



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Aircraft operation safety [S1Lot2-BTL>BESP]

Course

Field of study

Aviation

Year/Semester

3/5

Area of study (specialization)

Air Transport Safety

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

15

Number of credit points

4,00

Coordinators

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Lecturers

Prerequisites

Knowledge: Basic knowledge of aviation, aircraft and air operations. Skills: Is able to analyze air operations and implement methods of safety analysis. Social competences: Is able to formulate concise questions; is able to define problems; is able to conduct self-study in problem solving.

Course objective

Getting to know all the aspects of the aircraft operations, safety regulations and requirements

Course-related learning outcomes

Knowledge:

1. Student 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 recording systems, automation of individual systems, has basic knowledge of flight simulation training devices and simulation methods used to solve air transport issues.
2. Student has knowledge of aviation safety and management. The student knows the concept of the human factor and methods of assessing human reliability, has detailed knowledge related to selected issues in the field of human capabilities and limitations during aircraft operation in flight, its impact on

health and the ability to perform air operations, as well as the possibility of improving physical condition.

Skills:

1. Student is able to obtain information from various sources, including literature and databases, both in Polish and in English, integrate them properly, interpret them and make a critical evaluation, draw conclusions and exhaustively justify the opinions they formulate.

Social competences:

1. Student understands that in technology, knowledge and skills very quickly become obsolete.
2. Correctly identifies and resolves dilemmas related to the profession of an aerospace engineer.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Final written test.

Programme content

1. Safety Regulations for General Aviation and Commercial Air Transport (PL-6)
2. Definitions, abbreviations and acronyms related to aircraft operations safety.
3. Aircraft operation organizations.
4. Detailed rules and limitations.
5. Aircraft maintenance
6. Continuing airworthiness.
7. Maintenance programme
8. Airworthiness directives
9. Maintenance standards and good practices
10. Accident and incident reporting
11. Aircraft instruments and systems. Onboard safety systems.
12. Manuals, logs and records

Course topics

Aviation regulation for the aircraft maintenance

ICAO History, Polish Aviation Law, EU Aviation Law

Maintenance strategies and aircraft maintenance management.

Degradation and destruction processes. Aircraft diagnostic and damage control. Corrosion, aging and wearing.

Aircraft non-destructive inspections

DOPS, MEL, ETOPS, Part 21, Part M, Part 145, Part 66, PART 147

Aircraft inspections

Aircraft airworthiness

Maintenance organisations

Maintenance Program

Airworthiness directives

Aerospace Ground Equipment

Aircraft Parking and Mooring and Lifting

Weight and Balance

Teaching methods

Lecture

Project

Bibliography

Basic:

1. Convention on International Civil Aviation:

Annex 1 - Personnel Licensing

Annex 6 - Operation of Aircraft

- Annex 8 - Airworthiness of Aircraft
- Annex 13 - Aircraft Accident and Incident Investigation
- Annex 14 - Aerodromes
- Annex 18 - The Safe Transportation of Dangerous Goods by Air
- Annex 19 - Safety Management
- 2. Regulation (EU) 2018/1139 of the European Parliament and of the Council
- Commission Regulation (UE) 965/2012 - OPS
- Rozporządzenie Komisji (UE) 1178/2011 - FCL
- Commission Regulation (UE) 139/2014 - ADR
- Commission Regulation (UE) 1321/2014 - Continuing AIR
- Commission Regulation (UE) 748/2012 - Initial AIR
- Commission Regulation (UE) 2017/373 - ATM/ANS
- Commission Regulation (UE) 2015/340 - ATCO
- Commission Regulation (UE) 996/2010
- 3. Safety Management Manual (Doc 9859).
- 4. Manual of Aircraft Accident and Incident Investigation (Doc 9756)

Additional:

- 1. ICAO, IATA, ULC, FAA web sites

Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	75	3,00