**Technician for sustainability, digitalisation and bioeconomy on forestry sector**

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| **Code** | Later defined by ESCO |
| **Description** | The **Technician for sustainability, digitalization and bioeconomy in Forestry** manages and controls forestry related processes by identifying and coordinating procedures useful for resources and developing the company according to the reference territorial context. The operator manages the operational organization, the implementation of continuous improvement procedures, the monitoring and evaluation of the results using digital methodologies and technologies. Assumes responsibilities related to the oversight of executive activities carried out by others. The technical training in the use of methodologies, tools and information specialized in the bioeconomy allows him to carry out activities related to the management and choice of production addresses, investments, marketing chains, etc., with particular attention to the sustainability of processes and of products.The Technician also deals with all support activities for the planning, organization and monitoring of the work and evaluation phases of the product process. |
| **Alternative label** | Later defined by ESCO |
| **Regulatory Framework** |  |
| **Hierarchy** | Later defined by ESCO |
| **More specific professions** | Later Defined by ESCO |
| **Essential skills** | * From the core curriculum (Module Soft-skills and Entrepreneurship See Annex I)
* Sustainable and multifunctional forest management: Ecosystem services, prevention and management of natural disturbances, management of natural resources
* Water management
* Efficient use of resources and logistics
* Production and extraction of forestry products
* By-products and co-products valorisation
* Soil nutrient health management
* Reforestation, afforestation & restoration of forest ecosystems
* New markets for bio-based products/construction/biomaterials
* Protection against fires/fire detention
* Forest disease control and prevention
* Forest equipment/machinery and maintenance
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| **Essential knowledge** | * Knowledge of general forestry principles
* Knowledge of technical principles for digital forestry
* Precision forestry
* Forestry smart systems and technologies introductory aspects
* Basic GIS knowledge
* Basic forestry legislation (national and EU)
* Process operations
* Weather forecast knowledge and/or tools
* Wood technology
* Renewable energy
* Biodiversity knowledge
* Sustainable forest management practices and planning
* Climate change-resilient and stress-tolerant forests
* Biomass production and transformation
* Bio-based products and ecosystem services, re-use, recycling and valorisation of raw materials, by-products and waste; nutrients circulation vs nutrients removal
* Knowledge of Forest Management Information Systems
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| **Optional skills** | * ICT: peer groups
* Implementation of Forest Management Information Systems
* Use of robots/drones
* Wood processing, heat generation & services
* Practical training with specific machinery
* Creation and management of urban green spaces
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| **Optional knowledge** | * European environmental legislation/regulation
* Environmental policies, regulation, subsidy and support programmes
* Life cycle assessment (LCA) aspects
* New technologies in pulp and paper manufacturing, Circular economy and recycling in the pulp and paper industry, Residues and industrial side new technologies in pulp and paper manufacturing
* Use data analytics
* Knowledge of Decision Support Systems
* Circular economy knowledge
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| **State** |  |
| **Concept URI** |  |

**Annex I**

**Basic Module for each occupational profile.**

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| **Units**  | **Learning outcomes** |
| **Basic knowledge** | * Definitions (soft skills, food industry, sustainability, bioeconomy)
* Job safety
* Digital learning/tools
* Basic of economic and financial issues
* English reading/understanding
* Business-/Entrepreneurship Skills in general
* Knowledge of agri-food communities
 |
| **Business planning/model** | * Innovation management and its deployment
* Project management
* Decision making
* Time management
* Business planning
* Sales and Marketing
* Cooperatives
* Agri-food law, quality, safety and certification
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| **Social & Communication** | * Public speaking
* Negotiation and conflicts
* Food chain cooperation
* Staff working/networking
* Reporting and briefing
 |
| **Thinking** | * Organisation, planning, proactive, flexible, and strategic thinking
* Problem solving
* Interdisciplinary knowledge
* Learning Continuously
* Analytical, critical and creative thinking
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