Universitat de Lleida

DEGREE CURRICULUM

INDUSTRIAL CHEMICAL LEGISLATION

Coordination: ALBAREDA SOTERAS, XAVIER

Academic year 2019-20

Subject's general information

Subject name	INDUSTRIAL CHEMICAL LEGISLATION
Code	102349
Semester	2nd Q(SEMESTER) CONTINUED EVALUATION
Typology	<table><tr><th>Degree</th><th>Course</th><th>Character</th><th>Modality</th></tr><tr><td>Not informed</td><td>3</td><td>COMPULSORY</td><td>Attendance-based</td></tr></table>
Course number of credits (ECTS)	6
Type of activity, credits, and groups	<table><tr><th>Activity type</th><th>PRALAB</th><th>PRAULA</th><th>TEORIA</th></tr><tr><th>Number of credits</th><td>0.4</td><td>2.6</td><td>3</td></tr><tr><th>Number of groups</th><td>1</td><td>1</td><td>1</td></tr></table>
Coordination	ALBAREDA SOTERAS, XAVIER
Department	COMPUTER SCIENCE AND INDUSTRIAL ENGINEERING
Teaching load distribution between lectures and independent student work	Lectures activities 60 hours Independent study work 90 hours
Important information on data processing	Consult this link for more information.
Language	Catalan
Distribution of credits	3 THEORY 3 PRACTICE

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
ALBAREDA SOTERAS, XAVIER	xavier.albareda@udl.cat	3	
CUADROS DOMÈNECH, ROSA	rosa.cuadros@udl.cat	3	

Learning objectives

At the end of the subject the student must be able to:

- Become familiar with reading, interpretation and compliance with legal and regulatory texts.
- Know the basic concepts about safety and health at work.
- Practice the fundamental technique in occupational risks prevention: identification, elimination, evaluation, corrective measures, controls, etc.
- Use the appropriate communication tools.
- Display in public the work done with the appropriate strategies and means.
- Know and put into practice the dynamics of team working.

Competences

Basic

B01 That students have demonstrated to possess and understand knowledge in an area of study that starts from the base of general secondary education, and is usually found at a level that, although supported by advanced textbooks, also includes some aspects that imply knowledge coming from the vanguard of his/her field of study.

B02 That students know how to apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study.

B03 That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.

B04 That students can transmit information, ideas, problems and solutions to a specialized and non-specialized public.

B05 That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

Transversal

CT1. To develop a proper understanding and oral and written expression of Catalan and Spanish.

CT2. To develop meaningful command of a foreign language, especially English.

CT3. To iImplement new technologies and technologies of information and communication.

CT4. To apply basic knowledge of entrepreneurship and professional environments.

CT5. To apply essential notions of scientific thinking.

General competences

CG3. To synthesize basic and technological subjects, which enable them to learn new methods and theories, and provide them with versatility to adapt to new situations.

CG4. To solve problems with initiative, make decisions, creativity, critical reasoning and to communicate and transmit knowledge, skills and abilities in the field of Industrial Chemical Engineering.

CG5. To carry out measurements, calculations, valuations, appraisals, surveys, studies, reports, work plans and other analogous work.

CG6. To implement specifications, regulations and mandatory rules.

CG7. To analyze and assess the social and environmental impact of technical solutions.

CG8. To apply the principles and methods of quality.

CG10. To work in a multilingual and multidisciplinary environment.

CG11. To understand and apply the necessary legislation in the exercise of the profession of Industrial Technical Engineer

Specific competences

CE20. To analyze, design, simulate and optimize processes and products.

CE22. To design, manage and operate simulation, control and instrumentation procedures of chemical processes.

Subject contents

T0-Course presentation + previous conceptual aspects + environment / neighborhood / industrial site / product and machinery / industrial property.

T1- Elementary legislative structure.

T2-Standardization / Accreditation / Certification.

T3-Basic urbanism: fundamental concepts applied to the industry.

T4-License of industrial works. Classification and procedure.

T5-Environmental licenses. Classification and procedure.

T6-RSCIEI + CTE

T7-Severe accidents (linked to environmental license).

T8-industrial waste / soil contamination

T9-acoustic pollution / odor pollution

T10- Industrial regulations. Structure and breakdown: products and facilities. Main regulations. Obligations and responsibilities.

T-11- Low Voltage electrotechnical regulation - ITC-BT ATEX intensification.

T-12- Regulation of pressure equipment -ITC-EP.

T13- Chemical products storage regulation - MIE-APQ.

T14-Gaseous fuel installation regulations and oil installations ITC-ICG / ITC-MIG / ITC-MI-IP.

T15-CE Marking. Raw materials and manufactured products. Free movement. Labeled. Content and responsibilities

T16-Safety in machines. Applicable casuistry. Manufacturing / adaptation / verification.

T17-Industrial property: patents, utility models, trademarks.

T1. Law 31/1995 on Prevention of Occupational Risks.

T2. ISO 45000. Occupational Health and Safety Management Systems.

T3. Safety at Work. Emergency plans. Self-protection plan.

T4 Identification and general evaluation of risks. Corrective measures. Collective and individual protection. Signage security.

T5 Industrial hygiene. Concepts and objectives

T6. Chemical agents. Carcinogenic agents. Normative. Exposure evaluation and control.

T7. Physical agents. Noise (RD 286/2006). Thermal environment Non-ionizing and ionizing radiation.

T8. Biological agents (RD 664/1997).

T9. Ergonomics. Psychosociology

T10 Safety in the chemical industry. Accidents.

T11. REACH Regulation (1907/2006): Registration, authorization and restriction of chemical preparations.

T12. CLP Regulation (1272/2008): Classification, labeling and packaging of substances and their mixtures. Labels and safety data sheets.

T13. Transport of dangerous goods. ADR: European Agreement on international transport of dangerous goods by road.

Methodology

- Theory in large groups classes: Expositive classes by the teacher, with the concepts explanation, materials and work plan.
- Proposal and resolutions of problems in the classroom.
- Exercises will be proposed individually and autonomously and / or practical cases in groups that will be evaluated by the teacher.
- Integrating Project: in the C3S2 integrating project there will participate the following subjects: Industrial Chemical Analysis, Biotechnology and Industrial Chemical Legislation. The coordinator of the integrating project will follow the tasks entrusted to the script that will be provided at the beginning of the semester. All the subjects involved in the project will be registered jointly. In the circumstance that the students might have passed more than 50% of the subjects involved in the project, they will be allowed to write an equivalent project focused on the subject they are currently taking.

Development plan

WEEK (4 presencial hours)	TUESDAY (2 presencial hours)	THURSDAY (2 presencial hours)	METHODOLGY

1	T0-Course presentation + previous conceptual aspects + environment / neighborhood / industrial site / product and machinery / industrial property. T1- Elementary legislative structure.	Cours presentation T1. Law 31/1995 on the Prevention of Occupational Risks.	Master class Practical cases
2	T2-Standardization / Certification / Accreditation / Certification.	T2. ISO 45000. Occupational Health and Safety Management Systems.	Master class Practical cases
3	T3-Basic urbanism: fundamental concepts applied to the industry.	T3. Safety at Work. Emergency plans. Self-protection plan.	Master class Practical cases
4	T4-License of industrial works. Classification and procedure. T5-Environmental licenses. Classification and procedure.	T4 Identification and general evaluation of risks. Corrective measures. Collective and individual protection. Security signage.	Master class Practical cases
5	T6-RSCIEI + CTE T7-Severe accidents (linked to environmental license).	T5 Industrial hygiene. Concepts and objectives T6. Chemical agents. Carcinogenic agents Normative. Exposure evaluation and control.	Master class Practical cases
6	T8-industrial waste / soil contamination T9-acoustic pollution / odor pollution T10- Industrial regulations. Structure and breakdown: products and facilities. Main regulations. Obligations and responsibilities.	T7 Physical agents. Noise (RD 286/2006). Thermal environment Non-ionizing and ionizing radiation.	Master class Practical cases
7	T-11- Low Voltage electrotechnical regulation - ITC-BT ATEX intensification.	T8 Biological agents (RD 664/1997).	Master class Practical cases
8	T-12- Regulation of pressure equipment -ITC-EP.	T9. Ergonomia. Psicosociología.	Master class Practical cases
9		Evaluation	
10	T13- Chemical products storage regulation - MIE-APQ.	T10. Safety in the chemical industry. Accident	Master class Practical cases
11	T14-Gaseous fuel installation regulations and oil installations ITC-ICG / ITC-MIG / ITC-MI-IP.	Visit chemical company	Master class Practical cases
12	T15-CE Marking. Raw materials and manufactured products. Free movement. Labeled. Content and responsibilities	T11. REACH Regulation (1907/2006): Registration, authorization and restriction of chemical preparations.	Master class Practical cases
13	T16-Safety in machines. Applicable casuistry. Manufacturing / adaptation / verification.	T12. CLP Regulation (1272/2008): Classification, labeling and packaging of substances and their mixtures. Labels and safety data sheets	Master class Practical cases
14	T17-Industrial property: patents, utility models, trademarks.	T13. Transport of dangerous goods. ADR: European Agreement on international transport of dangerous goods by road.	Master class Practical cases
15	Evaluation		

Evaluation

During the course there will be a continued evaluation of the subject (compulsory attendance 90%). And for those

who do not follow the continuous evaluation, they will take part in the scheduled exam calendar.

- The final grade of the subject according to the continuous evaluation will be calculated by this way: None of the elements evaluated (exams, practical cases and exercises) will exceed 40% of the overall mark.
- The integrating project accounts for 15% of the overall score of the note.

There will be a recovery of the parts that haven't been passed according to the established schedule.

Note: in case the student does not develop the project or equivalent work, the mark of the subject will be Not attended.

Bibliography

- Updated lesgislation and regulations of the different subject contents.
- Instituto Nacional de Seguridad y Salud en el Trabajo.http://www.insht.es/
- Generalitat de Catalunya. Seguretat i salut laboral.http://treball.gencat.cat/ca/ambits/seguretat_i_salut_laboral/

Adaptations to the methodology due to COVID-19

- Theory in large groups classes: Expositive classes by the teacher, with the concepts explanation, materials and work plan using online methodologies.
- Proposal and resolutions of problems online.

Adaptations to the evaluation due to COVID-19

During the course there will be a continued evaluation of the subject (timely delivery of the tests established according to the published activity calendar). And for those who do not follow the continuous evaluation, they will take part in the scheduled exam calendar.

- The final grade of the subject according to the continuous evaluation will be calculated by this way: None of the elements evaluated (tests, practical cases and exercises) will exceed 40% of the overall mark.
- The integrating project accounts for 15% of the overall score of the note.

There will be a recovery of the parts that haven't been passed according to the established schedule.

Note: in case the student does not develop the project or equivalent work, the mark of the subject will be Not attended.