



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Airports infrastructure

Course

Field of study

Aerospace engineering

Area of study (specialization)

–

Level of study

Second-cycle studies

Form of study

full-time

Year/Semester

1/1

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

Number of hours

Lecture

30

Laboratory classes

15

Other (e.g. online)

0

Tutorials

0

Projects/seminars

15

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

Mateusz Nowak

Mateusz.s.nowak@put.poznan.pl

Faculty of Civil and Transport Engineering

ul. Piotrowo 3, 60-965 Poznań

Responsible for the course/lecturer:

Marta Galant-Gołębiewska

marta.galant@put.poznan.pl

Faculty of Civil and Transport Engineering

ul. Piotrowo 3, 60-965 Poznań

Prerequisites

Knowledge: Basic knowledge of the English language, understanding of basic issues related to air transport

Skills: Acquiring knowledge with understanding.

Social competences: Is prepared for teamwork.

Course objective

To acquaint students with the construction and structure of airports.

Course-related learning outcomes

Knowledge



1. has detailed knowledge related to selected issues in the field of ground handling of aircraft and propulsion systems, including logistics aspects
2. has an orderly, theoretically founded general knowledge covering key issues in the field of the impact of aviation on the natural environment, emission of toxic compounds from aircraft propulsion, acoustic emission of flying objects
3. has detailed and structured knowledge in the field of using air technical facilities for the transport of passengers, goods, dangerous goods, as well as in the management of air operations and airports

Skills

1. is able to assess material and environmental costs as well as labor costs for the implementation of aviation modules and on-board devices
2. can analyze objects and technical solutions, can search in catalogs and on manufacturers' websites, ready components of machines and devices, including means and transport and storage devices, assess their suitability for use in their own technical and organizational projects
3. can obtain information from literature, the Internet, databases and other sources. Can integrate the obtained information, interpret and draw conclusions from it, and create and justify opinions

Social competences

1. understands the need for lifelong learning; can inspire and organize the learning process of other people
2. Is ready to critically evaluate the knowledge and content received, recognize the importance of knowledge in solving cognitive and practical problems, and consult experts in case of difficulties in solving the problem on its own
3. is able to properly define priorities for the implementation of a task set by himself or others

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: final test covering the discussed material

Laboratory: grade average for theoretical preparation for classes and reports

Project: execution of subsequent phases of the project and its defense at the end of the semester

Programme content

1. Key definitions of airports, methods of identifying airports, sources of law
2. Airport infrastructure - structure and elements of the movement area, horizontal and vertical markings of PRN, light and technical navigation aids and apron lighting)
3. Terminals and ground handling - terminal classification, main elements, design principles, terminal configurations, passenger and baggage handling)



5. Airspace in the vicinity of airports and airport navigation aids
6. Designing the movement area
7. Airport capacity
8. Airport pressure zone, airport profit structure, environmental regulations for establishing airports)
9. Airport safety and security
10. Key airports in the world - statistics, analyzes
11. The impact of airports - noise and exhaust emissions, impact on the development of the region
12. Airport performance - overview of the basic indicators used to evaluate the performance of airports
13. Central Communication Port - discussion of issues related to planning and implementation
14. Certification of airports

Teaching methods

Informative (conventional) lecture (transfer of information in a systematic way) - can be (propedeutical) or monographic (specialist)

Laboratory (experiment) method (students conduct experiments independently)

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

Bibliography

Basic

1. Żylicz. M .Międzynarodowe prawo lotnicze , Lexis, Warszawa 2011
2. Compa.M . Przepustowość przestrzeni powietrznej. WLOP Dęblin 2009
3. Aneksy ICAO
4. Chakuu S., Kozłowski P., Nędza M.: Podstawy transportu lotniczego, Konsorcjum Akademickie, Kraków, Rzeszów, Zamość 2012
5. Nita S. Projektowanie lotnisk i portów lotniczych, 2014
6. Kozłowski M., Porty lotnicze - infrastruktura, eksploatacja i zarządzanie, Warszawa, 2015

Additional

1. Materiały szkoleniowe, wewnętrzne Polskiej Agencji Żeglugi Powietrznej
2. Rydzkowski W., Wojewódzka-Król K. (red.): Transport. PWN, Warszawa 1998



Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	60	2,0
Student's own work (literature studies, preparation for laboratory classes, preparation for tests/exam) ¹	15	1,0

¹ delete or add other activities as appropriate