COURSE DESCRIPTION CARD - SYLLABUS

Course name
History of progress in aviation and cosmic [S2LiK2P>HPLiK]

Course

Field of study
Aerospace Engineering

Year/Semester
1/1

Area of study (specialization)
–

Profile of study
practical

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 (e.g. online)
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

dr hab. inż. Wojciech Karpiuk
wojciech.karpiuk@put.poznan.pl

Lecturers

Prerequisites

Knowledge - Student has the basic knowledge necessary to understand social, economic, legal and other non-technical conditions of engineering activities. Skills - Student is able to obtain information from literature, databases and other, properly selected sources. Social competencies - Student understands the need for lifelong learning, can inspire and organize the learning process of other people, understands the need and ability to self-education, shows the ability to work in a team.

Course objective

The aim of the course is to familiarize students with the history of aviation and astronautics in the direction of technical aspects

Course-related learning outcomes

Knowledge:
1. has extended knowledge necessary to understand the profile subjects and specialist knowledge of civil aviation, unmanned aerial vehicles, military aviation, aviation management and aeronautical engineering

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

Social competences:
1. is aware of the social role of a technical university graduate, and especially understands the need to formulate and convey to the society, in particular through the mass media, information and opinions on technological achievements and other aspects of engineering activities; makes efforts to provide such information and opinions in a generally comprehensible manner

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Completion of the lecture - a report on a historical issue related to aviation

Programme content

The origins of aviation
World War I
Inter-war aviation
World War II
Post-war period

Course topics

The origins of aviation:
- earliest attempts, aviation pioneers, first engine flights, airships,

World War I
- the tasks of aviation
- Aircraft armament
- Pioneers of aviation
- The most important aircraft designs (e.g. Nieuport 11, Albatros, Royal Aircraft Factory, Fokkers + bombers)
- aces of the air

Inter-war aviation
- Beginnings of transport aviation (birth of airlines, intercontinental flights)
- record-breaking
- key figures (including John Alcock, Charles Lindbergh, Wiley Post and Harold Gatty, Amelia Earhart)
- military constructions of the inter-war period of various countries including Poland (fighters + bombers)

World War II
- blitzkrieg
- German march on Europe (evacuation of Dunkirk, Battle of Britain)
- Polish squadrons in the Battle of Britain
- beginnings of radar
- Main aircrafts (Messerschmitt Bf 109, Ju 87 Stuka, Spitfire, Hawker Hurricane, Mig-3, Mitsubishi A6M, P-51 Mustang + bombers)
- Beginning of the atomic era (Hiroshima and Nagasaki)

Post-war period:
- jets + beginnings of space aviation
- transport aviation 1945 - 1960
- advances in aerospace
- Cold War 1960 - 1990
- military aviation

Teaching methods

Informative (conventional) lecture (providing information in a structured way) - may be of a course

(introductory) or monographic (specialist) character

Bibliography

Basic:
1. Historia lotnictwa, od maszyny latającej Leonarda da Vinci do podboju kosmosu - Riccardo Niccoli
2. Historia lotnictwa w Polsce - wielu autorów, wydawnictwo Carta blanca 3. Beier F.J., Rutkowski K.: Logistyka. SGH, Warszawa 1993.
3. Historia Lotnictwa. Od Pierwszych Dwupłatowców Po Podbój Kosmosu - David Simons

Additional:
1. Dzieje lotnictwa - Jim Winchester
2. Historia lotnictwa - Robert Jackson
3. FDR and Civil Aviation - Alan P. Dobson

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	15	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	10	0,00