



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Flight planning and monitoring 2 [S1Lot2-PSPL>WiPL2]

Course

Field of study

Aviation

Year/Semester

2/3

Area of study (specialization)

Aircraft Piloting

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

15

Projects/seminars

0

Number of credit points

1,00

Coordinators

Wojciech Nowaczyk

Lecturers

Prerequisites

A student starting this subject should have basic knowledge of flight planning. They should also have the ability to apply the scientific method to problem solving and be willing to work as part of a team.

Course objective

To familiarize the student with the principles of flight planning and monitoring in accordance with applicable regulations, development of an operational flight plan and a flight plan for air navigation services.

Course-related learning outcomes

Knowledge:

1. has detailed knowledge related to selected issues in the scope of the most important phenomena occurring in the Earth's atmosphere, the possibility of their prediction, recognition, research, as well as limiting the negative impact of human activity on the surrounding environment
2. has detailed knowledge related to selected issues in the scope of navigation, flight mechanics and piloting techniques, the use of simulators, flight principles, its preparation, as well as related operational procedures

Skills:

1. is able to obtain information from various sources, including literature and databases, both in Polish and English, integrate it properly, interpret and critically evaluate it, draw conclusions, and exhaustively justify the opinions he formulates
2. is able, when formulating and solving tasks related to civil aviation, to apply appropriately selected methods, including analytical, simulation or experimental methods
3. is able to organize, cooperate and work in a group, assuming different roles in it and is able to properly determine priorities for the implementation of a task specified by himself or others

Social competences:

1. understands that in technology knowledge and skills become outdated very quickly
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:

Lecture:

- assessment of knowledge and skills demonstrated in a written test - 1.5 hours Laboratory exercises: test and rewarding knowledge necessary to complete the problems posed in a given area of laboratory tasks, assessment of knowledge and skills related to the implementation of the laboratory exercise, assessment of the report on the completed exercise.

Programme content

Lecture:

Semester 5:

FUEL PLANNING - CAT.OP.MPA.106 and CAT.OP.MPA.150 and AMC1, 2 and 3

General

Fuel planning (general)

Pre-flight fuel planning for commercial flights Fuel for flight

Fuel reserve and its components

Fuel for contingency Alternative fuel

Final fuel reserve Additional fuel Additional fuel

Calculation of total fuel and completion of the fuel section of the navigation plan (fuel plan) Laboratory exercises:

Detailed fuel calculation procedures

Limited fuel procedure for contingency Isolated airport or heliport procedure

Predetermined point procedure Fuel tankers PRE-FLIGHT PREPARATION

Notice to pilots (NOTAM) at briefing Ground and satellite facilities and services Departure, destination and alternate airports

Air routes and airspace structure Pre-flight preparation of availability GNSS Meteorological briefing

Updating the navigation plan with the latest meteorological information Fuel plan update

Point of equal time (PET) and point of safe return (PSR) Point of equal time (PET)

Point of safe return (PSR)

Course topics

Detailed discussion of fuel planning, fuel reserves and contingency fuel, fuel calculation, procedures, NOTAMs, airports, air routes and airspace structure

Teaching methods

1. Lecture: multimedia presentation.

Bibliography

Basic:

Polak Z., Rypulak A., Bilski J., Avionics, Instruments, and Onboard Systems, WSOSP, Dęblin, 1999.

Additional:

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Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
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)	20	1,00