

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Economics of safety project		Code 1011105221011126440
Field of study Safety Engineering - Part-time studies - Second-	Profile of study (general academic, practical) (brak)	Year /Semester 1 / 2
Elective path/specialty Ergonomics and Work Safety	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: 8 Classes: 12 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		ECTS distribution (number and %) 4 100%
Responsible for subject / lecturer: dr inż. Grzegorz Dahlke email: grzegorz.dahlke@put.poznan.pl tel. 6653379 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Students should know the basic economic indicators characterizing the enterprise.
2	Skills	Students should be able to apply the learned knowledge in practical situations during the classes laboratory exercises .
3	Social competencies	The student is aware of the structure of how the quality of the work influences the economic situation at the enterprise level and the state's level. He can also discern the need for continuous improvement of knowledge.
Assumptions and objectives of the course: Acquiring the ability to investigate the relation between action regarding safety and effects in the form of external benefits at the state and enterprise level.		
Study outcomes and reference to the educational results for a field of study		
Knowledge: 1. He knows the concepts such as labour costs, the consequences of poor working conditions, and economic aspects of shaping macroeconomic conditions, economic aspects of health and safety - [K2A_W08] 2. He knows the insurance systems in occupational safety, employment law, social security, health insurance, employment fund, guarantee employee benefits fund, social security law - [K2A_W27]		
Skills:		

<ol style="list-style-type: none"> 1. Can acquire, integrate, interpret data from literature, database or other properly matched sources, both in English or other foreign language accepted as an international language of communication within economic safety aspects, as well as to draw conclusions, formulate and justify opinions - [K2A_U1] 2. Can apply various techniques in order to communicate in occupational environment and other environments - [K2A_U2] 3. Can create, both in English and Polish language, a well- documented report of problems within economic safety aspects, which present the results of their own research - [K2A_U3] 4. Can prepare and give oral presentation relating to detailed issues within the realm of economic safety aspects in Polish and other foreign language - [K2A_U4] 5. Has self-study ability and comprehends it - [K2A_U5] 6. Student can apply information-communicative techniques to deal with tasks that are typical of engineering activity - [K2A_U7] 7. Can, while formulating and solving engineering tasks, discern their systemic and non-technical aspects and also socio-technical, organizational and economic approach - [K2A_U10] 8. Can come up with a suggestion how to make use of state-of-the art technology (techniques and technology) within products design - [K2A_U12] 9. Has got the preparation that is indispensable to be able to work in an industrial environment and also knows safety rules connected with a given work along with the ability to impose their use in practice - [K2A_U13] 10. Is able to analyze engineering actions in economic terms - [K2A_U14] 11. Student can assess the utility of routine methods and tools that are designed for solving simple engineering tasks of practical nature, characteristic to the economic safety aspects as well as choose and apply an appropriate method and tools and also use it effectively, bearing in mind non-technical aspects - [K2A_U17] 12. Student can, according to a given specification, do an economic analysis of systems or processes connected with safety, while using appropriate methods, techniques and tools, as well as solve complex engineering tasks - [K2A_U18]
<p>Social competencies:</p> <ol style="list-style-type: none"> 1. Understands the need and knows means how to self-study (first, second and third cycle studies, postgraduate studies, qualification courses)- improving professional, personal and social competence; can argument the need to learn for the whole life - [K2A_K1] 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 - [K2A_K3] 3. Can determine some causal relationships in the process of targets implementation and rank pertinence of alternative or competitive tasks - [K2A_K4] 4. Is able to creatively plan and manage business ventures - [K2A_K6]

<p>Assessment methods of study outcomes</p>
<p>Formative assessment:</p> <p>Classes: based on two written tests</p> <p>Project work: on the basis of the group project</p> <p>Lectures: in the basis of a written test from the material presented during the lectures</p> <p>Collective assessment:</p> <p>Classes: on the basis of an arithmetic average taken from two written assignments (5 tasks); exercises are scores 0-1; positive mark will be given after doing 50% of the tasks</p> <p>Project work: project assessment according to the following guideline: each group member is evaluated on the basis of individual tasks done in a project group</p> <p>Lectures: an arithmetic average taken from the written tests; the answer is scored 0-1; credits will be given after achieving 51% of the total points.</p>
<p>Course description</p>
<p>Expenditures. Costs. External benefits. The labour costs. Costs of consequences with regards to poor working conditions. Economic aspects of developing work conditions. Macroeconomic aspects of developing work conditions. Economic aspects of health and safety - Economic stimulants to improve working conditions. Insurance systems in occupational safety. The social security system in Poland. Law on social security. Social insurance obligation. Determination of entitlement to social security benefits and the payment of these benefits. Assessment and collection of social security contributions, health insurance, Labour Fund and Guaranteed Employee Benefits Fund. The case law in the field of social security disability. The relationship between insurance premiums and the level of occupational safety. The criteria for determining risk categories for group activities. The rules for determining the interest rate premium on the social accident insurance for the company.</p>

Basic bibliography:

1. Ekonomiczne aspekty kształtowania warunków pracy, dr Jan Rzepecki (CIOP-PIB), Bezpieczeństwo pracy, 2007, nr 12
2. Informacja o świadczeniach pieniężnych z funduszu ubezpieczeń społecznych oraz o niektórych świadczeniach z ubezpieczenia społecznego. ZUS, Warszawa (lata 2003 do 2006)
3. Kowal E., (2002), Ekonomiczno ? społeczne aspekty ergonomii, Wydawnictwo Naukowe PWN, Warszawa ? Poznań
4. J. Rzepecki Składki i świadczenia z ubezpieczenia wypadkowego ZUS ? funkcjonowanie systemu. ?Bezpieczeństwo Pracy? 11(422) 2006
5. J. Rzepecki Badanie ekonomicznych skutków wdrażania systemów zarządzania BHP. Raport końcowy z realizacji zadania badawczego w ramach programu wieloletniego pn. ?Dostosowywanie warunków pracy w Polsce do standardów Unii Europejskiej?, CIOP-PIB, Warszawa 2007
6. Rzepecki J. Model zróżnicowanej składki na społeczne ubezpieczenie wypadkowe. ?Bezpieczeństwo Pracy?, 5 (346), 2000
7. Sierpińska M., Jachna T., (1997), Ocena przedsiębiorstwa według standardów światowych, Wydawnictwo Naukowe PWN, Warszawa

Additional bibliography:

1. Rozporządzenie Ministra Pracy i Polityki Społecznej z dnia 29 listopada 2002 r. w sprawie różnicowania stopy procentowej składki na ubezpieczenie społeczne z tytułu wypadków przy pracy i chorób zawodowych w zależności od zagrożeń zawodowych i ich skutków. (Dz.U. nr 200, poz. 1692)
2. Ustawa z dnia 13 października 1998 r. o systemie ubezpieczeń społecznych. (t.j.Dz.U. 2007 nr 11 poz. 74) ze zm.
3. Ustawa z dnia 30 października 2002 r. o ubezpieczeniu społecznym z tytułu wypadków przy pracy i chorób zawodowych. (Dz.U. nr 199, poz. 1673) ze zm.

Result of average student's workload

Activity	Time (working hours)
1. Participation in lectures	8
2. Participation in classes	12
3. Preparation for classes	15
4. Preparation for the final credits	15
5. Overview of the credits	1

Student's workload		
Source of workload	hours	ECTS
Total workload	51	4
Contact hours	20	2
Practical activities	31	2