equipment, control systems, communication and recording

systems, life support systems, satellite navigation systems, teletection, image recognition, automation of individual systems

Skills:

1. Is able to plan and perform a flight on an unmanned aerial vehicle, taking into account the availability of airspace, terrain obstacles, UAV capabilities and the type of flight

2. Can identify the sources of threats in various areas of aircraft operation, formulate the related threats, assess the risk of threats using appropriate methods and propose ways to ensure safety

Social competence

1. understands the need for lifelong learning; can inspire and organize the learning process of other people

2. is aware of the importance and understands the non-technical aspects and effects of engineering activities, including its impact on the environment, and the related responsibility for decisions

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:

Lecture: exam covering the issues discussed in class.

Project: written work with a solution to a given problem

Programme content

LECTURE:

1. Application of UAV in agriculture,

2. Application of UAV in geodesy,

3. Application of UAV in search and rescue,

4. Other UAV applications

Course topics

none

Teaching methods

Informative (conventional) lecture (providing information in a structured way) - may be of a course (introductory) or monographic (specialist) character

Bibliography

Basic

1. Mechanika lotu modeli latających – J.Staszek

2. Drony - teoria i praktyka, M.Szczepkowski, B.Bartkiewicz, P.Kruszewski

Additional

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	50	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	25	1,00