



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Construction of the Unmanned Aerial Vehicles

### Course

Field of study

Aviation and cosmonautics

Area of study (specialization)

Unmanned Aerial Vehicles

Level of study

Second-cycle studies

Form of study

full-time

Year/Semester

1/2

Profile of study

general academic

Course offered in

polish

Requirements

elective

Year/Semester

1/2

Profile of study

general academic

Course offered in

polish

Requirements

elective

### Number of hours

Lecture

15

Laboratory classes

0

Other (e.g. online)

0

Tutorials

15

Projects/seminars

0

### Number of credit points

1

### Lecturers

Responsible for the course/lecturer:

dr Jędrzej Łukasiewicz

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Wydział Inżynierii Lądowej i Transportu

ul. Piotrowo 3, 60-965 Poznań

Responsible for the course/lecturer:

Responsible for the course/lecturer:

### Prerequisites

Knowledge:

The student has a basic knowledge of the Aviation Law Act

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 construction 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, teledetection, image recognition, automation of individual systems

#### Skills

1. can analyze facilities and technical solutions, can search in catalogs and on manufacturers' websites, ready components of machines and devices, including means and devices for transport and storage, assess their suitability for use in own technical and organizational projects
2. can use basic technical standards regarding unification, safety and recycling

#### Social competence

1. 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
2. is able to properly define the priorities for the implementation of the tasks set by himself or others

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: exam covering the issues discussed in class

### Programme content

#### LECTURE:

1. Construction of unmanned aerial vehicles,
2. sensors and detectors to improve flight safety,
3. communication systems BSP - pilot
4. construction and operation of on-board systems

### 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	30	1,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work	0	0,0