

Developing Innovative and Attractive CVET programmes in industrial shoe production

Task Analyses (TA) - Results from Portugal

IO 1

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1 Design – How to create a shoe collection

Venue		Date
CARITÉ		September/2021
Qualification for the sphere of activity		
Technical Specialist in Footwear Design		
Legal framework		
National Qualifications Catalogue		
Working Environment		
Products	Prototypes and samples	
Users	Customers Commercial	
Internal interfaces	Commercial, Technical Development, Sample Production, Purchasing/Procurement, Warehouse	
External interfaces	Customers Suppliers Catalogs/Internet	
Organization	Management, Commercial Responsible, Designer	
Production steps that already took place	-	
Level of autonomy	Responsible for Design and 3 collaborators	
Workplace	Close to the Development Office / CAD Workstations	
Tasks		
<ul style="list-style-type: none"> • Collect trends from various sources of information (websites, magazines, trend catalogues, visits to material and footwear fairs, shop windows in fashion capitals, etc.); • Define product concepts; • Create drawings for collections; • Submit ideas/drawings for commercial/customer approval; • Participate in the development of lasts and soles; • Select materials and accessories; • Participate in product design and development planning; • Plan the models and cut patterns; • Pass the models to CAD; • Develop the pattern making activities for the first prototypes; • Monitor the production of prototypes and samples; • Check/Validate prototypes and samples; • Submit final product for commercial/customer approval 		

Required knowledge and skills
<ul style="list-style-type: none">• Research and analyze trends• Interpret the market needs• Search for new materials• Training in shoe design• Footwear pattern making knowledge• Knowledge of the Anatomy of the Foot• Knowledge of the footwear manufacturing process• Knowledge of various materials and their functionality
Others
<ul style="list-style-type: none">• Creativity• Self-taught ability

2 Production Planning

Venue		Date
CARITÉ		September/2021
Qualification for the sphere of activity		
Production Management Technician of Footwear and Leather goods		
Legal framework		
National Qualifications Catalogue		
Working Environment		
Products	Reception of private label orders and own brands orders Production Planning Confirmation of delivery times to customers	
Users	Purchasing All productive sectors	
Internal interfaces	Commercials Development/Technical Sheets Purchasing Production and all productive sectors	
External interfaces	Clients Suppliers	
Organization	Manager	
Production steps that already took place	-	
Level of autonomy	Planning responsible	
Workplace	Work office	
Tasks		
<ul style="list-style-type: none"> • Receive the orders coming from commercials either private label or own brands • Inform the manager of the supply of the new orders planned so that it can arrange the respective acquisition of materials and provides delivery dates of the suppliers • Depending on the availability of materials, confirms delivery deadline to the customer or proposes another deadline depending on the capacity of the company • Define and report Development of priorities for industrialization • Prepare weekly planning for the different productive sections • Accompany the performance of the sections by daily monitoring the actual productions • Updates weekly planning whenever necessary, after joint analysis with Purchasement Manager and Production Manager • Receives customer complaints, registers them and provides the company's timely response as well as taking corrective action • Collaborates in the preparation and follow-up of external audits and client audits 		

Required knowledge and skills
<ul style="list-style-type: none">• Footwear production knowledge• Knowledge of materials• Knowledge of stocks management• Knowledge of planning techniques• Knowledge of related international standards and applicable legislation• Safety, Health and Environment
Others
<ul style="list-style-type: none">• Leadership and teamwork skills• Communication, interpersonal relationship• Ability to work under pressure• Organization

3 Technical Development

Venue		Date
CARITÉ		September/2021
Qualification for the sphere of activity		
Footwear Pattern Making Technician / Footwear Modeling Technician		
Legal framework		
National Qualifications Catalogue		
Working Environment		
Products	Prototypes Samples Sales samples Samples of the confirmation Pair in number	
Users	Manufacture of samples Commercial - sending samples to customers Production Purchasing	
Internal interfaces	Design Commercials Production New materials Laboratory	
External interfaces	Material and Tool Suppliers Customers	
Organization	Management, Responsible for Development, Modelers/Pattern Makers	
Production steps that already took place	-	
Level of autonomy	Responsible for Development and Modelers/Pattern Makers	
Workplace	Office / Workstations with CAD system Cardboard pattern cutting table Defined locations for filing envelopes with parts from the models	
Tasks		
<ul style="list-style-type: none"> • Develop the models using the CAD system, and taking into account the technical and functional specifications of the footwear and customer requirements, which includes the development of the last with the supplier. • Extract the pieces/prepare the patterns/prepare the model for automatic cutting. • Put the prototype or sample into production and monitor its execution. • Introduce corrections if necessary. • Scale the model if there is an order. • Execute the pair in number, analyze and introduce the necessary corrections. • Acquire the necessary tools – cutting dies and the lasts - their reception and control. • Define all the technical specifications of the model with indications for the different production operations. 		

Required knowledge and skills

- Footwear pattern making
- Last development
- Model development
- Industrialization
- CAD/CAM
- Foot anatomy
- Shoe manufacturing
- Materials

Others

- Creativity
- Organization capacity
- Good interpersonal relationship

4 Training Management

Tasks of this sphere are not part of local work processes.

5 Maintenance Management

Venue		Date
CARITÉ		September/2021
Qualification for the sphere of activity		
Specialist Technician in Industrial Maintenance Management		
Legal framework		
National Qualifications Catalogue / technical regulations		
Working Environment		
Products	Infrastructure and equipment maintenance management	
Users	Users of equipment and infrastructure	
Internal interfaces	Productive sectors, Planning, Warehouse, Quality, Environment, Safety and Health at work	
External interfaces	External maintenance suppliers Outsourcing Other suppliers	
Organization	Responsible for the Production, Management	
Production steps that already took place	-	
Level of autonomy	Management, Responsible for the Production and Maintenance	
Workplace	Manager's Office and atelier/All sectors	
Tasks		
<ul style="list-style-type: none"> • Select/set maintenance management models. • Manage the administration and contracts with third parties that support some maintenance activities. • Develop the General Maintenance Plan. • Develop and implement Maintenance Intervention Sheets. • Carry out the analysis of inherent maintenance costs. • Plan and implement maintenance tasks planned and approved by the management, making the necessary adjustments. • Coordinate the team and ensure that each employee will comply and perform effectively. • Analyze production processes, considering the purpose and operation of equipment. • Identify and reference equipment from various sectors. • Implement processes and procedures for the maintenance of the company's infrastructure. • Implement processes and procedures for the maintenance of equipment inherent to production processes, defining technical specifications and guidelines necessary for the operation of the equipment – for users. • Ensure the application of safety measures at work. • Ensure the application of environmental protection measures. • Research and propose the acquisition of effective equipment for the development of production processes. • Research and propose new processes and materials for the maintenance of the company's infrastructure. • Ensure the supply of components and other materials to be used in maintenance. 		

- Ensure self-training – knowledge of innovation in the area of the intervention.
- Define the intervention priorities, prioritizing the preventive maintenance.
- Define, implement and control the systems and mechanisms to monitor the performance of equipment.
- Control the quality of maintenance - Maintenance Performance Indicators.
- Organize and file the documentation inherent to the department: technical documentation of equipment, warranties, materials

Required knowledge and skills

Knowledge of the equipment management and maintenance inherent to the company's activity.

Knowledge of:

- Conservation/repair of company infrastructure.
- Installation / tuning and repair of industrial equipment.
- Preventive maintenance of industrial equipment.
- Basic knowledge of electricity, hydraulics and pneumatics.

Others

- Leadership
- Motivation
- Team management
- Ability to solve problems
- Ability to work under pressure
- Organization
- Communication facility

6 Quality Management

Venue	Date
CARITÉ	September/2021
Qualification for the sphere of activity	
Production Management Technician of Footwear and Leather goods	
Legal framework	
National Qualifications Catalogue	
Working Environment	
Products	<p>Management of the company's processes, in terms of compliance with ISO 9001: 2015 requirements and customer requirements:</p> <ul style="list-style-type: none"> • Strategic Process • Business Process • Design and Development Process • Treatment Orders and Planning Process • Purchasing Process and Launch of Orders • Production Process • Quality Process • Maintenance Process • Human Resources and Administrative Process • Integrated Management System Process • Management of internal and external laboratory tests • Product certification, in accordance with applicable standards and requirements
Users	All company processes
Internal interfaces	<p>Environment Process Safety and Health at Work Product Quality New materials New processes</p>
External interfaces	<p>Certification bodies Clients Suppliers External Laboratories Subcontractors</p>
Organization	Management, Quality responsible
Production steps that already took place	-
Level of autonomy	Quality responsible, Laboratory technician
Workplace	Work Office/Laboratory

Tasks
<ul style="list-style-type: none">• Ensure that each responsible of the different processes, complies with the updated, whenever necessary, established procedures and in particular the monitoring and improvement of the performance of their process.• Monitor the data and results obtained in the different processes and treat them statistically.• Promote the implementation of recurrent corrective actions for monitoring results, complaints, audits, etc., whenever justified and relevant to the evolution of the system, towards continuous improvement.• Provide regular meetings with management and process managers to follow the established objectives, analysis of deviations and definition of measures to implemented• Prepare and monitor external audits and client audits• Define the quality standards to be considered in the audit in accordance with general standards together with internal standards and company expectations.• Monitor the performance of laboratory tests and results obtained in this• Carry out the control of standards and legislation applicable to the product• Manage the laboratory and equipment calibration• Handle the logistics and documentation associated with product certification.
Required knowledge and skills
<ul style="list-style-type: none">• Academic qualifications at the level of a bachelor's/master's degree in engineering, namely mechanical engineering, materials or similar• Footwear production knowledge• Knowledge of quality control procedures• Knowledge of languages (mainly English)• Knowledge of statistical treatment methods, ease in creating and interpreting reports• Knowledge of related international standards (ISO 9001:2015) and applicable legislation• Knowledge of material and product testing standards• Safety, health and environment
Others
<ul style="list-style-type: none">• Strong leadership• Motivation• Team management• Dynamism and proactivity• Communication• Analytical look

7 New Materials

Venue		Date
CARITÉ		September/2021
Qualification for the sphere of activity		
Technician in Footwear and Leather Goods Production Management		
Legal framework		
National Qualifications Catalogue		
Working Environment		
Products	Footwear with new materials	
Users	Design and technical development	
Internal interfaces	Commercial, Technical Development, Quality, Sample Production, Purchasing, Warehouse, Laboratory	
External interfaces	Suppliers Research Centers Fairs/Catalogues/internet	
Organization	Management, Sales Manager, Designer / Pattern making Technician	
Production steps that already took place	-	
Level of autonomy	Management / Design Responsible / Pattern making Technician	
Workplace	Close to Development / Quality Office	
Tasks		
<ul style="list-style-type: none"> • Define the concept related to the product to be developed, as well as, the specification of the respective requirements. • Characterize the materials with potential applicability in shoe conception. • Research the new materials with suppliers, customer indication, fairs, etc. • Provide physical-mechanical and chemical testing of materials, in accordance with normative and/or customer specifications. • Provide the execution of samples with the new materials. • Monitor the industrialization process to define care and work standards, if applicable. • Monitor the execution of footwear use tests to determine advantages or improvements to be implemented in the use of new materials. • Validate the new material as a raw material component of footwear and cataloging it. 		
Required knowledge and skills		
<ul style="list-style-type: none"> • Ability to research and analyze the trends. • Ability to interpret the market needs. • Knowledge of various materials and their functionality. • Research the new materials. • Knowledge of footwear assessment standards and their component materials. • Knowledge of the footwear manufacturing process. 		
Outros		
<ul style="list-style-type: none"> • Leadership • Motivation • Dynamism and proactivity • Communication • Analytical look 		

8 Supply Chain Management

Venue		Date
CARITÉ		September/2021
Qualification for the sphere of activity		
Production Management Technician of Footwear and Leather goods		
Legal framework		
National Qualifications Catalogue		
Working Environment		
Products	Acquisition of materials and components to supply the various production sections, through production orders, weekly planning and stock consultation. Selection and evaluation of suppliers	
Users	Sample production Production All productive sectors	
Internal interfaces	Production planning Development Technical sheets Sample production Production Quality/Laboratory	
External interfaces	Suppliers Clients Subcontractors	
Organization	Management, Purchasing Responsible	
Production steps that already took place	-	
Level of autonomy	Purchasing Responsible and collaborators	
Workplace	Work Office / Own area on raw materials warehouse	
Tasks		
<ul style="list-style-type: none"> • According to production planning (delivery dates and expected dates of production start-up), it analyzes the material requirements for the production orders and after checking the of materials in stock, defines the purchase orders and their deadlines to selected suppliers • Provides permanent follow-up of the planned deliveries of each supplier in order to ensure timely availability of materials • Communicates to the planning responsible the expected delays that may interfere with the planning for the production • It distributes, guides and controls the execution of the work of the sector's employees, ensuring the supply of all productive sections and compliance with quality, environment, safety and health standards, taking into account production planning and proposing alternative measures in function of the detected deviations 		

- Supervises the receipt and control of materials, intervening where necessary, and coordinating the communication with those responsible for production, and in particular that of the Cutting, for validation of materials, especially leather, by conducting production tests.
- Ensures the identification of the materials, their arrangement according to the predefined criteria and the recording of all movements, carrying out periodic inventories for stock control
- Collaborates in the company's response to customer complaints related to material compliance and in taking corrective actions
- Collaborates in the preparation and follow-up of **external audits and client audits.**

Required knowledge and skills

- Footwear production knowledge
- Knowledge of materials
- Knowledge of stocks management
- Knowledge of quality control procedures
- Knowledge of related international standards and applicable legislation
- Safety, Health and Environment

Others

- Leadership and teamwork skills
- Communication, interpersonal relationship
- Ability to work under pressure
- Organization

9 Social Responsibility Management

Venue		Date
CARITÉ		September/2021
Qualification for the sphere of activity		
Production Management Technician of Footwear and Leather goods		
Legal framework		
National Qualifications Catalogue		
Working Environment		
Products	Social Responsibility Policy that guides all the company's steps, in order to make it more ethical, responsible, sustainable and human. The company's commitment to conducting business and interacting with partners, employees and customers in a socially responsible manner.	
Users	All company employees	
Internal interfaces	All processes, with special impact on the Environmental process and on Occupational Health and Safety	
External interfaces	Clients Providers Surrounding community Auditing entities	
Organization	Management / Responsible for Quality	
Production steps that already took place	-	
Level of autonomy	Responsible for Quality	
Workplace	Work office	
Tasks		
<p>Conduct the implementation of:</p> <ul style="list-style-type: none"> • labor practices, such as human rights, work and training, diversity, gender equality, health and well-being of workers; <ul style="list-style-type: none"> ○ environmental issues such as biodiversity, climate change, efficient use of resources and pollution prevention; ○ fight against corruption; ○ involvement and contribution to community development; ○ inclusion of people in situations of inequality; ○ interests and benefits of clients; • attraction and maintenance of qualified human capital in the organization, encouraging their motivation and increasing their productivity; <ul style="list-style-type: none"> ○ attraction and retention of customers, partners, suppliers and investors who want to collaborate with the social cause; ○ a more positive image of the organization; ○ reduction of possible scenarios of scarcity of natural resources, with positive impacts both on the supply chain and on the organization itself. 		

Required knowledge and skills
<ul style="list-style-type: none">• Academic qualifications at the level of a bachelor's/master's degree in engineering, namely safety at work or similar• Knowledge of statistical treatment methods, ease in creating and interpreting reports• Application of labor legislation and existing standards
Other
<ul style="list-style-type: none">• Strong leadership• Motivation• Team management• Dynamism and proactivity• Communication• Analytical look

10 Sustainability Management

Tasks of this sphere are not part of local work processes.

11 Environmental Management

Venue		Date
CARITÉ		September/2021
Qualification for the sphere of activity		
Production Management Technician of Footwear and Leather goods		
Legal framework		
National Qualifications Catalogue		
Working Environment		
Products	Management of the company's processes, in terms of compliance with ISO 14001: 2015 requirements and customer requirements Environment Process	
Users	All company processes	
Internal interfaces	Quality Process Safety and Health at Work Maintenance of infrastructure and equipments	
External interfaces	Certification bodies Clients Suppliers External Laboratories Subcontractors Surrounding community Public Entities/Government Bodies	
Organization	Management, Quality responsible	
Production steps that already took place	-	
Level of autonomy	Quality responsible	
Workplace	Work Office /All sectors	
Tasks		
<ul style="list-style-type: none"> • Support the managers of the processes of the Quality and Environment Management Systems in collecting and processing information to monitor the performance of the respective processes; • Monitor audits under the Quality and Environment Management Systems; • Monitor customer audits • Ensure communication related to the Integrated Management System to the entire organization; • Monitor the System's indicators and support the taking of corrective or improvement actions; • Promote resource management, waste collection equipment and emergency response equipment • Ensure that all employees comply with the Environment Management System requirements; • Monitor and update the legislation applicable to the organization's environmental aspects; • Assume communication with competent entities in sending and providing information that demonstrate compliance with legal requirements applicable to environmental aspects of the organization; • Manage the verification and control of water quality; 		

- Waste management, promoting its recovery, reducing the environmental impact;
- Monitoring of VOCs and consumption of chemical products;
- Control of electricity, CO₂ and fuel consumption;
- Control of domestic and industrial wastewater;
- Identification, characterization and assessment of direct and indirect environmental aspects;
- Collaborate in the industrial licensing process.

Required knowledge and skills

- Academic qualifications at the level of a bachelor's/master's degree in engineering, namely environment, safety at work or similar
- Knowledge of statistical treatment methods, ease in creating and interpreting reports
- Knowledge of related international standards (ISO 14001:2015) and applicable environmental legislation

Others

- Strong leadership
- Motivation
- Team management
- Dynamism and proactivity
- Communication
- Analytical look
- Keeping up to date, especially with regard to environmental treatment standards for companies.

12 STEM in the Footwear Industry –New Technologies

Tasks of this sphere are not part of local work processes.

13 Health and Safety at Work Management

Venue		Data
CARITÉ		September/2021
Qualification for the sphere of activity		
Production Management Technician of Footwear and Leather goods		
Legal framework		
National Qualifications Catalogue		
Working Environment		
Products	Management of the Company's processes in terms of compliance with the requirements of Law No. 102/2009, of 10 September and customer requirements. Environment Process.	
Users	All processes/Employees	
Internal interfaces	Quality process Environmental process All sectors	
External interfaces	Public Entities/Government Agencies	
Organization	Management. Responsible for Quality/GIS	
Production steps that already took place	-	
Level of autonomy	Quality Manager / GIS / Superior Technician SW	
Workplace	Office/All workstations	
Tasks		
<ul style="list-style-type: none"> • Develop the professional risk assessment processes; • Design, program and develop the prevention and protection measures; • Provide the continuous training; • Participate in safety at work meetings and take the minutes; • Monitor the implementation of the preventive and corrective measures for occupational safety and health; • Identify and implement legal obligations in the field of safety and health at work; • Monitor and carry out safety audits at work; • Develop and manage security plans; • Plan and carry out emergency simulations; • Ensure compliance with security measures and use of the PPE's; • Inform and register non-compliances, prepare reports and follow up on matters relating to occupational health and safety; • Coordinate the occupational health and safety tasks with external service providers. • Implement the DL 50/2005 		
Required knowledge and skills		
<ul style="list-style-type: none"> • Academic qualifications at the level of Degree/Masters in Engineering, namely, work safety, among others; • Knowledge of statistical treatment methods, ease of creating and interpreting reports; • Application of the legislation and standards; • Superior Technician SW. 		

Others

- Strong leadership, motivation and team management;
- Strong dynamism and proactivity;
- Communication facility;
- Analytical look;
- Persistence.