

<i>Course</i>	Mechanical and Industrial Informatics			<i>Academic year</i>	2021/2022		
<i>Subject</i>	Industrial Safety			ECTS	4		
<i>Type of course</i>	Compulsory						
<i>Year</i>	3rd	<i>Semester</i>	1st	<i>Student Workload:</i>			
<i>Professor(s)</i>	Luís Miguel Lopes Lourenço			<i>Total</i>	108	<i>Contact</i>	45
<i>Area Coordinator</i>	José Reinas dos Santos André						

Planned SD

1. LEARNING OBJECTIVES

The syllabus allows the student to understand the concepts related to industrial occupational health and safety, including Legislation and standards on Safety. Particularly students should:

- (C1) Acquire skills to identify, assess and prevent hazards in industrial environments.
- (C2) Identify and prevent major contaminants.
- (C3) Acquire skills in the prevention of occupational diseases and occupational accidents.
- (C4) Acquire skills related to Legislation and standards on Safety in industrial environment.
- (C5) Acquire skills related to Occupational Ergonomics in industry.

2. PROGRAMME

1. Introduction of occupational safety and health.
2. Risk assessment.
3. Risks related to electrical energy, chemical contaminants and radiation.
4. Personal protective equipment.
5. Occupational diseases, Hygiene and Safety fundamentals in workshops and preventive actions in industry.
6. Occupational Ergonomics in the industrial environment.

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

- Intended learning outcomes C1 – syllabus contents in 2 and 3.
- Intended learning outcomes C2 – syllabus contents in 3.
- Intended learning outcomes C3 – syllabus contents from 2 to 6.
- Intended learning outcomes C4 – syllabus contents from 3 to 6.
- Intended learning outcomes C5 – syllabus contents in 6.

4. MAIN BIBLIOGRAPHY

Miguel, A.S.; Manual de Higiene e Segurança do Trabalho. 13ª ed. Porto Editora, 2014. ISBN: 978-972-0-01896-0

Brauer, R. L.; Safety and Health for Engineers. 3rd Edition, John Wiley & Sons, Inc., 2016. ISBN: 978-1-119-21918-7

Itiro, I; Ergonomia projeto e produção, Edgard Blucher, 2005. ISBN: 85-212-3054-3

Fonseca, A. et al.; Conceção de Locais de Trabalho: Guia de Apoio, Série Informação Técnica - 4ª edição, IDICT, 2006. ISBN: 972-8321-90-2

EU-OSH -European Agency for Safety and Health at Work; Analysis of the determinants of workplace occupational safety and health practice in a selection of EU Member States, 2013. ISBN: 9789292400675

NP 4397 - Sistemas de gestão da segurança e saúde do trabalho: Requisitos, Instituto Português da Qualidade, 2008.

OHSAS 18001 - Sistemas de gestão da segurança e da saúde do trabalho – Requisitos, ICS, 2007.

ISO 11228-3:2007 - Ergonomics -- Manual handling -- Part 3: Handling of low loads at high frequency, 2007.

5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

Teaching methodologies

The contents are presented using theoretical-practical lessons (TP).

The contents are presented through lectures, using the whiteboard, audiovisual media and some demonstrations.

Student evaluation

Ongoing assessment (minimum grade – 10/20): written test.

Exam assessment (minimum grade – 10/20): written test.

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The oral presentation of the contents, using the whiteboard, audiovisual media, practical examples and some demonstrations ensures that students achieve the intended learning outcomes.

7. ATTENDANCE

N.A.

8. CONTACTS AND OFFICE HOURS

Professor: Luís Miguel Lopes Lourenço (Ph.D); mlopes@ipg.pt; office n.º 67

Area Coordinator: José Reinas dos Santos André (Ph.D); jandre@ipg.pt; office n.º 1

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