Universitat Autònoma de Barcelona

2022/2023

Hygiene and Health

Code: 101833
ECTS Credits: 6

Degree	Type	Year	Semester
2502501 Prevention and Integral Safety and Security	OT	4	1

Contact

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Use of Languages

Principal working language: spanish (spa)
Some groups entirely in English: No
Some groups entirely in Catalan: No
Some groups entirely in Spanish: Yes

Prerequisites

This subject has no pre-requierements

Objectives and Contextualisation

The general training objectives of the subject are:

- Understand the key aspects to assess the working conditions from the physical, chemical and biological perspective of the working environment.
- Assess the main risks to the person of the physical, chemical and biological contaminants.
- Know how to design sampling strategies for hygiene studies.
- Know how to interpret the results of the measures of the physical, chemical and biological contaminants.
- Identify the necessary preventative aspects to protect the person from the physical, chemical and biological contaminants.
- Acquire the knowledge necessary for the design of jobs adapted to the person and free of contaminants.
- Understand the main functions of work medicine.
- Know the main techniques of work medicine.
- Acquire the basic knowledge to understand occupational epidemiology.

Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Be able to adapt to unexpected situations.
- Communicate information , ideas, problems and solutions to both specialised and non-specialised publics.
- Generate innovative and competitive proposals in research and in professional activity developing curiosity and creativity.
- Have a general understanding of basic knowledge in the area of prevention and integral safety and security.
- Identify, manage and resolve conflicts.

- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
- Respond to problems applying knowledge to practice.
- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
- Use the capacity for analysis and synthesis to solve problems.
- Work in institutional and interprofessional networks.

Learning Outcomes

1. Analyse the situation and identify the points that are best.
2. Apply systems of responsibility and management models particular to models of labour risk prevention management.
3. Be able to adapt to unexpected situations.
4. Critically analyse the principles, values and procedures that govern professional practice.
5. Generate innovative and competitive proposals in research and in professional activity developing curiosity and creativity.
6. Identify the most common labour risk factors.
7. Identify, manage and resolve conflicts.
8. Propose new methods or well-founded alternative solutions.
9. Propose projects and actions that incorporate the gender perspective.
10. Propose viable projects and actions that promote social, economic and environmental benefits.
11. Respond to problems applying knowledge to practice.
12. Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
13. Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
14. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
15. Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
16. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
17. Use the capacity for analysis and synthesis to solve problems.
18. Work in institutional and interprofessional networks.

Content

Block 1 - Work hygiene

Work hygiene Concepts and objectives.
Chemical agents Occupational toxicology.
Chemical agents Evaluation of the exhibition.

Chemical agents Control of the exhibition: general principles; actions on the polluting focus; actions on the propagation medium. Ventilation; actions on the person: personal protection equipment.
Specific legal regulations.
Physical agents: characteristics, effects, evaluation and control: noise, vibrations, thermal environment, non-ionizing radiation, ionizing radiation.
Biological agents. Effects, evaluation and control.

Block 2 - Work medicine

Basic concepts, objectives and functions.
Pathologies of work origin.
Surveillance of health.
Promotion of health in the company.
Epidemiología laboral y investigación epidemiológica.
Health planning and information.
First aid

Methodology

The theoretical classes in the classroom, correspond to a master methodology in which the teacher will make a theoretical presentation of the subject matter of study most of the time.

The practical classes in the classroom will consist of developing exercises and assignments, in which some of the concepts explained in the theoretical classes will be put into practice. Subsequent sharing will be carried out, from which the corresponding academic conclusions were drawn.

The autonomous activities correspond to the individual study as well as the resolution of the exercises and works proposed by the teacher. You can also propose to the student to do a research work on a subject related to the subject matter of study, which in some cases you can ask for their exposure to the group.

The evaluation activities will serve to evaluate the knowledge and competences acquired by the students.

Tutorials with the faculty will be arranged by email.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Evaluation	4	0.16	
Lessons	40	1.6	
Type: Supervised			
Continuos assessment I and II	12	0.48	
Type: Autonomous			
Personal study	94	3.76	

Assessment

Individual theoretical-practical tests
The theoretical test on Block 1 will count 30% of the grade of the subject.
The theoretical test on Block 2 will count 20% of the grade of the subject.
Both tests will be defined by the faculty with enough advance notice to the students. One not presented to one of the tests is equivalent to 0. In case of absence justified to the test, you can talk with the teacher to find an alternative way of evaluation for that test.
Evaluation of individual works
During the course a series of individual exercises to be delivered will be proposed and they will score a 50% in the final grade.
Continuous assessment
The continuous evaluation will only be taken into 3,5 points if the theoretical-practical tests have been passed and 80% of the proposed activities have been carried out.
Recovery Exam
Those students who score less than 3,5 points will have the option to take the final exam.
In case of not passing the subject according to the aforementioned criteria (continuous evaluation), a recovery test can be done on the date scheduled in the schedule, and it will cover all the contents of the program.
To participate in the recovery of students must have been previously evaluated in a set of activities, the weight of which equals a minimum of two thirds of the total grade of the subject. However, the grade that will appear in the student's file is a maximum of 5-Pass.
Students who need to change an evaluation date must submit the request by filling in the document that you will find in the moodle space of Tutorial EPSI.
Without prejudice to other disciplinary measures deemed appropriate, and in accordance withcurrent academic regulations, "in the event that the student performs any irregularity that could lead to a significant variation in the grade of an evaluation act, it will be graded with a 0 this evaluation act, regardless of the disciplinary process that can be instructed, in case there are several irregularities in the evaluation acts of the same subject, the final grade of this subject will be 0 ".
The tests / exams may be written and / or oral at the discretion of the teaching staff.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Delivery of work	50%	0	0	3, 4, 1, 2, 11, 5, 6, 7, 8, 9, 10, 16, 15, 14, 12, 13, 18, 17
Theoretical test Part 1 and 2	50%	0	0	3, 4, 1, 2, 11, 5, 6, 7, 8, 9, 10, 16, 15, 12, 13, 17

Bibliography

- UNE-EN 689:2019. Exposición en el lugar de trabajo. Medición de la exposición por inhalación de agentes químicos. Estrategia para verificar la conformidad con los valores límite de exposición profesional.
- Bazan, X (2014). Higiene industrial. Barcelona: editorial UOC.
- Fernández, J. (2013). Vigilancia de la salud de los trabajadores. Madrid: Eolas Editores.
- Henao, F. (2010). Riesgo Químico. Madrid: Starbook Editorial.
- López, A. (2011). Radioprotección en centros sanitarios. Madrid: CEP.
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- Mateo, P. (2009). Gestión de la higiene industrial en la empresa. Madrid: Fundación Confemetal.
- Menendez, F. (2012). Higiene Industrial. Manual para la formación del especialista. Valladolid: Lex Nova.
- Rubio, J. C. (2005) Manual para la formación de nivel superior en prevención de riesgos laborales. Barcelona: Diaz Santos.
- Ruix-Frutos c, García AM, Delcl`s J, Benavides FG. (2007) Salud laboral, conceptos y técnicas para la prevención de riesgos laborales. Barcelona. Ed. Masson.

Software

The subject will use the basic software of the Office 365 package.