



Developing Innovative and Attractive CVET programmes in industrial shoe production

Curriculum
Portugal

IO 4

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1 Footwear Design

1.1 Objectives:

- Identify various conditions, limitations and requirements related to the Fashion market and Company Footwear.
- Research, analyse, synthesize, apply and evaluate themes related to creation.
- Apply at the project level the research methodology and analysis of concepts with a view to creating a footwear collection.
- Idealize and creatively redesign footwear models.
- Identify and apply good work practices and visual, oral and written presentation.

Total duration: 75 hours (3 months)

Theory: 25 hours

Practice: 50 hours

1.2 Lecturers:

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
Design methodology - problem structuring	<ul style="list-style-type: none"> • Research: brand identity, consumer demands, trends, materials, technologies, competitor innovations, ... • Summary: setting parameters – characteristics, construction, technical solutions, materials, design constraints, target group, indicative price. 	9	
Design methodology - Project and experimentation	<ul style="list-style-type: none"> • Design: inspiration, concept, sketches, virtual modelling, rendering. • Development: modelling, technical sheets. 	9	
Design methodology - realization	<ul style="list-style-type: none"> • Prototype: rapid prototyping, samples, tests, modifications. • Validation: approval of the final products by the company's management, marketing team and customers 	4	
Digital Design	<ul style="list-style-type: none"> • Virtual prototyping • Digital Materials and Rendering • Virtual Reality and Augmented Reality • Virtual testing 	3	

1.3 Project work:

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
Project development (design+technical development)	<ul style="list-style-type: none">• Project structure• Model design definition• Technical development• Definition of technical characteristics• Prototype• Physical sample• Presentation and argument• Validation		50

2 Technical Development

2.1 Objectives:

- Apply knowledge and techniques of footwear pattern making and the principles of computer-assisted technical development, ensuring ergonomic and functional characteristics in models of different typologies.

Total duration: 75 hours (3 months)

Theory: 25 hours

Practice: 50 hours

2.2 Lecturers:

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
Characterization of different models of footwear	<ul style="list-style-type: none"> • Footwear models: shoe, boot, ... • Construction of different shoe models: Derby, Moccasin, Oxford, California, Goodyear, Strobel, Injected, ... • Materials technology 	2	
Last planning and model drawing	<ul style="list-style-type: none"> • Last measurements • Definition of basic lines - basic structure for the models • Last Planning • Digitization of the Plan - 2D • Model drawing in the Plan 	6	
Extraction of patterns from the model, grading and exporting patterns for automatic cutting	<ul style="list-style-type: none"> • Pattern definition and treatment - 2D • Pattern grading • Model material consumption • Data export to automatic cutting machine • Cutting of patterns and/or pieces of the model 	17	

2.3 Project work:

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
Project development (design+technical development)	<ul style="list-style-type: none"> • Project structure • Model design definition • Technical development • Definition of technical characteristics • Prototype • Physical sample • Presentation and argument • Validation 		50

3 Social Responsibility Management

3.1 Objectives:

- Recognize the concept and principles of labor law.
- Identify and describe the fundamentals of the employment contract.
- Identify and interpret applicable legislation
- Define business ethics
- Understand a code of ethics
- Know how the concept of business ethics has evolved up to the present day
- Know the areas of intervention of business ethics
- Knowing how ethics is applied in different business approaches
- Know the general regimes for preventing corruption and protecting whistleblowers and their impact on the organization
- Study of the contents of a sustainability report

Total duration: 75 hours (3 months)

Theory: 25 hours

Practice: 50 hours

3.2 Lecturers:

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
Labor Law	<ul style="list-style-type: none"> • Labor law: Concept and general principles, Rights and duties of the parties • Employment contract: Essential elements of a contract; Forms of termination; Conditions for signing and expiry of the fixed-term employment contract; Duration and organization of working time: holidays and absences, other contractual aspects - applicable legislation • General Data Protection Regime • Hiring migrants 	6	

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
Business Ethics	<ul style="list-style-type: none"> • Notion of Ethics and evolution of the concept • Application of Ethics in the company's universe • Contextualization of Business Ethics in business • Application of Ethics in a business environment - case studies • Ethics as a competitive factor • Gender equality • Code of ethics and conduct 	9	
RGPC - General Regime for the Prevention of Corruption and GDPR – General Regime for the Protection of Whistleblowers	<ul style="list-style-type: none"> • Principles and requirements of applicable regulations • Implementation and impact of your application on the organization 	6	
Sustainability Reports	<ul style="list-style-type: none"> • Advantages/gains for the organization • Contents to include • Analysis of reference reports 	4	

3.3 Project work:

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
Project development	<ul style="list-style-type: none"> • Prepare/adapt Code of Conduct and Ethics, • Structuring the Reporting Channel • Perform Risk Analysis • Preparing the first draft of a Sustainability Report 		50

4 Quality Management

4.1 Objectives:

- Interpret the requirements defined in the quality management system standard NP EN ISO 9001;
- Understand the process approach, identifying the main activities in an organization and defining methodologies for mapping processes and their management
- Identify the necessary documentation for the implementation of the quality management system;
- Knowing how to select and use process monitoring indicators
- Recognize the importance of integrating different management systems;
- Promote quality improvement, through the use of quality tools, demonstrating a clear understanding of them.
- Know the fundamentals of Risk Management

Total duration: 75 hours (3 months)

Theory: 25 hours

Practice: 50 hours

4.2 Lecturers:

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
Introduction	<ul style="list-style-type: none"> • Fundamental concepts of quality management • Quality vs Production 	3	
Standards, their evolution and application	<ul style="list-style-type: none"> • The ISO 9000 family of standards • Articulation with other families of standards (for example, ISO 14001) • ISO 9001 requirements • Process approach • Monitoring and measurement/KPIs • Continuous improvement • Practical examples 	12	
Process control	<ul style="list-style-type: none"> • Customer requirements • Laboratory tests – instructions, recording and treatment of results • Quality control in different sectors and final control • Quality tools • Data processing and computerization 	10	

4.3 Project work:

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
Project development	<ul style="list-style-type: none">• Start the process of computerizing the recording and processing of data from all quality control points• Create database of material technical data sheets		50

5 Environmental Management

5.1 Objectives:

- List the principles of prevention and environmental management systems
- Understand all requirements of the associated standard
- Framing the product lifecycle
- Understand the meaning and principles associated with environmental responsibility
- Relate the principles and requirements of the standard with the industrial activity of footwear production
- Identify applicable legislation
- Implement the necessary measures to respond to more sustainable requirements/practices

Total duration: 75 hours (3 months)

Theory: 25 hours

Practice: 50 hours

5.2 Lecturers:

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
The environment and the industry	<ul style="list-style-type: none"> • Principles of prevention and Environmental Management System 	3	
Develop an Environmental Management System	<ul style="list-style-type: none"> • The ISO 14001 standard – requirements • Applicable legislation • Environmental responsibility • Product life cycle • Environmental performance indicators and their monitoring (atmospheric emissions, water, waste, ambient noise, energy) • Dashboard for environmental management • Examples of sustainable practices 	19	
Integrated management systems	<ul style="list-style-type: none"> • The quality-environment integrated concept • ISO quality-environment standards (ISO 9000 and ISO 14000 series) 	3	

5.3 Project work:

Topic	Content	Theoretical training (hours)	Practical WBL training (hours)
Project development	<ul style="list-style-type: none">• Identify and plan more sustainable practices to be implemented in the company• Structuring the Environmental component for the Sustainability Report		50