COURSE DESCRIPTION CARD - SYLLABUS

Course name

Rules of creating air routes networks

Course

Field of study

Aviation and cosmonautics

Year/Semester

1/2

Area of study (specialization)

Civil aviation

Profile of study

general academic

Level of study

Second-cycle studies

Course offered in

polish

Form of study

full-time

Requirements

elective

Number of hours

Lecture

15

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

15

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

dr inż. Anna Kobaszyńska-Twardowska

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Wydział Inżynierii Lądowej i Transportu

Ul. Piotrowo 3, 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites

Knowledge: Has a basic knowledge of the functioning of air carriers, air traffic management, the impact of aviation on the economy, society and the environment has basic knowledge of the use of air technical facilities for the transport of people, goods, dangerous goods, as well as in the management of air operations and airports

Skills: has the ability to self-study with the use of modern teaching tools, such as remote lectures, websites and databases, teaching programs, e-books

Social competences: can independently search for information in literature and knows the rules of discussion

Course objective

The aim of the course is to familiarize the student with the basic principles related to the shaping of flight connections and the acquisition of the ability to perform an individual project.

Course-related learning outcomes

Knowledge

1. Has broadened knowledge, necessary for understanding of profile subjects and specialist knowledge about construction, methods of construction, manufacturing, operation, air traffic management, security systems, impact on the economy, society and the aviation and aerospace environment for selected specialties:

1. Aeronautical Engineering

2. Space Engineering

3. Civil Aviation

4. Virtual Engineering in Aeronautics

2. Has a structured, theoretically founded general knowledge covering key issues in the field of flight safety and risk assessment

3. Has detailed and structured knowledge in the use of aviation technical facilities in the transport of persons, goods, dangerous goods, as well as in the management of aviation operations and airports

4. Has basic knowledge in the field of law, in particular the law on civil aviation, copyright and protection of industrial property and its impact on the development of technology, can use patent information resources

Skills

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

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

3. Can obtain information from literature, the Internet, databases and other sources. Can integrate the information obtained and interpret conclusions and create and justify opinions

4. Is able to prepare and present a short verbal and multimedia presentation devoted to the results of the engineering task

Social competences

1. Understand the need for lifelong learning; can inspire and organize the learning process of other people

2.It is ready to critically evaluate your knowledge and content, recognize the importance of knowledge in solving cognitive and practical problems and consult experts in the event of difficulties in solving the problem yourself

3. Is able to properly define the priorities for the implementation of the tasks set by himself or others

4. Correctly identifies and resolves dilemmas related to the profession 5. Can think and act in an entrepreneurial way

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:
LECTURE: written exam of the content presented during the lecture

PROJECT: credit on the basis of the submitted paper version of the project and its defense

Programme content

LECTURE:

1. The concept of a connection grid and its definition

2. Connection grid models

3. The working time of flight crews

4. Economic factors and the network of connections

5. The type of carrier, and the shaping of the network of connections

6. Determination of flight routes

7. Planning operations - creating flight schedules

PROEJKT

Project implementation - title: Shaping the air connections network, containing:

1. Creating an example airline

2. Determining which model of connection network will be used - creating a connection map

3. Based on the connection map, the choice of airports, based on the costs for airport operations

4. Determining the exact flight routes

5. Creating a flight schedule - Microsoft Excel

6. Planning flight crew working time for several selected routes

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 the 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. Piotr Kozłowski, Sumeer Chakuu, Michał Nędza: Podstawy transportu lotniczego, 2012

2. Spyra Z., Witczak O.: Czynniki wpływające na wizerunek portów lotniczych, 2017

3. Pijet-Migoń Edyta: Zmiany rynku lotniczych przewozów pasażerskich w Polsce po akcesji do Unii Europejskiej, 2012

Additional

Breakdown of average student's workload

	Hours	ECTS
Total workload	60	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for tests, project preparation) [1]	30	1,0

[1] delete or add other activities as appropriate