STUDY MODULE DESCRIPTION FORM

Name of the module/subject		Code
Work safety ergonomics		**1011104241011123035**
Field of study	Profile of study (general academic, practical)	Year /Semester
Safety Engineering - Part-time studies - First-	**(brak)**	**2 / 4**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**obligatory**
Cycle of study:	Form of study (full-time,part-time)	
First-cycle studies	**part-time**	
No. of hours		No. of credits
Lecture: **-** Classes: **-** Laboratory: **-** Project/seminars: **10**		**4**
Status of the course in the study program (Basic, major, other)	(university-wide, from another field)	
(brak)	**(brak)**	
Education areas and fields of science and art		ECTS distribution (number and %)

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	The student defines and characterizes: basic knowledge of mathematics, physics, chemistry, basic technologies of production processes, selected concepts within the sciences of organization and management, basics of ocupational safety management. The student has knowledge of lectures and laboratory exercises with the subject "Ergonomics in occupational safety"
2	**Skills**	The students can interpret relationships occurring in the system of human-technical object, organize work that causes minimal workload ensures security.
3	**Social competencies**	The student is aware of the social role of a technical college graduate, and of predispositions to apply occupational safety principles.

Assumptions and objectives of the course:

-Teaching students how to prevent the negative consequences of excessive workload. Understanding the theoretical and practical problems in the design and organization of technical systems to ensure ergonomics and safety. The use of the acquired knowledge to solve problems in the field of adapting the work to the capabilities of the human body and ensuring safety.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Knows the basic dependencies in a given discipline. - [[K1A_W24}]
2. Knows the meaning of concepts that rule a given discipline for Safety Engineering. - [[K1A_W08]]
3. Knows the definition of the subject and scope of the discipline. - [[K1A_W11]]
4. Knows the advanced dependencies for the given discipline. - [[K1A_W17]]
5. Knows the characteristic phenomena for a given discipline. - [[K1A_W13]]
6. Knows the current trends within the discipline. - [[K1A_W18]]
7. Knows interpretations of characteristics for a given discipline. - [[K1A_W09]]

Skills:

1. Is able to plan and carry out experiments, including measurements and computer simulations, to interpret the results and draw conclusions. - [[K1A_U08]]

2. It has the necessary preparation to work in an industrial environment, knows safety rules connected with a given wok and is able to enforce their use in practice. - [[K1A_U11]]

3. . Can make a critical analysis of the methods of operation and evaluate the existing technical solutions, in particular for machinery, equipment, facilities, systems, processes, services. - [[K1A_U13]]

4. . Is able to identify and formulate the specifications of simple engineering tasks of practical nature, characteristic to safety engineering. - [[K1A_U14]]

5. . Is able to assess the suitability of methods and tools, as well as select and apply appropriate methods and tools and use them effectively. - [[K1A_U15]]

Social competencies:

1. . Understands the need and knows means how to self-study, improves his professional, personal and social competence; can argument the need to learn for the whole life - [[K1A_K01]]

2. . Student is fully aware of the responsibility that he has taken for his own work and expresses readiness to comply with the rules of team work as well as responsibility for mutually realized and completed tasks. - [[K1A_K03]]

3. Can determine some causal relationships in the process of targets implementation and rank pertinence of alternative or competitive tasks. - [[K1A_K04]]

4. The student is aware of the social role of a technical college graduate. Takes up an effort to pass these information and opinions, which were commonly understood. - [[K1A_K07]]

Assessment methods of study outcomes

-Project assessment

Course description

-Ergonomic aspects of man-machine system. Models of the course and causes of the accident. Physiology of work: the cost of physiological work, preventing overloads. The arduousness and hazard of work. The health effects of excessive burden. The human factor in the organization of work and management. Physico-chemical environment factors of the human work. Information- decision-making processes, controlling the machines and technical equipment. Anthropometric base formation and organization of the work. The crux of ergonomic approach (project management, checklists). Marketing ergonomics. Methods of work, tasks and their execution. Posture and movement associated with the work. Basics of ergonomic design.

Basic bibliography:

1. Pacholski L., (red), Ergonomia (Ergonomics), Wyd. Politechniki Poznańskiej, Poznań, 1986

2. Koradecka D., (red), Bezpieczeństwo pracy i ergonomia (Occupational safety and ergonomics), Wyd. CIOP, Warszawa, 1999

3. Tytyk E., Projektowanie ergonomiczne (Ergonomic design), Wyd. PWN, Warszawa 2001

4. Wejman M., Diagnozowanie środowiska pracy (Diagnosing working environment), Wyd. Politechniki Poznańskiej, Poznań 2012

5. Horst W., (red), Ergonomia z elementami bezpieczeństwa i ochrony zdrowia w pracy, Wyd. Politechniki Poznańskiej, Poznan 2012

Additional bibliography:

1. Norms, standards, regulation specified by the lecturer.

Result of average student's workload

Activity	Time (working hours)
1. Participation in projects	10
2. Preparing projects	10

Student's workload

Source of workload	hours	ECTS
Total workload	20	4
Contact hours	10	2
Practical activities	10	2