

HEALTH AND SAFETY AT WORK II

MSc Degree in Integrated Management Systems QAS (Quality, Environment and Safety)

Code: 9090120

Main Scientific Area: Health, Environment and Industrial Technologies

Lecturer: Filipe José da Fonseca Carvalho

Language of Instruction: Portuguese

Regime: S2

Contact Hours: 40h Total Workload: 153h

ECTS: 7,0

Objectives

Provide to students knowledge about safety at work, fire safety, emergency organization and management of the prevention of the occupational risks in civil construction: Identify and characterize the occupational risks in terms of prevention and protection; Understand and apply preventive criteria and protection criteria in order to reduce occupational risks; Understand the importance of prioritizing prevention measures through the application of different occupational health and safety techniques.

Learning Outcomes

Identify and understand the general principles of prevention. Identify the domains of the safety at work. Identify the causes and consequences of the accidents at work. Reduce electrical risks through of prevention and protection measures. Reduce machines risks through of prevention and protection measures. Know the protective equipments. Identify the safety signaling. Know the legislation and standards applicable. Identify and understand fire prevention and protection measures. Understand the general principles of emergency organization. Understand the general principles of prevention of the occupational risks in civil construction.

Course Contents

Chapter 1

1. Safety at work
 - 1.1. Principles and domains of the safety at work
 - 1.2. Causes and consequences of the accidents at work
 - 1.3. Electrical risks
 - 1.4. Risks associated with machines and tools
 - 1.5. Protection of machinery
 - 1.6. Collective protection equipments
 - 1.7. Individual protection equipments

1.8. Safety signaling

1.9. Legal and regulatory framework

Chapter 2

2. Fire safety

2.1. Regulation and standardization

2.2. Prevention and protection against fire

Chapter 3

3. Emergency organization

3.1. General principles of emergency organization

Chapter 4

4. Management of the prevention of the occupational risks 4.1. Prevention of the risks in civil construction

Recommended Bibliography

Brauner, R. L. (2016). Safety and health for engineers (3rd Edition). Hoboken, NJ: Wiley-Interscience. ISBN: 978-1-119-21918-7

Cabral, F. (2011). Segurança e saúde do trabalho: Manual de prevenção de riscos profissionais (1.ª Edição). Lisboa: Verlag Dashöfer. ISBN: 978-989-642-137-3

DiBerardinis, L., J. (1998). Handbook of occupational safety and health (2nd Edition). New York, NY: Wiley-Interscience. ISBN: 978-0-471-16017-5

Freitas, L. C. (2003). Gestão da segurança e saúde no trabalho – 1 Volume (1.ª Edição). Lisboa: Edições Universitárias Lusófonas. ISBN: 972-8296-91-6

Freitas, L. C. (2003). Gestão da segurança e saúde no trabalho – 2 Volume (1.ª Edição). Lisboa: Edições Universitárias Lusófonas. ISBN: 972-8296-92-4

Freitas, L. C. (2022). Manual de segurança e saúde do trabalho (5.ª Edição). Lisboa: Edições Sílabo. ISBN: 978-989-561-205-5

Freitas, L. C. (Coordenação), Parreira, A., Baptista, C., Frade, F., Marçal, J. E., Nascimento, M., Ferreira, P., Manuel, S., Cordeiro, T., Marques, V. (2013). Manual de segurança e saúde do trabalho (1.ª Edição). Lisboa: Edições Universitárias Lusófonas. ISBN: 978-989-8512-62-8

Koradecka, D. (2010). Handbook of occupational safety and health (1st Edition). Boca Raton: CRC Press. ISBN:

978-1-4398-0685-2

Miguel, A. S. (1998). *Segurança e higiene do trabalho* (1.^a Edição). Lisboa: Universidade Aberta. ISBN: 972-674-229-3

Miguel, A. S. S. R. (2014). *Manual de higiene e segurança do trabalho* (13.^a Edição). Porto: Porto Editora. ISBN: 978-972-0-01896-0

Miguel, A. S., Perestrelo, G., Machado, J. M., Freitas, M., Campelo, F., Lopes, F. J., Silva, J. M., Braga, C. (2005). *Manual de segurança, higiene e saúde do trabalho para as indústrias da fileira de madeira* (1.^a Edição). Porto: Associação das Industrias de Madeira e Mobiliário de Portugal (AIMMP). ISBN: 972-99315-2-6

Moreira, A. (2010). *Segurança e saúde no trabalho: Em ambiente de escritório* (1.^a Edição). Lisboa: Lidel. ISBN: 978-972-757-666-1

Nunes, F. M. D. O. (2006). *Segurança e higiene do trabalho: Manual técnico* (1.^a Edição). Amadora: Texto Editores. ISBN: 972-8326-45-9
Oliveira, L. C. (2006). *Segurança, higiene e saúde no trabalho: Manual de apoio* (1.^a Edição). Porto: Vida Económica. ISBN: 972-788-152-1

Learning and Teaching Methods

The syllabus of the curricular unit is in complete harmony with the objectives of the curricular unit. In other words, the various objectives of the curricular unit are fully aligned with the syllabus established for the curricular unit. Thus, the various objectives defined are fully based on the syllabus proposed for the curricular unit (see objectives and chapters 1, 2, 3 and 4):

- 1) The objectives related to safety at work are based on the syllabus of chapter 1;
- 2) The objectives related to fire safety are based on the syllabus of chapter 2;
- 3) The objectives related to emergency organization are based on the syllabus of chapter 3; 4) The objectives related to management of the prevention of the occupational risks are based on the syllabus of chapter 4.

Assessment Methods

Continuous and Periodic Assessment

The final assessment of the Curricular Unit (CU) is supported by three (3) assessment elements: the participation in classes (accounts for 10% of the classification of the curricular unit); a group work – report (accounts for 40% of the classification of the curricular unit); and an individual written proof – test (accounts for 50% of the classification of the unit curricular). Thus, the final classification of the curricular unit is calculated by the following mathematical equation:

$$FC = (CPC \times 0.10) + (GWRC \times 0.40) + (IWPC \times 0.50)$$

Where:

FC – Final Classification

CPC – Classes Participation Classification

GWRC – Group Work Report Classification

IWPC – Individual Written Proof Classification (Test)

Assessment by Final Exam

The final assessment of the Curricular Unit (CU) is supported by one (1) assessment element: an individual written proof – exam (accounts for 100% of the classification of the unit curricular). Thus, the final classification of the curricular unit is calculated by the following mathematical equation:

$$FC = IWPC$$

Where:

FC – Final Classification

IWPC – Individual Written Proof Classification (Exam)

NOTE: In the assessment of the curricular unit, all classifications are assigned on a scale of zero (0) to twenty (20) values. Thus, the student obtains approval to the curricular unit when the final classification of learning is at least 10 values.