

1. TITLE OF THE CERTIFICATE AND OF THE EDUCATION PROGRAMME (SL) <sup>(1)</sup>

**Spričevalo o poklicni maturi po izobraževalnem programu:**

**METALURŠKI TEHNIK**

(ID:999591)

<sup>(1)</sup> In native language.

2. TRANSLATED TITLE OF THE CERTIFICATE AND OF THE EDUCATION PROGRAMME (EN) <sup>(1)</sup>

**School-leaving certificate:  
METALLURGICAL TECHNICIAN**

<sup>(1)</sup> This translation has no legal status.

3. ACQUIRED KNOWLEDGE, SKILLS AND PROFESSIONAL COMPETENCES

The holder of the certificate is qualified to:

- study and use technical and technological documentation, technical regulations and standards and technical drawings for metallurgical processes;
- use technical knowledge, information technology and software in the addressing of real practical problems within the metallurgical field;
- mathematically resolve technical problems in their professional field and create analytical and graphic presentations;
- use technical terminology, process data in order to obtain information and manage technical and technological documentation;
- differentiate between primary and secondary raw materials and processes for the manufacture of metals and alloys;
- select suitable raw materials and auxiliary materials on the basis of economic and technical requirements and the requirements of quality assurance system;
- use a classification of materials, states of materials and standards;
- participate in the preparation, selection and management of technological procedures for the manufacture of metals and alloys and for shaping and heat treatment;
- monitor, set and record technological parameters of metallurgical manufacturing processes and analyse and evaluate results;
- plan a sequence of operations and monitor the productivity and capacity of individual machinery or equipment;
- direct and if necessary correct a metallurgical process or technological procedure;
- select sampling procedures, prepare samples for metallographic testing and carry out basic mechanical and technological tests of materials;
- apply judgement on the rational use of energy, use of energy sources and waste management;
- weigh the possibilities for developing and using unconventional energy sources and the rational use of energy;
- assess the environmental viability of the use of individual machines, devices and systems;
- implement and provide for measures for occupational health and safety, environmental protection, fire safety and accident prevention;
- seek rational and professional solutions in the implementation of activities in the working environment;
- use critical judgement and conduct themselves economically, responsibly and socially in the working environment;

Optional:

- select special heat treatment processes and prepare the technological pathway of the selected procedure or technological process;
- monitor basic technological parameters when carrying out heat treatment and evaluate results;
- carry out the procedure of preparing a melt for casting and select a casting process;
- monitor the technological pathway of the preparation of casting, casting technology and heat treatment of casts;
- optimise the technological procedures of individual phases of the work process and monitor the efficiency of metallurgical processes;
- use principles and methods to schedule production, resolve problems in a structured manner and eliminate errors;
- identify energy systems in metallurgy and seek technological solutions for efficient energy use in metallurgical processes;
- observe sustainable development criteria when selecting energy plants and technologies in metallurgy.

In addition, the holder of the certificate also upgraded his/her key professional skills and competences with key general knowledge and skills in line with national standards.

<sup>(\*)</sup> Explanatory note

This document is designed to provide additional information about the specified certificate and does not have any legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications, Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates, and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

More information available at: <http://europass.cedefop.eu.int>

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#### 4. RANGE OF OCCUPATIONS ACCESSIBLE TO HOLDER OF THE CERTIFICATE

The holder of the certificate can find employment in the metallurgical industry involved in the manufacture and processing of metals and alloys such as foundries and ironworks, the aluminium industry, the non-ferrous metals industry, the metalworking industry or the car industry, or with sole traders in the metal and alloy casting, shaping and heat treatment sectors.

#### **(<sup>1</sup>) Explanatory note**

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5. OFFICIAL BASIS OF THE CERTIFICATE	
<p><b>Name and status of the body awarding the certificate</b></p> <p>The institution is accredited with the Ministry of Education, Science and Sport.</p>	<p><b>Name and status of the national/regional authority providing accreditation/recognition of the certificate</b></p> <p>Ministry of Education, Science and Sport Masarykova 16 SI-1000 Ljubljana www.mizs.gov.si</p>
<p><b>Level of the certificate (national or international)</b></p> <p>Upper Secondary Technical Education Slovenian Qualification Framework: SOK 5 European Qualification Framework: EQF 4 ISCED 2011: 354</p>	<p><b>Grading scale</b></p> <p>5 – excellent 4 – very good 3 – good 2 – sufficient</p>
<p><b>Access to next level of education/training</b></p> <p>Education programme completed with the Vocational Matura exam enables enrolment to higher vocational and professional study programmes. Passing an additional General Matura exam is required to enrol to one of the university study programmes, which allow this possibility.</p>	<p><b>International agreements</b></p> <p>The Republic of Slovenia has concluded agreements on the recognition of education with individual countries. The relevant information is available at ENIC/NARIC - the National Academic Recognition Information Centre.</p>
<p><b>Legal basis</b></p> <p>Organisation and Financing of Education Act Vocational and Technical Education Act</p>	
6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE	
Time of the education	4 years
Number of credits <sup>1</sup>	240 credits
General education	101 credits
Professional education	80 credits
Practical education at the employer	14 credits
Extracurricular activities	14 credits
Open curriculum <sup>2</sup>	27 credits
Vocational matura	4 credits
<p><b>Entry requirements</b></p> <p>The programme can be attended by anyone who has completed the programme of primary education or lower vocational education or equivalent education in line with previous regulations.</p>	
<p><b>Additional information</b></p> <ul style="list-style-type: none"> <li>– Ministry of Education, Science and Sport (<a href="http://www.mizs.gov.si">www.mizs.gov.si</a>): Education programme and description of education and schooling in Slovenia</li> <li>– National Reference Point for Vocational Qualifications - NRP (<a href="http://www.nrpslo.org">www.nrpslo.org</a>)</li> <li>– National Europass Centre (<a href="http://www.europass.si">www.europass.si</a>)</li> </ul>	

<sup>1</sup> One credit equals 25 hours of candidate's work.

<sup>2</sup> Goals of the open curriculum are defined by schools in cooperation with companies on a local/regional level.

## 7. A DETAILED DESCRIPTION OF EDUCATION

### GENERAL EDUCATION:

1. Slovene (24 credits)
2. Mathematics (19 credits)
3. Foreign language 1 (20 credits)
4. Art (3 credits)
5. History (5 credits)
6. Geography (3 credits)
7. Sociology or Psychology (3 credits)
8. Physics (6 credits)
9. Chemistry (3 credits)
10. Physical education (14 credits)

### PROFESSIONAL EDUCATION:

#### Mandatory Modules (64 credits)

1. Technical communication (7 credits)
2. Business administration and organization (3 credits)
3. Process metallurgy (15 credits)
4. Materials in metallurgy (15 credits)
5. Metallurgical technology (16 credits)
6. Material testing (8 credits)

#### Optional Modules (16 credits)

7. Special heat treatments (8 credits)
8. Casting processes (8 credits)
9. Optimisation of metallurgical processes (8 credits)
10. Energy in metallurgy (8 credits)

### OPEN CURRICULUM (27 credits):

The open curriculum is determined by the school in cooperation with companies on the local level.

### PRACTICAL EDUCATION:

1. Practical training in school
2. Practical training through work placement at the employer

### EXTRACURRICULAR ACTIVITIES (14 credits):

Extracurricular activities involve compulsory activities, programme-related content and electives.

### VOCATIONAL MATURA:

Mandatory part:

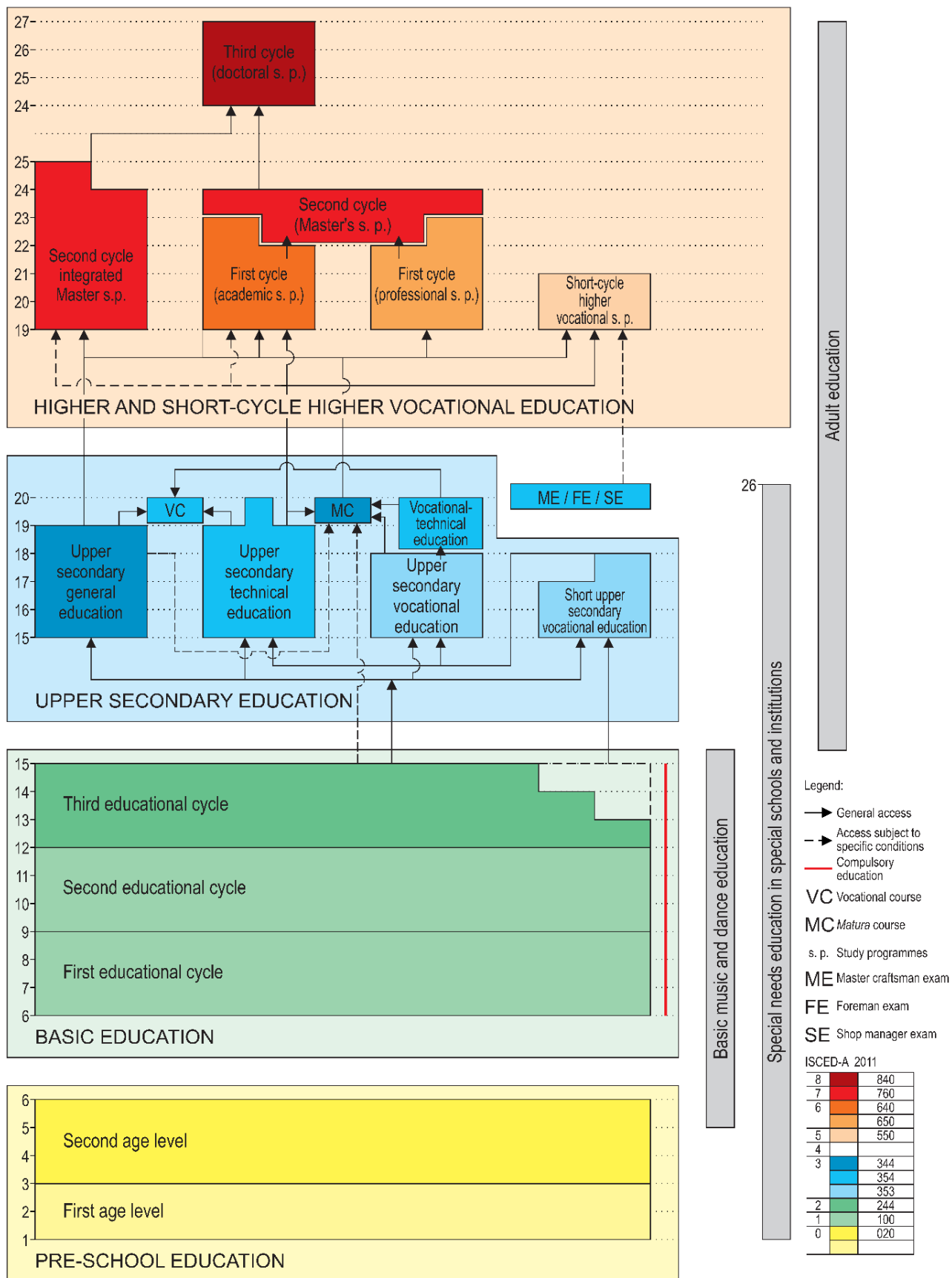
- written and oral exam of Slovenian language,
- written and oral exam in Metallurgy.

Optional part:

- written and oral exam in a Foreign language or Mathematics,
- presenting and defending a project or service (4 credits):

### OTHER NOTES:

# STRUCTURE OF THE EDUCATION SYSTEM IN THE REPUBLIC OF SLOVENIA



From school/academic year 2016/2017