COURSE DESCRIPTION CARD - SYLLABUS

Course name
VLOS and BVLOS flight rules [S1Lot2-BSP>ZWL]

Course

Field of study
Aviation

Year/Semester
2/3

Area of study (specialization)
Unmanned Aerial Vehicles

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
full-time

Requirements
elective

Number of hours

Lecture
15

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

inż. Filip Orzeł

Lecturers

Prerequisites

Knowledge: 1. Basics of mathematics, chemistry and physics. Skills: 1. Using literature (textbooks, internet), ability to perceive lecture content Social competences: 1. Awareness of the need to deepen engineering knowledge and its place in everyday life.

Course objective

Familiarization with the rules for conducting VLOS and BVLOS flights

Course-related learning outcomes

Knowledge:
1. has an ordered, theoretically founded general knowledge of technology and various means of air transport
2. has a structured and theoretically founded general knowledge in the field of key technical issues and detailed
knowledge in the field of selected issues related to air transport
3. has detailed knowledge related to selected issues in the field of manned and unmanned aerial vehicles, in
the field of on-board equipment, control systems, communication and registration systems, automation of

individual systems
1. can obtain information from various sources, including literature and databases, both in Polish and in English, integrate them properly, interpret and critically evaluate them, draw conclusions and exhaustively justify their opinions
2. is able to properly use information and communication techniques, applicable at various stages of the implementation of aviation projects
3. can assess - at least in a basic scope - various aspects of the risk associated with a logistics undertaking in air transport;

Skills:
-

Social competences:
1. understands that in technology, knowledge and skills very quickly become obsolete;
2. is aware of the importance of knowledge in solving engineering problems and knows examples and understands the causes of faulty engineering projects that have led to serious financial and social losses or to serious loss of health and even life
3. is aware of the social role of a graduate of a technical university, in particular understands the need to formulate and convey to society, in an appropriate form, information and opinions concerning engineering activities, technical achievements, as well as the achievements and traditions of the engineering profession;
4. is aware of the social role of a graduate of a technical university, in particular understands the need to formulate and convey to the society, in an appropriate form, information and opinions on engineering activities, technological achievements, as well as the achievements and traditions of the engineer profession

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: writing exam

Programme content

The course program includes familiarizing students with current regulations and rules for performing flights in visual line of sight (VLOS) and beyond visual line of sight (BVLOS) using UAVs. The content includes regulations at the national and European level. Mainly performing flights according to national and European scenarios.

Course topics

1. Polish airspace management
2. PNSA UTM
3. Airspace management in case of Unmanned Aerial Vehicle used
4. European Union law in case of UAV’s use
5. Polish Scenarios (NSTS)
6. European Scenario’s (STS)

Teaching methods

Lecture: informative (conventional), transfer of information in a systematic manner

Bibliography

Basic:
1. Polish regulations - NSTS;
2. European regulations - STS;
3. EU Implementing Regulations 2019/947 and 2019/945,
4. Guidelines No. 7 of the President of the Civil Aviation Authority of 2021

Additional:
-

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	10	0,50