



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

VFR flight planning

### Course

Field of study

Aviation

Area of study (specialization)

Air Traffic Organisation

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

2/3

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

### Number of hours

Lecture

15

Laboratory classes

0

Other (e.g. online)

0

Tutorials

15

Projects/seminars

15

### Number of credit points

5

### Lecturers

Responsible for the course/lecturer:

dr inż. Marta Galant-Gołębiowska

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Faculty of Civil and Transport Engineering

ul. Piotrowo 3, 60-965 Poznań

Responsible for the course/lecturer:

mgr inż. Marta Maciejewska

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### Prerequisites

Knowledge: Basic knowledge of aviation

Skills: Can analyze the presented data as well as legal regulations and requirements. Can implement data in new environments

Social competences: Prepared for independent work with a presentation of its effects.

### Course objective

Getting acquainted with the principles of visual flight planning, in general aviation, in uncontrolled airspace

### Course-related learning outcomes

Knowledge



1. has ordered and theoretically founded general knowledge in the field of key technical issues and detailed knowledge of selected issues related to air transport, knows the basic techniques, methods and tools used in the process of solving tasks related to air transport, mainly of an engineering nature [L1\_W03]
2. 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 problems air transport [L1\_W006]
3. has basic knowledge of aviation law, organizations operating in civil aviation and knows the basic principles of state aviation functioning, has basic knowledge of key issues in the functioning of civil aviation [L01\_W24]

#### Skills

1. can, when formulating and solving tasks related to civil aviation, apply appropriately selected methods, including analytical, simulation or experimental methods [L\_U04]
2. is able to assess - at least in the basic scope - various aspects of the risk associated with a logistics undertaking in air transport [L\_U06]
3. can analyze the strategies of enterprises and interpret their activities, and can use in practice the basic tools of strategic analysis [L\_U08]

#### Social competences

1. understands that in technology, knowledge and skills very quickly become obsolete [L\_K01]
2. correctly identifies and resolves dilemmas related to the profession of aerospace engineer [L\_K05].

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

Learning outcomes presented above are verified as follows:

Lecture - written test, exercises - final test, project - presentation of the completed project in front of the group

#### Programme content

Lecture: planning flights of general aviation aircraft in uncontrolled space, including in particular:

1. Analysis of the airspace system
2. Checking the availability of airport infrastructure
3. Meteorological analysis
4. Marking and plotting the route
5. Road, speed, fuel - calculations for sections



6. Performance control

8. Mass and balance control

Exercises: implementation of a joint flight planning project between selected cities in Poland.

Determining key values and developing a navigational and operational flight plan in accordance with the guidelines.

Project: development of a flight route between selected airports in Europe. Students will be required to find regulations and payment rules for selected airports. The instructor gives the main guidelines, students carry out projects on their own. At the end of the semester, they present their study to the group.

### Teaching methods

Informative (conventional) lecture (providing information in a structured way) - may be of a course (introductory) or monographic (specialist) character

The exercise method (subject exercises, practice exercises) - in the form of auditorium exercises (application of acquired knowledge in practice - may take various forms: solving cognitive tasks or training psychomotor skills; transforming a conscious activity into a habit through repetition)

Project method (individual or team implementation of a large, multi-stage cognitive or practical task, the effect of which is the creation of a work)

### Bibliography

Basic

1. Flight Planning & Monitoring - EASA | Aviationexam, wyd. Jeppsen
2. Osiągi, wyważenie i planowanie lotu szkolenie EASA, wyd. Pileus
3. Szutowski L., Poradnik pilota samolotowego, Poznań 2007
4. Compa T., Zarządzanie przestrzenią powietrzną, AON, Warszawa 2003
5. Domicz J., Szutowski L., Podręcznik pilota samolotowego, Poznań 2008

Additional

1. Zarządzanie ruchem lotniczym w przestrzeni powietrznej RP, WLOP, Warszawa 2002.
2. Ustawa Prawo Lotnicze.



### Breakdown of average student's workload

	Hours	ECTS
Total workload	125	5,0
Classes requiring direct contact with the teacher	45	2,0
Student's own work (literature studies, preparation for classes, preparation for tests,) <sup>1</sup>	80	3,0

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