

**COURSE DATA****DATA SUBJECT**

Code: 46915
Name: Ergonomics
Cycle: Master's Degree
ECTS Credits: 4.5
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
2275 - Master's Degree in Occupational Health and Safety	Facultat de Ciències Socials	1	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2275 - Master's Degree in Occupational Health and Safety	Ergonomía	COMPULSORY

COORDINATION

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SUMMARY

In the subject Ergonomics HE introduce the knowledge basics of the ergonomics applied to prevention of the risks labor, of mode that HE offers to the student body a approach to the The most relevant concepts and applications of the discipline that can be considered essential for the future professional practice. With this subject, students will acquire the fundamental foundations to pursue the specialization. optional of Ergonomics and psychosociology applied. In any case, Yeah the choice of the student either schoolgirl No out this specialty, HE guarantees in his training a base minimum of knowledge in this area, enabling him to perform simple ergonomic risk assessments, proposal of measures for he control and reduction of this guy of risks, carry out activities training and information, collaborate with the Services of Prevention and with the specialists of Ergonomics and Psychosociology Applied and all those functions that you correspond according to he article 36 of the Regulation of the Services of Prevention.

PREVIOUS KNOWLEDGE**RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE**



There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

RELATIONSHIP WITH OTHER SUBJECTS OF THE SAME DEGREE

No HE they have specified restrictions of tuition with other subjects of the plan of studies.

OTHERS GUYS OF REQUIREMENTS

Given that students entering the Master's program have a heterogeneous undergraduate degree profile, it is recommended that students read and research ergonomics content to facilitate the transmission and understanding of knowledge.

COMPETENCES / LEARNING OUTCOMES

2275 - Master's Degree in Occupational Health and Safety

Apply communication, information, negotiation and conflict resolution techniques in organisations.

Be able to analyse new problems using the knowledge and tools learnt and reason rigorously and systematically.

Be able to apply knowledge and problem-solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to the field of study.

Be able to apply the fundamentals and methods of qualitative and quantitative research to study and analyse elements related to occupational risk prevention at all levels of action.

Be able to measure and obtain relevant data for the organisational diagnosis of occupational risks.

Be able to monitor compliance with risk control and reduction programmes and carry out activities to control working conditions.

Be able to plan preventive action and propose measures for the control and reduction of risks.

Collaborate effectively in work teams, assuming responsibilities and leadership roles while contributing to collective improvement and development.

Conduct general information and training activities at all levels and in the areas of specialisation.

Conduct searches in scientific literature and rigorously analyse and interpret the results of scientific studies carried out in the field of occupational health and safety.

Contribute to designing, developing and implementing solutions that address social demands, taking the Sustainable Development Goals as a reference.

Demonstrate knowledge and understanding of social inequalities based on sex and gender within this



specific field of study; integrate the different needs and preferences based on sex and gender into the design of solutions and problem solving.

Demonstrate knowledge and understanding of the importance of respecting gender equality as established in Organic Law 3/2007, of 22 March, for the effective equality of women and men, and the principle of equal treatment and non-discrimination on the grounds of birth, national or ethnic origin, religion, belief, age, disability, sexual orientation, gender identity or expression, sexual characteristics, illness, socio-economic situation or any other personal or social condition or circumstance.

Demonstrate knowledge and understanding of the importance of respecting human rights and fundamental rights; democratic values such as freedom of thought and teaching, tolerance, recognition of and respect for diversity, equality for all citizens, elimination of any discriminatory content or practice, culture of peace and participation, among others.

Demonstrate knowledge and understanding of the importance of respecting the principles of universal accessibility and design for all, in accordance with the second final provision of the Consolidated Text of the General Law on the Rights of Persons with Disabilities and their Social Inclusion, approved by Royal Legislative Decree 1/2013, of 29 November.

Develop assertive skills to initiate, lead and facilitate participation in groups, promoting interpersonal relationships.

Develop critical and self-critical reasoning within the field of study, considering aspects such as professional ethics, moral values and the social implications of the different activities carried out.

Develop initiative, critical thinking and creativity.

Know and be able to apply the different types of occupational prevention organisation in the company (constitution requirements, training required, etc.).

Know how to analyse the needs and demands of the recipients of the functions of the occupational health and safety specialists, considering different contexts.

Know how to communicate effectively, both orally and in writing, adapting to the characteristics of the situation and the audience.

Know how to measure and obtain relevant data for the organisational diagnosis of ergonomics.

Know the accident risk assessment methods and apply them in practice.

Know the ergonomic factors that are present in a work situation that can affect the worker's well-being or health (physical, mental, or social) and the development of the work.

Know the generic and specific obligations in occupational risk prevention and be able to advise on each of the obligations in which the duty of protection is specified.

Know the most appropriate accident prevention measures in the different sectors of activity, as well as the most significant occupational risks and preventive measures.

Learn autonomously, making informed decisions in different contexts, making judgements based on experimentation and analysis and transferring knowledge to new situations.



Perform risk assessments (related to industrial hygiene, safety at work, ergonomics and applied psychosociology) with maximum safety for the operator and the environment.

Plan, advise and make decisions based on ethical and legal criteria.

Propose creative and innovative solutions to complex situations or problems specific to the field of knowledge to respond to different professional and social needs.

Search for and select information in scientific and professional databases and documents and have the ability to synthesise and interpret it.

Understand the interrelationships between environmental and occupational health.

DESCRIPTION OF CONTENTS

1. Introduction to the ergonomics: concepts and goals.

- 1.1 Introduction.
- 1.2 Definition and goals of the ergonomics.
- 1.3 Concepts important.
- 1.4 Regulations legal.
- 1.5 Models ergonomic.
- 1.6 Procedures for the development of the systems human-machine.
- 1.7 Sciences related with ergonomics.
- 1.8 The errors.
- 1.9 Methods employees in ergonomics.
- 1.10 Introduction to the anthropometry and the design of the position of job.
- 1.11 Procedure methodological for the redesign of a system.

2. Requirements of the task, capabilities and limitations of the beings humans of interest for ergonomics

- 2.1 Requirements physical.
- 2.2 Requirement environmental.
- 2.3 Requirement mental.
- 2.4 Requirement psychosocial.
- 2.5 The capabilities of the human being.
- 2.6 The human body as functional unit.
- 2.7 The highly strung system.
- 2.8 The sensory system.
- 2.9 The musculoskeletal system.
- 2.10 system .
- 2.11 system .
- 2.12 Limitations.

3. Indicators of risk in ergonomics

- 3.1 Introduction.
- 3.2 Indicators of risk in ergonomics.
- 3.3 Statistical analysis applied to the ergonomics.



4. ID of the risks ergonomic
 - 4.1 Introduction.
 - 4.2 Definition, ID and measures preventive forehead to the risk of handling manual of loads.
 - 4.3 Definition and ID of the risk of the transportation.
 - 4.4 Definition and ID of the pushes and drags.
 - 4.5 Definition and ID of the efforts.
 - 4.6 Definition and ID of the positions inadequate.
 - 4.7 Definition and ID of the repetitiveness.
 - 4.8 ID of the risk ergonomic in positions occupied by workers especially sensitive.
 - 4.9 Definition and ID of the burden metabolic.
 - 4.10 Definition and ID of the risks ergonomic environmental.
5. Assessment simple of the risks ergonomic
 - 5.1 Introduction.
 - 5.2 Assessment of the handling manual of loads (Guide technique and rule UNE-EN 1005- 2).
 - 5.3 Assessment of transportation .
 - 5.4 Evaluation of pushes and drags.
 - 5.5 Assessment of positions (OWAS, RULA, REBA)
 - 5.6 Assessment of repetitiveness (method JSI).
 - 5.7 Assessment of positions occupied by workers especially sensitive.
 - 5.8 Assessment of the burden metabolic.
 - 5.9 Assessment environmental.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	30,00
Classroom practices	15,00
Total hours	45,00

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	2,50
Individual or group project	50,00
Independent study and work	15,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	67,50

TEACHING METHODOLOGY

1. Listen participatory and criticism.



2. Discussions of cluster.
3. Tutoring individual.
4. Utilization of technologies computer science.
5. Presentations in public.
6. Reading and analysis of documents scientists and technicians.

EVALUATION

1. Exams writings, including evidence objective either semi-objective, resolution of issues, tests of answer brief, rehearsal, resolution of cases or other options similar. It represents a 70% of the final grade for the subject. In cases where there are reasonable grounds to believe that an exam, test, or assessable activity has not been completed entirely by the enrolled student or that a breach of academic integrity rules may have occurred, the teaching staff may require an individual verification of authorship. This is without prejudice to any other measures that may be applied in accordance with university regulations.
2. Preparation of applied or practical reports on the subject matter. It represents the 30% of the qualification end of the subject. The drafting of the information and jobs has to reach a level corresponding to a university postgraduate degree to be evaluated (spelling, grammar, semantics) ...). No HE will accept information Manuscripts will be submitted and evaluated according to the rubric available in the virtual classroom. The professor may require in-class presentations, and passing the assignment requires a passing grade (5 out of 10) for both the content of the submitted report and its presentation (5 out of 10 in each part). If a presentation needs to be resubmitted, the professor will explain the procedure in class.
3. The attendance to a minimum percentage of classes it may be valued as requirement indispensable for to be evaluated in the activities linked to those classes, well HE will perform activities that adjust to the condition of assessment continued. Are activities and the qualification that derive of they They will NOT be recoverable through other types of testing.

For obtain Tuition of Honor, students need to have a note minimum of 9. To start of this note, the decision to award this TH will depend on the teacher, who may establish an extra activity to obtain it, in addition to considering the work done throughout the course.

Requirements minima.

Minimum passing grade in the theoretical and practical assessments to be able to combine the grades of both parts. Obtain at least 5 out of 10 in the assessment of theoretical content (exams). written) and practical (preparation of information). Yeah the note is lower in some of those parts, No HE will add the note of the other evaluation systems, with only the grade of the exam of theoretical content, either the of the report of case studies of No to be presented to exam Theoretical content. Submission and a minimum grade of five out of ten on the practical reports are required to pass the course. In cases where practical reports have not been submitted or have been failed, even if the exam is passed and a weighted average grade of five is obtained, it will be necessary to resubmit these reports or assignments.



According to HE establishes in Article 13. d) of the Statute of l'Estudiant University (RD 1791/2010, of 30 of (December), students must refrain from using or cooperating in the use of procedures fraudulent in assessment tests, in the work carried out, or in official documents of The university. The teaching staff will check, using the resources available to the University of Valencia, whether it is plagiarism or total or partial copying has occurred. If detected, the student will be suspended from the subject and the disciplinary measures established in the current regulations will be initiated. In cases of fraudulent practices, the procedure established in the Protocol for Action against Fraudulent Practices of the University of Valencia (ACGUV 123/2020) will be followed: <https://www.uv.es/sgeneral/Protocols/C83sp.pdf> . qualification of the subject will remain subjected as provided in the Regulation Evaluation i Qualificació of the University of Valencia per to titles of Grau Yo Master (ACGUV 108/2017 of 30 of May (of 2017). http://www.uv.es/graus/normatives/2017_108_Reglament_avaluacio_qualificacio.pdf

The use of AI or other technological support in the various assignments must be duly justified and explained in the corresponding appendix. The use of such tools without this explanation will result in the automatic failure of the assignment in question, and disciplinary measures established in current regulations will be initiated. The course grade will be subject to the provisions of the University of Valencia's Regulations on Evaluation and Grading for Bachelor's and Master's Degrees (ACGUV 108/2017 of May 30, 2017). http://www.uv.es/graus/normatives/2017_108_reglament_avaluacio_qualificacio.pdf

AI Usage Statement

The author must explicitly declare the use of any AI tools in their work. This declaration should be included in the section titled "Declaration of AI Use" in the Appendices of this manuscript, after the references.

1. The author must provide the following information:

- Name and version of the AI tools used
- Brief description of how AI was used, for example, to generate parts of the text, assist in literature review, editing and revision of the draft, data analysis, translation, or other functions.

2. Summons

Authors must properly cite the AI tool used in the references section, following the journal's standard citation format. For example:

OpenAI. (2024). ChatGPT GPT-4o [Large language model]. <https://chat.openai.com/chat>

Anthropic. (2024). Claude 3.5 Sonnet [Large language model]. <https://www.claude.ai/>

3. Usage Limits

- Generative AI should not be used to create or manipulate research data.
- The use of AI does not exempt the authors from their responsibility for the content of the manuscript.
- Authors should carefully review and edit any AI-generated text to ensure its accuracy and relevance, especially given the risk of hallucination from generative AI.

It will be of application the regulations of the University about challenge of exams.

REFERENCES