

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Introduction to Research in Aviation		Code 1010621261010624112
Field of study Transport	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 6
Elective path/specialty Aircraft Transport	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 1 Classes: - Laboratory: 1 Project/seminars: -		No. of credits 3
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences		ECTS distribution (number and %) 3 100%
Responsible for subject / lecturer: Wojciech Serdecki, D.SC.Eng email: wojciech.serdecki@put.poznan.pl tel. 61 665 2243 Faculty of Machines and Transport 3 Piotrowo street, 60-965 Poznan, Poland		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Knows the basic laws of physics, in particular in the field of mechanics, electrical engineering and electronics. He has knowledge of air transport.
2	Skills	Is able to handle basic measuring devices.
3	Social competencies	Is prepared to work in a team.
Assumptions and objectives of the course: To provide the basic knowledge of applied research in air transport. Getting to Know the methods, apparatus and measuring systems used in the studies of the wider air transport		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Has a basic knowledge of the parameters characterizing the flight of the airplane and the methods of their determination - [[K1A_W14]]		
2. Has a basic knowledge of the construction of measurement systems and measurement methods used in studies of air transport - [[K1A_W16]]		
3. Has a basic knowledge of the methods for assessing the impact of the wider impact of air transport on the environment - [[K1A_W24]]		
Skills:		
1. Is able to plan and carry out measurements of the characteristic quantities of air transport, interpret the data and draw conclusions. - [[K1A_U07]]		
2. He knows the basic rules and safety standards applicable to air transport, so that, inter alia, able to assess the impact of conditions in the plane and at the airport for being a passenger. - [[K1A_U08]]		
Social competencies:		
1. Understands the need for learning throughout life. - [[K1A_K01]]		
2. He is aware of the importance and understand the business impact of non-technical engineer, particularly in terms of the impact of aviation on the environment. - [[K1A_K02]]		
Assessment methods of study outcomes		

The discussion in the class, using visual materials related to air transport. The written examination		
Course description		
Selected issues of metrology of air transport. Systems and equipment for measuring and recording. Sensors. Equipment on board the aircraft. Methods of measurement of selected parameters characterizing the flight of the aircraft. Methods of measurement of selected parameters characterizing the conditions in the plane and at the airport. Methods for the assessment of the impact of aviation on the environment.		
Basic bibliography:		
1. Gajek A., Juda Z., Czujniki. WKŁ, Warszawa 2008.		
2. Polak Z., Rypulak A., Awionika, przyrządy i systemy pokładowe. WSOSP Dęblin 2002.		
3. Serdecki W. (red) ? Badania silników spalinowych. Wydawnictwo Politechniki Poznańskiej, Poznań 2012.		
Additional bibliography:		
1. Lewitowicz J. (red) ? Problemy badań i eksploatacji techniki lotniczej. Wydawnictwo ITWL, Warszawa 2006.		
Result of average student's workload		
Activity	Time (working hours)	
1. . Preparation for lectures	1	
2. Participation in the lecture	15	
3. Learning of lectures content	7	
4. Office hours	5	
5. Preparation for the exam	10	
6. Participation in the exam	2	
7. Preparation for laboratories	7	
8. Participation for laboratories	15	
9. Preparation for the laboratory test	7	
Student's workload		
Source of workload	hours	ECTS
Total workload	69	3
Contact hours	37	2
Practical activities	32	1