

| STUDY MODULE DESCRIPTION FORM | | |
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| Name of the module/subject Macroergonomics | | Code 1011105321011120211 |
| Field of study Engineering Management - Part-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) part-time | |
| No. of hours Lecture: 10 Classes: 10 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 | | ECTS distribution (number and %) |
| 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. Jasiak A. Misztal A., Makroergonomia i projektowanie makroergonomiczne: materiały pomocnicze WPP Poznań 2004
2. Jasiak A., Kryterium czynnika ludzkiego w projektowaniu systemów wytwarzania, WPP Poznań 1993
3. Jasiak A., Makroergonomia w projektowaniu systemów pracy i jakości życia, WPP Poznań 2015
4. Pacholski L., Jasiak A., Makroergonomia, WPP Poznań 2011
5. Kowal L., Ekonomiczno-społeczne aspekty ergonomii, PWN Warszawa 2002
6. Aleksandra Jasiak, Agnieszka Misztal, Macroergonomics and macroergonomic designing : supplementary materials WPP Poznań 2004
7. Aleksandra Jasiak, Human factor criterion in manufacturing systems designing, Poznań 1993
8. Krystyna Wasińska, Quality of work environment and its influence on human functioning in technical system, Wyższa Szkoła Pedagogiczna Zielona Góra 1999
9. Cooper C.L., Payne R (red) Stress in work, PWN Warszawa 1987
10. Edward Kowal, Economic - social aspects of ergonomics, Warszawa 2002
11. Leszek Pacholski, Aleksandra Jasiak, Macroergonomics, WPP Poznań 2011
12. Aleksandra Jasiak, Macroergonomics in designing of work systems and quality of life, WPP Poznań 2015

Additional bibliography:

1. Jasiak A., Czwarte oblicze makroergonomii, Zeszyty Naukowe PP seria Organizacja i Zarządzanie nr. 71 s. 137-150, Poznań 2016
2. Pacholski L. [ed], Macroergonomics vs social ergonomics, WPP Poznań 2009
3. Articles in Zeszyty Naukowe PP
4. 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
5. 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 | 10 | |
| 2. Exercises | 10 | |
| 3. Individual consulting | 10 | |
| 4. Preparation for classes | 10 | |
| 5. Preparation for the exam | 10 | |
| 6. Student's own work | 7 | |
| 7. Exam | 3 | |
| Student's workload | | |
| Source of workload | hours | ECTS |
| Total workload | 60 | 3 |
| Contact hours | 23 | 2 |
| Practical activities | 10 | 1 |