



Occupational health and safety
Educational subject description sheet

Basic information

Field of study Safety engineering		Education cycle 2021/22	
Speciality -		Subject code WIKSiGIBS.I10B.1425.21	
Organizational unit The Faculty of Environmental Engineering and Geodesy		Lecture languages english	
Study level First-cycle (engineer) programme		Mandatory optional	
Study form Full-time		Block major subjects	
Education profile General academic		Disciplines Environmental engineering, mining and energy	
		Subject related to scientific research Yes	
		Subject shaping practical skills Nie	
Teacher responsible for the subject	Łukasz Kuta		
Other teachers conducting classes	Łukasz Kuta		
Period Semester 5	Examination exam	Number of ECTS points 4.0	
	Activities and hours lecture: 30 project classes: 30		

Goals

C1	To transfer a knowledge for students in the area of occupational safety.
C2	Transfer of knowledge for students in the field, how to create a safety work conditions.
C3	To make students aware of problems related to non-compliance with work safety rules.

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge - Student knows and understands:			
W1	has knowledge of health and safety at work; knows the rights and obligations of the employer and employee, knows the legal consequences in the case of non-compliance by each worker a rule.	IB_P6S_WG05	written credit, active participation, test
W2	knows the rules of appointing a post-accident commission and conditions for post-accident procedures	IB_P6S_WG09	written credit, active participation, test
W3	has knowledge of the identification of hazards at the workplace. He knows the safety measures applied at workplace, knows the principles of creating a BIOZ plan, work instruction (general, workplace). He knows basic occupational diseases as a consequence of exposure to specific work environment factors.	IB_P6S_WG11	written credit, active participation, test
Skills - Student can:			
U1	Student is able to independently solve problems in the field of health and safety in various areas of business.	IB_P6S_UW10	project, presentation
U2	Students develops workplace safety instructions, he prepares a BIOZ plan, develops post-accident documentation, can choose appropriate preventive measures to improve working conditions in a specific position	IB_P6S_UW11	project, presentation
U3	Student is able to assess the effects of hazards in the workplace. He is able to use the current legal procedures to interpret the behavior of employees and employers. He is able to properly divide the factors of the work environment in some groups.	IB_P6S_UW15	project, presentation
Social competences - Student is ready to:			
K1	Student is aware that hazards which occur in the work environment can directly affect the safety of employees, property and the natural environment	IB_P6S_KO03	project, presentation
K2	Student understands an impact of his activity and its impact on the functioning of the safety level for pens and society.	IB_P6S_KO04	project, presentation

Balance of ECTS points

Activity form	Activity hours*
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lecture	30	
project classes	30	
presentation/report preparation	10	
report preparation	5	
exam / credit preparation	10	
lesson preparation	20	
consultations	2	
Student workload	Hours 107	ECTS 4.0
Workload involving teacher	Hours 62	ECTS 2.1
Practical workload	Hours 35	ECTS 1.2

* hour means 45 minutes

Study content

No.	Course content	Activities
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1.	<p>1. Determining the role of occupational safety and health in modern company.</p> <p>2. Health and safety management at the workplace. It is better to finance preventive activities or the effects of the lack of such activities? Case study.</p> <p>3. Planning the employee's basic rights and duties. Carrying out work safety inspections by the National Labor Inspectorate and health and safety service.</p> <p>4-5. Identification and classification of factors occurring in the work environment.</p> <p>6. Preparation of post-accident protocol. Operation of the post-accident commission. Classification of accidents. Determining the causes of accidents. "Ishikawa" and "5 steps" methods. Determining the scope of compensation. The Social Insurance Institution.</p> <p>7. Development of job procedures for chosen profession.</p> <p>8-10. Identification of hazards at selected work stations based on graphic material in company. Construction of a checklist. Auditing workstations. Presentation of threats at selected workplaces by students.</p> <p>11. Observing the principles of health and safety at works recognized as particularly dangerous in selected industries. Protection of employees at the construction site.</p> <p>12. Preparation of the workplace card. Preparation of the training schedule.</p> <p>13. Matching appropriate work protection measures to the analyzed examples. Case study.</p> <p>14. Planning the scope of duties of people managing employees in the field of health and safety and supervision over working conditions. National Labor Inspectorate, State Sanitary Inspection and the Office of Technical Inspection.</p> <p>15. Checking the knowledge, skills and competences acquired by students.</p>	lecture
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2.	<p>Excercises list:</p> <ol style="list-style-type: none"> 1. Work protection system in Poland. Legal protection of work. Basic health and safety information regarding legal norms and detailed regulations included with them. Health and Safety regulations. 2. Basic duties and rights of the employee and employer's obligations in the field of health and safety. Responsibilities and qualifications of the health and safety service. Basic rights and duties of the employee. Labor laws. 3. Health and safety management aims. Health and safety system conditions. Safety and health field. Planning a security system at the workplace. Health and safety in Poland and in other countries - comparison. 4. Accidents at work. Classification of accidents at work. Assumptions. Classification. 5. Post-accident report. Post-accident procedure. Determining the circumstances and causes of accidents at work. Proceedings in the case of occupational diseases. Obligations for accidents at work and occupational diseases. The Social Insurance Institution. 6. Occupational health and safety requirements for selected workplaces. Work instructions. Location and classifications of workplaces. 7. Health and safety requirements for machinery and technical equipment used in production departments at company. Signaling devices used in machines. Covers. Safety zones. Machine documentation. 8. Particularly dangerous works - characteristics. Protection measures. Accident prevention. Legal and organizational requirements. Measurement of dangerous factors. 9. Health and safety requirements regarding the use of construction works. Health and safety plan. Organization of works on construction site. Hazard characteristics. Preventive actions. Workers' health at the construction site. Necessary documentation. Accidents on the construction site. Protection measures applied in the workplace - technical, organizational, collective and individual. Modern solutions in the field of health and safety at work stations. 10. Explosive threats. Causes. Explosive mixture. Preventive actions. Effective sources of ignition. Explosive zones. Transport of hazardous materials. Explosion suppression systems. Legal requirements. 11. Fire hazards. Examples of workstations where a fire is most often cause. Preventive actions. Protection. The consequences of fire for employees, employers and the natural environment. 12. Legal procedures for reducing the negative impact of the work environment on the employee. Examples of work environment factors. Examples of health and safety requirements at specific workplaces. 13. Prevention of health protection. Work accidents and occupational diseases. Developing health and safety training in the work environment. Qualifying requirements. The scope of training. Training topics. 14. Responsibilities of people who manage employees in the field of health and safety. Supervision of working conditions. National Labor Inspectorate, State Sanitary Inspection and Office of Technical Inspection. Competences and rights. Responsibilities. 15. Written test of the lecture part. 	project classes
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Course advanced

Teaching methods:

case analysis, problem-solving method, situation-based learning, discussion, lecture, classes

Activities	Examination methods	Percentage in subject assessment
lecture	written credit	50%
project classes	project, active participation, presentation, test	50%

Entry requirements

Ergonomics, Labor law.

Literature

Obligatory

1. Tadeusz Fijałkowski; Kodeks pracy. Stan prawny 2011. W-wa 2011.
2. Ewa Suknarowska-Drzewiecka: Kodeks pracy - praktyczny komentarz. Wydawnictwo Legis 2011.

Optional

1. Dorota Stec: Zasady BHP w praktyce. Wszechnica Podatkowa, Kraków 2010.
2. Dorota Stec: Zasady BHP w praktyce. Wszechnica Podatkowa, Kraków 2010.

Kierunkowe efekty uczenia się

Kod	Treść
IB_P6S_KO03	Absolwent jest gotów do wypełniania zobowiązań społecznych oraz współorganizowania działalności na rzecz środowiska społecznego;
IB_P6S_KO04	Absolwent jest gotów do inicjowania działań na rzecz interesu publicznego;
IB_P6S_UW10	Absolwent potrafi dokonać ergonomiczną ocenę stanowiska pracy oraz wskazać sposoby ochrony pracownika przed skutkami szkodliwych czynników występujących w środowisku pracy;
IB_P6S_UW11	Absolwent potrafi opracować instrukcję bhp, organizować i prowadzić instruktaże stanowiskowe oraz okresowe szkolenia bhp;
IB_P6S_UW15	Absolwent potrafi wykonać raport bezpieczeństwa, ocenić zagrożenia pracowników oraz środowiska przyrodniczego w czasie budowy i eksploatacji urządzeń oraz obiektów technicznych, przygotować wewnętrzny i zewnętrzny plan operacyjny;
IB_P6S_WG05	Absolwent zna i rozumie w zaawansowanym stopniu zagadnienia z zakresu ergonomii, fizjologii oraz bezpieczeństwa pracy, umożliwiające ergonomiczną ocenę stanowisk pracy, dobór odpowiednich zabezpieczeń technicznych oraz środków ochrony osobistej;
IB_P6S_WG09	Absolwent zna i rozumie metody identyfikacji zagrożeń – osób, obiektów technicznych oraz elementów środowiska przyrodniczego, selekcji informacji o tych zagrożeniach oraz oceny ich skutków;
IB_P6S_WG11	Absolwent zna i rozumie działania logistyczne w obszarze bezpieczeństwa oraz zasady organizacji, zadania, funkcjonowanie i metody pracy służb bhp;