

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Ergonomics</b>		Code <b>1010612121010622331</b>
Field of study <b>Mechanika i budowa maszyn</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>1 / 2</b>
Elective path/specialty <b>Product engineering (Inżynieria produktu)</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>-</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>1</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		ECTS distribution (number and %)
<b>Responsible for subject / lecturer:</b>  Marek Zablocki PhD (Eng) email: Marek.Zablocki@put.poznan.pl tel. 616652056 Faculty of Machines and Transport Piotrowo Street 3, 60-965 Poznan		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	basic knowledge from the field of theory of machines, machine structure, science about man;
2	<b>Skills</b>	logical thinking, utilisation of information acquired from the library, Internet, standards, catalogues;
3	<b>Social competencies</b>	understanding the need of acquiring transferred knowledge;
<b>Assumptions and objectives of the course:</b> Gaining knowledge on the subject: significance of ergonomy in the activities of engineers		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b> 1. Has knowledge about safety and ergonomics in the design and operation of the machines and the risks that machines create for the environment. - [K2A_W08]		
<b>Skills:</b> 1. Is able to perform a fairly complex design project of an average working machine or a subsystem using modern CAD tools, - [-]		
<b>Social competencies:</b> 1. Understands the need for lifelong learning; is able to inspire and organize the learning process of others. - [K2A_K01] 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] 4. Is aware of social role of mechanical engineer, understands the need for and is able to deliver opinions and knowledge in the field of machine design, particularly through the media. - [K2A_K06]		
<b>Assessment methods of study outcomes</b>		
Lecture: course credits obtained on the basis of a colloquium		
<b>Course description</b>		

<p>? Basic concepts: origins of ergonomics as a scientific discipline, legal protection of man;</p> <p>? Position of ergonomic designing in the methodology of technical designing in machine construction (requirements in the process of technical designing);</p> <p>? Anthropotechnical and sociotechnical systems, somatic and receptor interrelationships in the system;</p> <p>? Analysis of anthropometric, biomechanical and psychic features and assisting design work in ergonomics: traditional approach and utilisation of CAD systems, motion capture devices or 3D scanning;</p> <p>? Analysis of anthropometric and biomechanical features in virtual features;</p> <p>? Detailed principles of product ergonomic designing in machine construction;</p> <p>? Contemporary fields of ergonomic activity, e.g.: ergonomics for senior citizens and persons with disabilities; ergonomics of extreme works; ergonomics of leisure time and sport (design criteria, requirements, standardisation);</p> <p>? Instances of knowledge integration in ergonomic designing: e.g.: typography and its significance for designing of signalling and controlling equipment; building engineering and the applied canons of human body; designing of forms of technical objects employing empirical investigations of somatic and receptor traits of the human body;</p> <p>? Development trends in designing for needs of ergonomics.</p>		
<b>Basic bibliography:</b>		
<b>Additional bibliography:</b>		
<b>Result of average student's workload</b>		
<b>Activity</b>		<b>Time (working hours)</b>
1. -		25
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	25	1
Contact hours	17	0
Practical activities	0	0