COURSE DESCRIPTION CARD - SYLLABUS

Course name
CARGO transport [S2LiK1-LC>PCARGO]

Course

Field of study
Aerospace Engineering

Year/Semester
1/2

Area of study (specialization)
Civil Aviation

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
15

Laboratory classes
0

Other
0

Tutorials
15

Projects/seminars
0

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

Knowledge: The student has a basic knowledge of air transport Skills: The student is able to integrate the obtained information, interpret it, draw conclusions, formulate and justify opinions, the ability to perceive, associate and interpret phenomena occurring in the management of organizations Social competences: The student is aware of the importance and understands the non-technical aspects and effects of transport activities

Course objective

The aim of the course is to familiarize the student with the basics of CARGO transport in air transport and to acquire the ability to calculate, for example, weight limits of transport aircraft

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:

- Aeronautical Engineering
- Civil Aviation
2. Has detailed knowledge related to selected issues in the field of above-ground servicing of aircraft and propulsion systems including logistic aspects
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, and in particular the law on civil aviation, copyright and the protection of industrial property and its impact on the development of technology, can

Skills:
1. Is able to 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. Is able to obtain information from literature, the Internet, databases and other sources. Can integrate the information obtained and interpret conclusions and create and justify opinions
4. Can use the formulas and tables, technical and economic calculations using a spreadsheet programming tools of own authorship, specialized software
5. Is able to analyze objects and technical solutions, is able to 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
6. Is able to assess the material, environmental and labor costs for the implementation of aircraft modules and on-board devices

Social competences:
1. Understands the need to learn throughout life; 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 the event of difficulties in solving the problem on their own

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:
LECTURE: written exam in the scope of content conducted as part of the lecture
CLASSES: written colloquium on knowledge and exercises performed during classes

Programme content

LECTURE:
1. Basic concepts and definitions regarding freight forwarding CARGO
2. The role of CARGO transport in Poland - CARGO transport volumes for individual airports in Poland
3. Organization of CARGO transport
4. CARGO terminals and carriers
5. CARGO transport planes
6. DGR - Dengerous Goods Regulations
7. CARGO Handling
8. Weight and balance
EXERCISES:
1. Weight and balance
2. The center of gravity of the CARGO aircraft
3. Mass limitations
4. Samload loading - loading space and loading time
5. Mass and balance report of the aircraft

Course topics

none

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)

Bibliography

Basic
1. EASA ATPL Training – Mass and Balance, Jeppesen, Boeing Company GmbH, Germany 2016
Additional
1. Kwasiborska A., 2012: Analiza zagadnienia załadunku frachtu lotniczego, Logistyka 2, 839–844.
2. Kwasiborska A, 2013: Analiza wybranych aspektów zagadnienia przewozu frachtu lotniczego, Prace Naukowe Politechniki Warszawskiej 89, 45–63
4. Tłoczyński D., 2013: Kierunki rozwoju transportu lotniczego, Współczesne Uwarunkowania Rozwoju Transportu w Regionie 143, 381–398.
5. Urząd Lotnictwa Cywilnego, 2016: Rejestr lotnisk cywilnych 2016, http://www.ulc.gov.pl/_download/lotniska/rejestrlotnisk_cywilnych_15_07_2016-.pdf [dostęp 01.06.2016].
6. Urząd Lotnictwa Cywilnego, 2015: Statystyki przewóz cargo: Ilość obsłużonych przesyłek (w kg) w polskich portach lotniczych w ruchu krajowym i międzynarodowym w czwartym kwartale lat 2013–2014, http://www.ulc.gov.pl/pl/regulacja-rynku/247-aktualnosci/3730-statystyki-przewoz-cargo [dostęp 15.04.2016].
9. Urząd Lotnictwa Cywilnego, 2016: Wykaz lądowisk wpisanych do ewidencji lądowisk, http://www.ulc.gov.pl/_download/lotniska/ewidencja-ladowisk-01-06-2016.pdf [dostęp 01.06.2016].
11. Ustawa z dnia 3 lipca 2002 r. Prawo lotnicze (Dz.U. 2002 nr 130, poz. 112).

Breakdown of average student's workload

	Hours	ECTS
Total workload	55	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	25	1,00