

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Macroergonomics		Code 1011102321011120211
Field of study Engineering Management - Full-time studies -	Profile of study (general academic, practical) general academic	Year /Semester 1 / 2
Elective path/specialty Quality Systems and Ergonomics	Subject offered in: Polish	Course (compulsory, elective) elective
Cycle of study: Second-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 15 Classes: 15 Laboratory: - Project/seminars: -		No. of credits 3
Status of the course in the study program (Basic, major, other) other		(university-wide, from another field) university-wide
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 3 100% 3 100%
Responsible for subject / lecturer: dr hab. inż. Aleksandra Jasiak prof. nadzw. email: aleksandra.jasiak@put.poznan.pl tel. 061 665 3384 Faculty of Engineering Management ul. Strzelecka 11, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Basic information on ergonomics as well as basics on management and marketing.
2	Skills	Is able to use basic rules of ergonomics and ergonomic requirements for design of workplaces.
3	Social competencies	Is aware of the role of ergonomics in human life.
Assumptions and objectives of the course: Subject target is to know theoretical and practical problems. Connected to the macroergonomics issues.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Has knowledge about the subject of contextual sciences in relation to sciences on management and ergologic sciences and used in them research methods as well as about common and specific conceptual apparatus in relation to sciences on management. - [K2A_W01]		
2. Has deepened knowledge on legal standards, their sources, changes as well as methods of impact on organizations. - [K2A_W12]		
Skills:		
1. Is able to use theoretical knowledge to describe and analyse reasons and the course of processes and social phenomena (cultural, political, legal, economic) as well as is able to formulate own opinions and select critical data and analyse methods. - [K2A_U02]		
2. Possesses the skill to use acquired knowledge in different scopes and forms, expanded by critical analysis of effectiveness and usefulness of knowledge used. - [K2A_U06]		
Social competencies:		
1. Is able to notice dependence on causes and effects in realization of set goals and grade ranks of significance of alternative or competitive tasks. - [K2A_K03]		
2. Is aware of the interdisciplinarity of knowledge and skills necessary to solve complex problems of organization and the need of building interdisciplinary teams. - [K2A_K06]		

Assessment methods of study outcomes		
Forming evaluation: - in the field of lectures: based on answers on questions relating to the material discussed during previous lectures, - in the field of exercises: based on evaluation of current progress of tasks execution. Summarising evaluation: - in the field of lectures: written exam in specific contents presented during lecture, - in the field of exercises: reports of performed exercises.		
Course description		
Programme of the subject covers the following issues: Methodological and practical determinants of non-traditional method in technical designing. Problem of non-traditional project information. Human factor criteria and ergonomic criterion. Content of work. Non-technical criteria in the process of manufacturing systems designing. Systems life cycles and current designing. Ergonomic information system for manufacturing systems designing needs. Methodological concepts of macroergonomic designing of manufacturing systems. Role of ergonomics in effectiveness increasing of companies? marketing activities. Development trends of macroergonomics as well as the possibilities of their implementation in the production and service companies operations. Management of the company through the prism of human factor with special attention on information ? decision processes ergonomics and interpersonal contacts ergonomics. Issues of work stress in the company.		
Basic bibliography:		
1. Aleksandra Jasiak, Agnieszka Misztal, Macroergonomics and macroergonomic designing : supplementary materials WPP Poznań 2004 2. Aleksandra Jasiak, Human factor criterion in manufacturing systems designing, Poznań 1993 3. Krystyna Wasińska, Quality of work environment and its influence on human functioning in technical system, Wyższa Szkoła Pedagogiczna Zielona Góra 1999 4. Cooper C.L., Payne R (red) Stress in work, PWN Warszawa 1987 5. Edward Kowal, Economic - social aspects of ergonomics, Warszawa 2002 6. Leszek Pacholski, Aleksandra Jasiak, Macroergonomics, WPP Poznań 2011 7. Aleksandra Jasiak, Macroergonomics in designing of work systems and quality of life, WPP Poznań 2015		
Additional bibliography:		
1. Articles in Zeszyty Naukowe PP 2. Aleksandra Jasiak, Anna Berkowska, Organizational criteria forming labour safety in the medium size production-service companies (CD and monograph), pp. 205-214, 4-th International Conference on Human Factors and Ergonomics (AHFE), San Francisco, USA [in:] Advances in social and organizational factory, ed. Peter Vink, Taylor and Francis Group, 2012 3. Aleksandra Jasiak, Dariusz Swereda, Ergonomics of persons with disabilities (II edition, extended), WPP Poznań 2009		
Result of average student's workload		
Activity	Time (working hours)	
1. Lecture	15	
2. Exercises	15	
3. Individual consulting	10	
4. Preparation for classes	15	
5. Preparation for the exam	15	
6. Student's own work	15	
7. Exam	3	
Student's workload		
Source of workload	hours	ECTS
Total workload	88	3
Contact hours	43	2
Practical activities	45	2