



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Flight performance and planning 2

### Course

Field of study

Aerospace Engineering

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

2/3-4; 3/5-6

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

### Number of hours

Lecture

60

Laboratory classes

Other (e.g. online)

Tutorials

60

Projects/seminars

### Number of credit points

8

### Lecturers

Responsible for the course/lecturer:

mgr inż. Tomasz Duda

Wydział Inżynierii Środowiska i Energetyki

email: tomasz.aeroprofi@gmail.com

tel. +48 505 071 667

Responsible for the course/lecturer:

dr hab. inż. Agnieszka Wróblewska, prof.PP

Wydział Inżynierii Środowiska i Energetyki

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tel. 61 665 2201

### Prerequisites

The student starting this subject should have a basic knowledge of flight planning. He should also have the ability to apply the scientific method in solving problems and be ready to cooperate within a team.

### Course objective

To acquaint the student with the rules of flight planning and monitoring in accordance with applicable regulations, developing an operational flight plan and flight plan for air navigation services.

### Course-related learning outcomes

Knowledge

1. has detailed knowledge related to selected issues in the field 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 activities on the surrounding environment.



2. has detailed knowledge related to selected issues in the field of flight rules, its preparation, as well as related operational procedures.

3. has expanded knowledge necessary to understand profile subjects and specialist knowledge about construction, methods of construction, manufacture, operation, aircraft control, safety systems, economic, social and environmental impact in the field of aviation engineering for selected specialties:

1. Piloting of aircraft
2. Aero engines and airframes.

#### Skills

1. has the ability to self-study using modern teaching tools, such as remote lectures, websites and databases, teaching programs, e-books.

2. is able to communicate using various techniques in a professional environment and other environments using the formal record of construction, technical drawing, concepts and definitions of the scope of the studied field of study.

3. can obtain information from literature, the Internet, databases and other sources. Is able to integrate obtained information, interpret and draw conclusions from them.

#### Social competences

1. is able to properly define priorities for the implementation of tasks specified by himself or others based on available knowledge.

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 associated responsibility for the decisions taken.

3. Understands the need for critical assessment of knowledge and continuous learning.

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture:

- assessment of knowledge and skills demonstrated on the written test - 1.5 hour (semesters 3-6)

Exercises:

- knowledge acquired as part of the exercises is verified by two 45-minute colloquia carried out in 3 and 7 classes (semester 3-5) and by two 45-minute colloquia carried out in 7 and 15 classes (semester 6)

#### Programme content

Lecture:

semester 3-6:



Flight planning for VFR flights. Flight planning for IFR flights. VFR and IFR navigation plan. Data on airspace, communications, visualization and radio navigation from VFR and IFR maps. General principles of fuel planning, total fuel per flight, reserve fuel. Preparation before flight. ATS flight plan. Flight planning and change of flight planning. The goal of taking into account weight and balance. Load.

exercises:

semester 3-6:

Flight briefing and debriefing

### Teaching methods

1. Lecture: multimedia presentation, illustrated with examples given on the board.
2. Exercises: examples given on the board and performance of tasks given by the teacher - practical exercises.

### Bibliography

Basic

Additional

### Breakdown of average student's workload

	Hours	ECTS
Total workload	200	8,0
Classes requiring direct contact with the teacher	140	5,6
Student's own work (literature studies, preparation for written tests ) <sup>1</sup>	60	2,4

<sup>1</sup> delete or add other activities as appropriate