

NATIONAL REPORT: Status of the output orientation of the training ordinances in VET programmes in Slovenia

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VET qualifications in Slovenia can be acquired following the school path (VET system) or the path of recognition of non formal learning (National Professional Qualifications System).

The **National Professional Qualifications Act – ZNPK** is compiled in a way that ensures and provides opportunities for interconnecting the national professional qualifications system with vocational education and training. The Article 3 of the ZNPK states that an individual may acquire a professional qualification:

- by acquiring a vocational or professional education,
- from parts of education programmes,
- under programmes for vocational training,
- under parts of study programmes for the acquisition of higher education or under advanced study programmes, and
- by achieving standards of technical knowledge and skills in accordance with the National Professional Qualifications Act.

When completing a programme, individuals who have not fulfilled all the obligations necessary for the acquisition of education are issued a certificate by schools attesting the qualification for which they did fulfil the requirements in accordance with the ZNPK.

Individuals who have not fulfilled all obligations for the acquisition of education and have not fulfilled the conditions for the acquisition of a certificate for NPQ are issued a certificate for the requirements they have fulfilled.

However, it should be stressed that within the national professional qualifications system, candidates do not acquire an education degree but a professional qualification at a particular level of difficulty which attests their ability to work effectively in a particular profession.

Individuals who have acquired a certificate in accordance with the ZNPK can prove to possess certain knowledge and skills and thus increase their employment opportunities, and opportunities for vertical and horizontal mobility not only in the labour market but also in the education system.

The VET Act connected both systems with introduction of occupational standards which represent a learning outcome standard for each qualification that can be acquired in Slovenia.

Occupational standards are the basic documents for the performance of examinations and the verification of professional qualifications.

It is important for them to be clearly, intelligibly and unambiguously written in order to prevent different or wrong interpretations. Therefore, the methodology for the preparation of occupational standards is prescribed, which ensures the transparency and comparability of occupational standards.

Occupational standards are prepared for individual professions which are recognised by the Statistical Office of the Republic of Slovenia and classified into the Standard Classifications of Occupations. It is important that occupational standards are prepared in cooperation with experts who are familiar with the profession, work organisation, technology and, last but not least, trends in the development of the profession and the sector itself.

Although the occupational standards are closely related to a particular sector and profession, general competences necessary to work effectively in a profession should also be included. For example: quality assurance of work, ICT skills, communication skills, work planning and organisation, health and environmental protection, etc. Unfortunately, this means that at the moment the national professional qualifications system is not able to verify general competences, which, on the other hand, undoubtedly increase the horizontal as well as vertical mobility.

The preparation of occupational standards is done through social dialogue. It is important for the employers to explain what kind of personnel with what kind of knowledge and skills they need now and in future. After all, occupational standards are not just a record of the current situation but also of the trends in the development, which is of considerable importance for the changing labour market not just from the point of view of the employer but especially from the point of view of the certificate holder.

The procedure for the preparation of occupational standards and catalogues of standards for technical knowledge and skills is determined in the Rules on the Standard Classification of Occupations:

- The procedure begins with an **initiative** submitted on a specific form to the National Institute for Vocational Education and Training, which records it, provides an expert assessment and submits it for discussion to the sector committee for occupational standards. When discussing the initiative, information on the needs of the labour market, on the comparability of standards for a specific qualification among EU member states, and, if necessary, on compliance with regulations and norms at EU level are especially important.
- If the sector committee for occupational standards considers the initiative to be well-founded, experts proposed by the competent sector committee for occupational standards, with methodological support from the CPI, prepare a proposal for an **occupational profile**.
- Based on the occupational profile, experts proposed by the competent sector committee for occupational standards, with support from the CPI, prepare a proposal for an **occupational standard** which defines professional competences, knowledge and skills necessary for a particular profession or set of responsibilities. The occupational standard is coordinated within the competent sector committee for occupational standards, which proposes it for discussion to the Council of Experts of the Republic of Slovenia for Vocational and Technical Education. An expert committee for occupational standards operating within the Council of Experts of the Republic of Slovenia for Vocational and Technical Education discusses the occupational standard and proposes its adoption or rejection. The final decision is taken by the Council of Experts of the Republic of Slovenia for Vocational and Technical Education, which thereupon proposes the occupational standard for adoption and publication on National Reference Point (www.nrpslo.org) to the minister responsible for labour.
- The occupational standard must be compiled in accordance with the **methodology** determined by the competent expert council on a proposal from sector committees for occupational standards. The national methodology represents a uniform basis for all occupational standards and catalogues, and thus ensures transparency and comparability of documents at national level. The methodological support for the preparation of occupational standards and catalogues is provided by the National Institute for Vocational Education and Training.

- On the basis of the occupational standard, a working group prepares a proposal for a **catalogue of standards for technical knowledge and skills** which is finally coordinated by the sector committee for occupational standards. Once the coordination is completed, the sector committee proposes the catalogue for discussion to the Council of Experts of the Republic of Slovenia for Vocational and Technical Education. The expert committee for occupational standards and the commission for educational programmes, operating within the Council of Experts, propose to the Council the adoption or rejection of the catalogue, and thereupon the Council proposes it for adoption to the Minister of Labour, Family and Social Affairs.
 - On the basis of one or more occupational standards a VET programme is developed. The national standards (minimum of hours for general knowledge modules and for professional modules, proportion of open curricula, etc) for each level of VET programmes are set by the Council of Experts of the Republic of Slovenia for Vocational and Technical Education. Each new VET programme is discussed by the Council of Experts of the Republic of Slovenia for Vocational and Technical Education which finally proposes to the adoption or rejection of the VET programme to the Minister of Education and Sports .
2. Presentation of occupational standard from the sectors of metal-working and its transformation into VET programme

Below we present our process of development from occupational standard to VET programme. We will present this process on one case of Tool industry worker (occupational standard) how it translates into the VET programme.

1. OCCUPATIONAL STANDARD

Tool industry worker – level 4 NQF Slovenia, possible level 3 EQF (still in consultation)

Professional competences

Candidates:

1. plan, implement and control their own work
2. prepare own posts and work tools
3. rationally use energy, material and time
4. perform work so as not to endanger yourself, the people and the environment
5. communicate with colleagues, with clients and customers
6. use computer equipment and software tools
7. manage working medium in the production
8. manufacture tools
9. controls and coordinates the work process of their own work
10. test the tools and are involved in the transfer of tools to buyer

Description of the occupational standard

Field of work	Core tasks	Professional skills and knowledge
Analysis, planning and organization of work	Plans and organises own work	<ul style="list-style-type: none"> • examines project-workshop documentation, technical and technological documentation • prepares the work plan • plans the necessary tools and devices in accordance with the documentation • plans the preparation and usage of resources to work in accordance with the documentation and other requirements • masters technical drawing • can read the technical documentation • understands mechanical drawing elements, subassemblies and assemblies tools • is familiar with the organization of the working environment • has knowledge of descriptive geometry in the profession • masters working order and knows the standards of material consumption • has knowledge of tools and equipment to carry out specific tasks • Knows the principles of work tasks organization
Preparation of own work or work post	Prepares own post and tools	<ul style="list-style-type: none"> • takes and examines the work order • reviews the sample drawing of the product and inventory of the machining process from technological sheet and estimates the scope of work • checks the supporting documents with technological sheet • reviews the work and protective equipment • takes delivery of the material and controls the quantity and quality • takes delivery of the tools and

Field of work	Core tasks	Professional skills and knowledge
		<p>prepare them and materials, equipment for the manufacturing of tools</p> <ul style="list-style-type: none"> • reviews the quality of tools and takes measures in case of damage • takes delivery of scaled rulers and tools • understands the importance of tolerance and matching • knows the basic and auxiliary materials and their properties, usability and compatibility • Is familiar with working tools, appliances and machines and their usefulness • knows the work instructions for work equipment and facilities for safe work
Operational work	operates machines in the production	<ul style="list-style-type: none"> • conducts a review of machinery and equipment • prepares and calibrates tools • mounts and dismounts work pieces • adjusts tools in accordance with the instructions • cleans the machine, the workplace and the work piece • uses hand tools for working • knows different types of machine tools and other working assets • knows how to operate metal working machinery, tools and accessories • is familiar with methods of clamping and fastening elements or tools. cutting tools and accessories • knows and is able to realize the basic parameters of the maintenance of labour resources
	Works on assembling the tools	<ul style="list-style-type: none"> • systematically assembles parts of the sub-assemblies and tools • according to the plan sets the elements of the tools' control functions • assembles and adjusts parts of the tools in the functional unit

Field of work	Core tasks	Professional skills and knowledge
		<ul style="list-style-type: none"> • prepares the designed surface of the tool parts • finalizes the active surface of the tool • applies varnish to inactive tools' surfaces • adjusts operating pressure of the tools' gas springs • finalizes the tools' composition • understands the function and operation of the tools • knows how to use the auxiliary equipment (manipulators, positioners, ...) • knows the methods of assembly of tools' elements in accordance with the instructions, and knows how to check the matching and the active tools' surfaces • knows the methods of installation of standard elements and methods of adjusting simple tools' control elements
	<p>controls and coordinates the work process of their own work</p>	<ul style="list-style-type: none"> • participates in the manufacture of individual parts of the tool • takes delivery of standard elements • control the dimensional and functional relevance of manufactured parts and assemblies according to the technical documentation • performs self-control of own work • diagnoses errors and notes inconsistencies • is able to work in a group • knows the role, function and arrangement of the tools' standard elements • is able to perform basic measurements of elements • is able to interpret the results of control measurements and implement corrections on the tools

Field of work	Core tasks	Professional skills and knowledge
	<p>using machines and other devices</p> <p>tests the tools and is involved in the transfer of tools to buyer</p>	<ul style="list-style-type: none"> • prepares the tool for testing • tests the tool on the accuracy of the product, ensuring stability in the manufacturing process • checks the overall functioning of the tools • makes final work on the tool taking into account the measurement protocols of the product • tests the tool at the buyer's premises • addresses deficiencies and inaccuracies in measurement • advises clients in respect of operation, use, setup and maintenance of the tools • has knowledge of machines and devices for testing tools • Knows how to prepare a tool for testing • Knows communication techniques for dealing with clients
Administration	Manages the required documentation	<ul style="list-style-type: none"> • manages the technical, technological, storing and working papers • prepares reports on completed work • enters the data on delays, malfunctions and other events on the machinery and equipment • knows the necessary work records • knows the elements of the working and technological documentation • masters the use of computers and other office equipment
quality assurance	Performs own work in accordance with standards and regulations	<ul style="list-style-type: none"> • assures quality in accordance with the standards • controls and evaluates the results of their own work • controls and monitors production; • control devices and takes measures

Field of work	Core tasks	Professional skills and knowledge
		<p>in case of injury</p> <ul style="list-style-type: none"> • rationally uses energy, material and time • uses measurement devices (scale, measuring tools, control devices) • participates in making proposals for improvements in machinery and improvements in the production process • monitors development trends in technologies and materials • has knowledge of procedures for identifying and monitoring quality of service • knows the standards and methods of quality control for materials and products • knows applicable standards and regulations • knows the types and methods of managing of individual records for quality assurance • is aware of the importance of rational use of materials and energy • masters the technical procedures and work instructions • knows the work instructions for work equipment and facilities for safe work
Maintenance	maintains a neat and clean working environment	<ul style="list-style-type: none"> • carries out daily cleaning, easy maintenance and repair of the equipment and tools • maintains machines, equipment and space between work • controls devices and takes measures in case of injury, and notify the superiors • participates in the maintenance work • understands the mechanics and the importance of maintenance • knows the procedures for regular inspections and maintenance of equipment, machinery, appliances

Field of work	Core tasks	Professional skills and knowledge
		and tools <ul style="list-style-type: none"> • knows preventive and corrective maintenance and the importance of maintenance • knows the basic maintenance of the devices, equipment and gear
communication	Collects and disseminates work related information	<ul style="list-style-type: none"> • collects and disseminates information on the work process and the status of tools and equipment • communicates with superiors, with technologists, service quality and other staff for quality, safe and environmentally sound work • participates in group • communicates with customer representative • Is familiar with professional terminology and uses it • Has basic knowledge of Business Communication • Has knowledge of technical terminology
Health and environment protection	performs work so as not to endanger yourself, the people and the environment	<ul style="list-style-type: none"> • complies with the rules on safety and health at work and the Fire Protection • applies personal and collective protective equipment • uses protective equipment and safeguards to work • protects own health, the health of all present and the environment • informs the head of the irregularities that hinder the health and safety at work • collects, classifies and properly disposes of waste material • knows the rules on health and safety at work regulations on fire protection, fire order and command of protective measures • knows the rules for protecting the environment • knows possible injury at work • masters the basics of first aid

Field of work	Core tasks	Professional skills and knowledge
		<ul style="list-style-type: none">• knows the importance of using personal protective equipment• knows the rules and masters the steps to protect the environment

Each VET programme is based on one or more occupational standards and enables the students to gain a broader educational qualification which leads to employment in more than one occupation. In case of Tool industry worker, this standard is a part of a 4 year vocational programme which is based on 2 occupational standards: Tool industry worker and Metalworking machinery operator.

Each Vet programme consists of a **Part A - General education** and **Part B + C Professional technical education**. In this last one we have obligatory and selective modules. In this VET programme called Processing of metal and tool making we have 11 professional modules of which 7 are obligatory and 4 elective.

To show how competences from occupational standard are transferred into a module we will use one module from the programme:

2. MODULE: FUNDAMENTALS OF PROCESSING METAL

This module covers some of competences from occupational standard and those are:
Professional competences:

1. Use technical and technological documentation and appropriate technical terminology
2. Differentiates the materials to make tools, to identify tools, to carry out the order of tools
3. Produce simple machine parts using various methods of machining
4. Evaluate and actively participate in ensuring a healthy and safe work
5. Working in groups, communicate with colleagues and superiors

Informational goals /knowledge	Formational goals/ skills
<p>Student:</p> <ul style="list-style-type: none"> • understands the basic principles of cutting • Is familiar with different manufacturing processes and their usefulness • understands the nature of drives and machine kinematics • understands guide, spindle, sled, compensatory Skirts • has knowledge of gear and continuously variable transmissions for setting trends in the machine • knows the effect of heat on the tool and work piece process • understands the configuration parameters of the process and resources necessary information and the method of determining the parameters • has knowledge of the geometry of the cutting wedge and their dependence on the type of material to be treated • understands the special devices to work on machine tools • understands the periodic inspection and preventive maintenance of machinery 	<p>Student:</p> <ul style="list-style-type: none"> • differentiates machining possibilities of different materials • differentiates and uses hand tools and machines • identifies and describes the basic functions of the machines • names component parts of the machine tool and its purpose • defines the parameters the connection between them and the impact on processing • calculates the speed of machining processes • explains the movement of the machine tool • interprets and applies instructions to monitor the work process • checks the machine before starting, and control during operation • carries out detailed settings and prepare the machine to run • adjusts the machine speed and feed rate • applies clamping and clamping devices on the machine • prepares a coolant and knows the rules of cooling and lubrication • controls the situation or fluid levels (oil, coolant) • determines tool wear and time to change the tools • prepares and implements a measurement with movable criteria micrometer and dial gauges • separates divisions on a graduated scale and uses the scale properly • identifies the dead travel to the spindle and the proper way • Is able to choose the right kind of support and prepare the work piece for clamping • sharpens tools (drill, turning the knife) • is able to choose the appropriate tool for a specific material ...

The same process from occupational standard to VET programme is used in all VET programmes.

In other two fields we can name two examples of occupational standards:

Car repair mechanic – level 4 NQF Slovenia,

Electromechanic of electric equipment - level 4 NQF Lithuania