

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Product Ergonomics		Code 1011101351011127536
Field of study Engineering Management - Full-time studies -	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 5
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) elective
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 15 Classes: 15 Laboratory: - Project/seminars: -		No. of credits 4
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 Technical sciences		ECTS distribution (number and %) 4 100% 4 100%
Responsible for subject / lecturer: dr inż. Beata Mrugalska email: beata.mrugalska@put.poznan.pl tel. +48(61) 6653364 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Student has basic knowledge about a workplace in the realm of ergonomics and macroergonomics.
2	Skills	Student can discern their system, socio-technical, organizational, economic and non-technical aspects of the human-technical object system.
3	Social competencies	Student is aware of the need to shape products including physical, psychological features and capabilities of an individual.
Assumptions and objectives of the course: Developing an understanding for theoretical aspects and practical skills of ergonomic product development.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Student has basic knowledge of products? lifecycle - [K02-InzA_W01] 2. Student knows fundamental methods, techniques, tools and materials that are applied in solving simple engineering tasks relating building and machines? utilization - [K04-InzA_W02] 3. Student has rudimental knowledge which is indispensable to comprehend non-technical conditions of engineering activity; knows basic health and safety procedures - [K05-InzA_W03] 4. Student knows some typical industrial technologies and has an extensive knowledge of building technologies and machines? utilization - [K07-InzA_W05]		
Skills:		
1. Student can make use of analytic, simulation and experimental methods to formulate and deal with engineering tasks - [K01-InzA_U2] 2. Student can discern its systemic, socio-technical, organizational, economic and non-technical aspects - [K01-InzA_U3] 3. Student can make a preliminary economic analysis in taking up engineering activities - [K01-InzA_U4] 4. Student can make an identification of project activities and solve simple project tasks within the area of product - [K01-InzA_U6]		
Social competencies:		

1. Student is conscious of the relevance and understands non-technical aspects and consequences of engineering activity, including an impact on a human being, and connected with it , responsibility for undertaken decisions - [K01-InzA_K1]
 2. Student is aware of the fact, that creating the product which fulfils the user?s needs, requires system approach - [K01-InzA_K2]

Assessment methods of study outcomes		
Formative assessment: Classes: current evaluation of the assigned tasks (from 0 to 5 points); Lectures: evaluations based on questions relating to the presented materials during the previous lectures. Collective assessment: Classes: average of partial exercises; credits given after achieving at least 3.0; Lectures: written test (open questions) concerning material presented during the lecture		
Course description		
The notion of products and ergonomics of products. Criteria of product evaluation. Ergonomic design. Legal regulations and norms in ergonomic design. Tasks of ergonomics of products. Advantages of ergonomic product design. Disadvantages of low level of ergonomic product design. Methods, tools for ergonomic shaping of the product and evaluation of product ergonomic quality. Ergonomics and industrial design. Responsibility for a product.		
Basic bibliography:		
1. Jabłoński J. (red.), Ergonomia produktu. Ergonomiczne zasady projektowania produktów, Wyd. Politechniki Poznańskiej, Poznań, 2006		
Additional bibliography:		
1. Tytyk E., Projektowanie ergonomiczne, Wydawnictwo Naukowe PWN, Warszawa, 2001		
Result of average student's workload		
Activity	Time (working hours)	
1. lecture	15	
2. preparation for lecture credit	20	
3. classes	15	
4. preparation for classes	30	
5. consultation	18	
6. credits	2	
Student's workload		
Source of workload	hours	ECTS
Total workload	100	4
Contact hours	50	2
Practical activities	15	1