

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Driving arrangements of Airships</b>		Code <b>1010601121010633497</b>
Field of study <b>Mechanical Engineering</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>1 / 2</b>
Elective path/specialty <b>Aircraft Engines</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>Second-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: <b>1</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>  mgr inż. Robert Klosowiak email: robert.klosowiak@put.poznan.pl tel. (061) 665 2331 Faculty of Working Machines and Transportation ul. Piotrowo 3; 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Basic knowledge of thermodynamics and construction of the range shown in college.
2	<b>Skills</b>	Able to apply the scientific method to solve problems, implement experiments and reasoning
3	<b>Social competencies</b>	He knows the limitations of their knowledge and skills, is able to accurately formulate questions, understands the need for further education
<b>Assumptions and objectives of the course:</b> - To familiarize students with basic knowledge on modern powertrain aircraft.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Has an extended knowledge in selected areas of technical mechanics related to the chosen specialization (e.g. soil mechanics). - [K2A_W16]		
2. Has an in-depth knowledge of the design and principles of operation and grading machines from the equipment of the chosen group. - [K2A_W18]		
3. Has a general understanding of the types of tests and test methods for working machines using modern measurement techniques and data acquisition. - [K2A_W20]		
<b>Skills:</b>		
1. Is able to freely use an international language in contacts with professionals from the same field of study. - [K2A_U01]		
2. Is able to perform a fairly complex design project of an average working machine or a subsystem using modern CAD tools, including tools for spatial modeling machines and finite elements calculation method. - [K2A_U07]		
3. Is able to perform basic measurements of mechanical properties on a selected machine using modern measurement systems. - [K2A_U08]		
<b>Social competencies:</b>		
1. Is able to think and act in an entrepreneurial manner. - [K2A_K05]		
2. Is aware of and understands the importance and impact of non-technical aspects of mechanical engineering activities and its impact on the environment, is aware of responsibility for decisions. - [K2A_K02]		
3. Is able to set priorities for realization of undertaken tasks. - [K2A_K04]		

<b>Assessment methods of study outcomes</b>		
- The written test		
<b>Course description</b>		
- General characteristics of air power units: the division, the basic parameters, requirements and application areas. The characteristics of air drives: inlets, fan and compressor, combustor, turbine exhaust systems. Modular structures.		
<b>Basic bibliography:</b>		
1. Cichosz E. o inni, Charakterystyka i zastosowanie napędów, WKiŁ, 1980r. 2. Ilustrowany Leksykon Lotniczy, Napędy, WKiŁ, 1993r		
<b>Additional bibliography:</b>		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. Participation in the lecture	15	
2. Participation in exercises	15	
3. Preparing to pass the lectures	5	
4. There are prepared to pass exercises	6	
5. Prepare for exercises	10	
6. Participation in the successful completion of lectures	2	
7. Participation in completing exercises	2	
8. Consultation	2	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	57	2
Contact hours	36	1
Practical activities	0	0