

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Aerodynamics of Flight and Flight Mechanics</b>		Code <b>1010621261010624111</b>
Field of study <b>Transport</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>3 / 6</b>
Elective path/specialty <b>Aircraft Transport</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: <b>2</b> Classes: <b>1</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>2</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art <b>technical sciences</b>		ECTS distribution (number and %) <b>2 100%</b>
<b>Responsible for subject / lecturer:</b> Jarosław Markowski D.Sc.Eng. email: jaroslaw.markowski@put.poznan.pl tel. (61) 647 5992 Faculty of Machines and Transport 3 Piotrowo street, 60-965 Poznan, Poland		<b>Responsible for subject / lecturer:</b> Benedykt Sasim, D.Sc.Eng email: bensas@wp.pl tel. 602457583 Faculty of Machines and Transport 3 Piotrowo street, 60-965 Poznan, Poland
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Basic knowledge of physics, mathematics, mechanics.
2	<b>Skills</b>	Can analyze the interrelationships between the effects and causes of phenomena and events arising from the laws of physics.
3	<b>Social competencies</b>	Prepared to work in team
<b>Assumptions and objectives of the course:</b> Acquainted with physical laws having reference to aspects of aviation, in particular related to flows around bodies, generation of lift, shaping vortices. Getting to know the methods of analysis flows and the fundamental rights of fluid mechanics.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Has a basic knowledge of what to do to solve a given problem - [-] 2. has a basic knowledge about the construction of aircraft - [-] 3. Has a basic knowledge of aircraft equipment necessary to move in the sky - [-] 4. Is aware of the existing laws of physics in the construction and design of aircraft - [-]		
<b>Skills:</b>		
1. Is able to identify a problem in physics, aerodynamics, fluid mechanics associated with aspects of air - [-] 2. Is able to analyze the cause and effect of the problem and propose a solution to - [-] 3. Is able to formulate the tasks and steps in the construction of aircraft. - [-] 4. Is aware of the existing laws of physics in the construction and design of aircraft - [-]		
<b>Social competencies:</b>		
1. Understands the need for learning throughout life - [-] 2. Is aware of the importance and understand the business impact of non-technical engineer in the field of multi-faceted impact of air transport - [-]		
<b>Assessment methods of study outcomes</b>		
End exam, colloquium and excersises test		

<b>Course description</b>		
Aerospace structures, construction and design features of aircraft (why the plane years). Basic concepts of physics, mechanics, fluid mechanics, aerodynamics associated with aspects of the flight of aircraft. Prospects for the development of aircraft structures to improve the properties of the volatile economic and ecological aircraft.		
<b>Basic bibliography:</b>		
1. Lewitowicz J. i in. Podstawy Eksploatacji Statków Powietrznych Tom 1-5 Wydawnictwo ITWL		
2. Milkiewicz A. , Praktyczna aerodynamika i mechanika lotu samolotu odrzutowego, w tym wysokomanewrowego. Wydawnictwo ITWL, Warszawa 2009.		
3. Łanecka-Makaruk W., Łucjanek W. Mechanika lotu. WKiŁ 1966.		
<b>Additional bibliography:</b>		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. Preparation for lectures	1	
2. Participation in the lecture	30	
3. Learning of lectures content	5	
4. Office hours - lectures	5	
5. Preparation for exam	10	
6. Participation in exam	1	
7. Preparation for excersises	7	
8. Participation in excersises	15	
9. Office hours - excersises	10	
10. Preparation for test	10	
11. Participation in test	0	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	45	2
Contact hours	30	1
Practical activities	15	1