

Course guides

240816 - 240816 - Workplace Ergonomics II

Last modified: 02/04/2020

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 2010). (Compulsory subject).
MASTER'S DEGREE IN OCCUPATIONAL HEALTH AND SAFETY (Syllabus 2016). (Compulsory subject).

Academic year: 2020 **ECTS Credits:** 6.0 **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. Obtain the capacity to prevent and detect psychosocial problems, adapt the job and coordinate with the medical services to analyse these cases.
3. 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.
4. Be able to promote conducts, habits, consumption and health life styles, with the active participation of the workers as main role of the own health. Be able to promote the preventing culture within the company and the creation of health environments.
5. 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

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Self study	96,0	64.00
Hours large group	54,0	36.00

Total learning time: 150 h



CONTENTS

(ENG) -PRESENTACIÓ

(ENG) -INTRODUCCIÓ A LA BIOMECÀNICA

(ENG) -SEGMENTS CORPORALS I CENTROIDES DE MASSA

(ENG) -CINEMÀTICA I CINÈTICA

(ENG) -MOMENT D'UNA FORÇA

(ENG) -BIOMECÀNICA ARTICULAR

(ENG) -BIOMECÀNICA DELS TEIXITS

(ENG) -CÀLCUL BIOMECÀNIC EN 2D

(ENG) -SISTEMES DE MEDICIÓ EN BIOMECÀNICA

(ENG) -CASOS PRÀCTICS

(ENG) -REGISTRE ELECTROMIOGRÀFIC I INTERPRETACIÓ

(ENG) -TUTORIA TREBALL FINAL

GRADING SYSTEM



BIBLIOGRAPHY

Basic:

- Barbany, Joan Ramon. Fundamentos de fisiología del ejercicio y del entrenamiento. Barcelona: Barcanova, 1990. ISBN 9788475335421.
- Chaffin, Don B; Andersson, Gunnar; Martin, Bernard J. Occupational biomechanics. 4th ed. Hoboken, N.J.: Wiley-Interscience, 2006. ISBN 9780471723431.
- Nordin, Margareta; Frankel, Victor H. Basic biomechanics of the musculoskeletal system. 4th ed. Philadelphia: Lippincott Williams & Wilkins, cop. 2012. ISBN 9781451117097.
- Trew, Marion; Everett, Tony. Fundamentos del movimiento humano. Barcelona: Masson, cop. 2006. ISBN 8445816066.
- Gowitzke, Barbara A; Milner, Morris; Iriarte, Eduardo. El Cuerpo y sus movimientos : bases científicas. Barcelona: Paidotribo, DL 1999. ISBN 8480194189.