COURSE DESCRIPTION CARD - SYLLABUS

Course name
Airports [S1Lot2>Lot]

Course

Field of study
Aviation

Year/Semester
1/1

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
30

Laboratory classes
15

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

3,00

Coordinators

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Lecturers

Prerequisites

Knowledge: Basic knowledge of the English language, understanding of basic issues related to transport logistics Skills: Acquiring knowledge with understanding. Social competences: Is prepared for team work.

Course objective

Getting to know the basic sources of aviation law, conventions, applicable regulations.

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
2. 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

Skills:

1. is able obtain information from various sources, including literature and databases, both in Polish and in English, integrate them properly, interpret and critically evaluate them, draw conclusions and exhaustively justify their opinions
2. is able to properly use information and communication techniques, applicable at various stages of the implementation of aviation projects
3. when formulating and solving tasks related to civil aviation, is able to apply appropriately selected methods, including analytical, simulation or experimental methods
4. can solve tasks using the rules of air traffic and design a runway in accordance with the applicable ICAO requirements

Social competences:
1. is aware of the social role of a technical university graduate, in particular understands the need to formulate and provide the society, in an appropriate form, with information and opinions on engineering activities, technological achievements, as well as the achievements and traditions of the engineer profession
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:

Learning outcomes presented above are verified as follows:
a final test covering the material discussed
project submission and defense at the end of the semester
Pass of the lecture: exam

Programme content

1. Introduction (airport origins, key definitions, airport identification methods)
2. Airport infrastructure (structure and elements of the movement area, PRN horizontal and vertical markings, light and technical aids and apron lighting)
3. Terminals and ground handling (terminal classification, main elements, design principles, terminal configurations, passenger and baggage handling)
4. Polish airports and air traffic (statistics, configurations, locations)
5. Airspace in the vicinity of airports and airport navigation aids
6. Designing the movement area
7. Airport capacity
8. Impact, airport design, location (airport pressure zone, airport profit structure, environmental regulations regarding the establishment of airports)
9. Key airports in the world - statistics, analyzes

Content realized as part of the project activities:
Airport design
1. Acceptance of input data for the project (selection of the aircraft and location of the airport).
2. Wind directions and frequencies
3. Calculation of the length of the main runway. Adoption of the airport reference code
4. Determining the azimuth of the runway
5. Air operations calculations. Adoption of taxiway dimensions
6. Diagram of the designed airport
7. Defense of the project

Course topics

Familiarization with issues related to the construction and operation of airports. Selected issues related to the design of airport facilities and the impact on the environment will also be discussed.

Teaching methods

Informative (conventional) lecture (providing information in a structured way) - may be of a course (introductory) or monographic (specialist) character,
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. Żylicz. M. International Aviation Law, Lexis, Warsaw 2011
2. Compa.M. Airspace capacity. WLOP Dęblin 2009
3. ICAO Annexes
4. Chakuu S., Kozłowski P., Nędza M .: Basics of air transport, Academic Consortium, Kraków, Rzeszów, Zamość 2012
5. Nita S. Designing airports and airports, 2014
6. Kozłowski M., Airports - infrastructure, operation and management, Warsaw, 2015

Additional:
1. Training materials, internal of the Polish Air Navigation Services Agency
2. Rydzkowski W., Wojewódzka-Król K. (ed.): Transport. PWN, Warsaw 1998

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	47	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	28	1,00