



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

History of progress in aviation and cosmic [S2LiK1>HPLiK]

### Course

Field of study

Aerospace Engineering

Year/Semester

1/1

Area of study (specialization)

Unmanned Aerial Vehicles

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

0

Projects/seminars

0

### Number of credit points

1,00

### Coordinators

dr hab. inż. Wojciech Karpiuk

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### 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:

has a basic knowledge of the history of aviation and astronautics, especially aircraft and space engines, major events and figures that have contributed to the development of specific fields of science relevant to human development, as well as the latest trends in the construction of machinery and equipment

#### Skills:

1. has the ability to self-study using modern teaching tools, such as remote lectures, websites and databases, didactic programs, e-books
2. can obtain information from literature, the Internet, databases and other sources. Can integrate the information obtained and interpret conclusions and create and justify opinions

#### Social competences:

1. understands the need to learn throughout life; can inspire and organize the learning process of other people
2. is aware of the importance and understands the non-technical aspects and effects of engineering activities, including its impact on the environment, and the related responsibility for decisions

### 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	20	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	5	0,00