

Course guide

240805 - 240805 - Workplace Ergonomics I

Last modified: 06/06/2024

Unit in charge: Barcelona School of Building Construction
Teaching unit: 732 - OE - Department of Management.

Degree: MASTER'S DEGREE IN OCCUPATIONAL HEALTH AND SAFETY (Syllabus 2016). (Compulsory subject).

Academic year: 2024 **ECTS Credits:** 3.0 **Languages:** Spanish

LECTURER

Coordinating lecturer: PEDRO MANUEL RODRIGUEZ MONDELO

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. Identify and recognise detection techniques of psychosocial problems and develop intervention plans in front of ill organizations, and recognise the minimum required ergonomic requirements in manual tools.
2. Know to develop emergency and security plans, make training and information plans assigned to workers, including the detection of needs and establish the evaluating systems and monitoring measures, lay out corrective measures in front of risks of chemical nature, physical or biological; carry out risk evaluations and set out corrective measures related to the physical and mental load at work; make the epidemiologic study design to identify risk factors of occupational nature, apply its basics and manipulation and applications of the main chemical analysis techniques in the hygienic world.
3. Be able to analyse the main health problems related to work.
4. Be able to recognise action measures in front of emergencies and disasters. Recognise the specific problems in health security at work in sensitive workers such as young and elder workers, disabled people or pregnant women, and identify and recognise the main instrumentation techniques to assess the fatigue and not the comfort at work.

TEACHING METHODOLOGY

The work plan will be carried out from the face-to-face classes (Monday from 5:30 p.m. to 7:30 p.m.).

LEARNING OBJECTIVES OF THE SUBJECT

- Know how ergonomics works.
- Know the ergonomic intervention methodology.
- Know general techniques to evaluate ergonomic risks.
- Know the ergonomic analysis methods.
- Identify ergonomic problems in the different fields of performance of ergonomics.
- Know the main elements for the design of jobs.

STUDY LOAD

Type	Hours	Percentage
Self study	48,0	64.00
Hours large group	27,0	36.00

Total learning time: 75 h



CONTENTS

-PRESENTATION

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-INTRODUCTION TO ERGONOMICS

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-METHODOLOGY

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-PERSON-MACHINE SYSTEM

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-ANTHROPOMETRY

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-ANTHROPOMETRIC MEASURES

Description:

-

Full-or-part-time: 1h

Theory classes: 1h



-DIMENSIONAL RELATIONS

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-ENVIRONMENTAL-THERMAL RELATIONS

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-ENVIRONMENTAL-ACOUSTIC RELATIONS

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-ENVIRONMENTAL-LIGHT RELATIONSHIPS

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-PHYSICAL WORK

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-DESIGN OF WORKSTATIONS

Description:

-

Full-or-part-time: 1h

Theory classes: 1h



-3D ELEVATION OF WORKSTATIONS

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

-FINAL WORK TUTORIAL

Description:

-

Full-or-part-time: 1h

Theory classes: 1h

GRADING SYSTEM

Readings and assessments in class: 20%

Subject work: 40%

Final exam: 40%

BIBLIOGRAPHY

Basic:

- Mondelo, Pedro R.. Fundamentos (vol. 1) [on line]. 2a ed.. Barcelona: Edicions UPC, 1995-99 [Consultation: 11/10/2017]. Available on: <http://hdl.handle.net/2099.3/36777>. ISBN 8483011948.

- Mondelo, Pedro Manuel; Gregori, Enrique; Comas, Santiago; Castejón, Emilio; Bartolomé, Esther. Confort y Estrés Térmico (vol. 2) [on line]. Barcelona: Edicions UPC, 2001Available on: <https://upcommons.upc.edu/handle/2099.3/36855>. ISBN 9788498801132.