Speciality in industrial health

Academic Year: (2020 / 2021) **Review date: 10-07-2020**

Department assigned to the subject: Social and Private International Law Department

Coordinating teacher: MERCADER UGUINA, JESUS RAFAEL

Type: Compulsory ECTS Credits : 6.0

Year : 1 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

To pursue this course is recommended to have done the following matters:
* It is a specialization that already have knowledge by the corresponding basic course, classes should focus on aspects, themes and subjects resulting in budget the acquisition of skills and competencies prior General to have passed the course.
* It is recommended that the student has basic knowledge of calculus and statistics.

OBJECTIVES

Covers basic skills.
* Let students know to apply the acquired knowledge and ability to problem-solving in new environments or little known within broad (or multidisciplinary) contexts related to the prevention of occupational risks.
* That students have learning skills which allow them to continue studying in a way that will be largely self-directed or autonomous.
* That the students are able to integrate knowledge and deal with the complexity of formulating judgments from information that is incomplete or limited, include reflections on the social and ethical responsibilities linked to the application of their knowledge and judgment.

General competences of the title covers.
* Relate working with occupational health conditions. Analyze major work-related health problems. Identify the risks and/or damage arising from work.
* Differentiated prevention and protection. Recognize which cases the prevention should be applied and when the worker must be protected.
* Use the statistical bases applied to the prevention of occupational risks.
* Recognize the activities of the health service and promote health in the workplace. Coordinate preventive health surveillance activities. Acquire basic training in first aid.
* Understand the general legislation on occupational health and follow their updates.
* Use the legislation and specific legislation in the field of industrial hygiene. Identify the characteristics and effects of chemical, physical and biological agents. Acquire sufficient technical knowledge to perform risk assessments and propose corrective measures against chemical, physical or biological hazards.
* Develop communication and negotiation techniques in the area of occupational risk prevention. Carry out information activities effectively.
* Develop training and information plans to workers, including the detection of needs and the establishment of evaluation systems and follow-up action.
* Apply techniques for communication, information and negotiation with/between employers and workers or their representatives, as well as with other technical agents and management of the company with skills related to the conditions of safety and health at work.
* For occupational risk prevention plans.
* Apply the main techniques of research in occupational health. Use the epidemiological method in problem solving. Epidemiological studies designed to test hypothesis.
* Understanding the bases of applied to contaminants in the workplace toxicology.
* Applying the fundamentals and management of the main techniques of chemical analysis in the field of hygiene.
* Define the technical solutions for the design and evaluation of ventilation systems.
* Establish advanced techniques of evaluation and control of the noise in the industry.
* Recognize the transmission mechanisms and pathways of biological agents. Apply the main techniques of Microbiology to risk assessment. Perform biological waste management plans.
* Determine the main hygienic risks in representative sectors of economic activity: agriculture, metal industry, construction, catering and other services sector.

* Apply the technical basis to analyze risks and propose corrective measures in industrial plants with greater risks: electrical installations, vessels and facilities to pressure, installations of combustible gases or storage of dangerous products.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Physical agents: lighting. Identification, evaluation and control of the risks.
1. Physical agents: ambient humidity Thermo. Identification evaluation and risk control.
2. Physical agents: noise, basic concepts, risks and damage to health, identification, rules of application, assessment of the evaluation of the risk, measuring equipment.
3. Physical agents: vibrations, basic concepts, risks and damage to health, identification, rules of application, assessment of the evaluation of the risk, measuring equipment.
4. Physical agents: radiation, basic concepts, risks and damage to health, identification, rules of application, assessment of the evaluation of the risk, measuring equipment.
5. Chemicals: classification, routes of entry, basic concepts, risks and damage to health, identification, rules of application, assessment of the evaluation of the risk, measuring equipment.
6. Biological agents: basics, risks and damage to health, identification, rules of application, assessment of the risk assessment.
7. Thermal stress. Exposure assessment methodologies. Assessment of exposure to heat stress by heat: WBGHT method. Assessment of exposure to heat stress by cold: IREQ method.

LEARNING ACTIVITIES AND METHODOLOGY

Training activities will include:
* Master classes, where will be the knowledge that students need to acquire. To do this, as well as advise the necessary manuals and a specific bibliography for specific matters (NTP´s, guides the INSHT, etc.), will be provided in advance the student materials prepared by the teacher to the deeper issues and a better follow-up of the explanations. Which is done in the classroom or synchronous and interactive online.
* Problem solving by the student which will serve as a self-assessment and to acquire the necessary capabilities.
* Sessions of problems and case studies, to develop and discuss the problems that are being proposed to the students.
* "On-line" self-assessment exercises.
* The tutoring is individualized for the resolution of questions and personalized counseling.
* Group tutorials.

ASSESSMENT SYSTEM

Evaluation of continuous academic will represent 50% of the total, distributed of the following way Note:

* 40%: the realization of case studies, workshops, fieldwork and seminars.

* 30%: 3 test "on-line" to be performed by the student, for which shall be communicated the dates on which such test available (a minimum of 72 hours) during which may be three attempts for a maximum period of 20 minutes each attempt. It will take into account only the highest obtained score.

The final exam, which will be a test on specific issues, will be 30% of the note.

The student who has not passed the course in the regular call must be presented to the extraordinary call qualification criteria remain the same as in the ordinary (70% continuous assessment + 30% special examination). In the case that have not exceeded the continuous evaluation must be a complementary exercise of practical nature that will be globally evaluated with final examination type test note.

Both the extraordinary and ordinary examination shall comply with the dates and official times posted by direction of the Master.

% end-of-term-examination:	30
% of continuous assessment (assigments, laboratory, practicals…):	70