

1. TITLE OF THE CERTIFICATE ⁽¹⁾

Reife- und Diplomprüfungszeugnis der Höheren Lehranstalt für Material- und Umwelttechnologie Ausbildungsschwerpunkt Metallurgie

⁽¹⁾ in original language

2. TRANSLATED TITLE OF THE CERTIFICATE (EN ⁽²⁾)

School Leaving Certificate and Diploma Certificate of the Higher Federal Technical College of Materials and Environmental Technology Specialist Subject Area: Metallurgy

⁽²⁾ This translation has no legal status.

3. PROFILE OF SKILLS AND COMPETENCES

Graduates of the Higher Federal Technical College of Materials and Environmental Technology are able to solve interdisciplinary scientific and (process) engineering problems in the field of materials and environmental technology. They are enabled to

- work on complex theoretical and experimental tasks in the field of classical natural sciences (chemistry, physics, biosciences) as well as document, interpret and present the corresponding results;
- design, lay out, calculate and optimize components and assemblies using the software provided for this purpose (FEM);
- analyze, calculate, present and interpret tasks in technical mechanics;
- plan treatment technology process steps in the field of environmental and process engineering as well as design them sustainably for corresponding recycling processes in terms of economic, ecological and legal framework conditions;
- evaluate, calculate and optimize the generation, conversion and storage of various (renewable) forms of energy in energy technology, with a particular focus on sustainable storage systems;
- describe and calculate the processes of thermal energy and process technology with regard to important fuels and assess material and energy balances on a thermodynamic basis;
- evaluate the importance of microorganisms for humans and the environment in the course of biotechnology as well as plan, design and optimize biotechnological processes;
- comment on business, economic and legal issues on a professional basis;
- plan and manage projects and they have basic knowledge on employee management;
- use relevant software and create task-related sub-programs including database applications.

In the specialization Metallurgy, graduates acquire knowledge in:

- production technology and metallurgical processes in the field of hydro-, electro- and pyrometallurgical processes for the extraction and refining of metals. This also includes knowledge of basic and additive manufacturing processes for semi-finished and finished products;
- the selection and application of metallic materials on the basis of metallurgical principles such as phase diagrams and heat treatment processes. The graduates are familiar with the production and use of steel and other metallic (special) materials and are able to analyze and optimize them.

Graduates have personal and social skills in the following areas:

- interdisciplinary work and management activities;
- Problem-solving skills, ability to work in a team, creativity, entrepreneurial thinking and acting, business management, customer orientation.

4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE CERTIFICATE ⁽³⁾

Range of occupations:

Graduates are qualified to carry out engineering activities in the materials extracting, material processing and chemical industries, but also in the fields of pharmaceuticals, the environment and recycling, among others. Furthermore, it is possible to work in technical companies in the metal industry, materials testing, material development and product management.

Self-employment in regulated professions (see www.gewerbeordnung.at)

⁽³⁾ if applicable.

(*) Explanatory note

The Certificate supplement provides additional information about the certificate and does not have any legal status in itself. Its format is based on the Decision (EU) 2018/646 of the European Parliament and of the Council of 18 April 2018 on a common framework for the provision of better services for skills and qualifications (Europass) and repealing Decision No 2241/2004/EC.

5. OFFICIAL BASIS OF THE CERTIFICATE	
Name and status of the body awarding the certificate Educational institution recognized by the State of Austria, for address see certificate	Name and status of the national/regional authority providing accreditation/recognition of the certificate Federal Ministry of Education
Level of the certificate (national or international) EQF/NQF 5 ISCED 55	Grading scale / Pass requirements 1 = excellent (excellent performance) 2 = good (good performance throughout) 3 = satisfactory (balanced performance) 4 = sufficient (performance meeting minimum pass levels) 5 = not sufficient (performance not meeting minimum pass levels) In addition, the overall performance at the final exam is rated as follows: Pass with distinction, Good pass, Pass, Fail
Access to next level of education/training In accordance with the School Organisation Act (Schulorganisationsgesetz), Federal Law Gazette no. 242/1962 as amended, this certificate entitles holders to attend a university, a post-secondary VET course (Kolleg), and a post-secondary VET college (Akademie); in accordance with the Act on Fachhochschule Study Programmes (Bundesgesetz über Fachhochschul-Studiengänge), Federal Law Gazette no. 340/1993 as amended, to attend a Fachhochschule study programme; and in accordance with the 2005 Higher Education Act (Hochschulgesetz), Federal Law Gazette I no. 30/2006 as amended, to attend a university college of teacher education (Pädagogische Hochschule).	International agreements <ul style="list-style-type: none"> • European Convention on the Equivalence of Diplomas leading to Admission to Universities, Federal Law Gazette no. 44/1957 • Convention on the Recognition of Qualifications concerning Higher Education in the European Region, Chapter IV, Federal Law Gazette III no. 71/1999 • Training completed with this certificate is a regulated education and training programme in accordance with Article 11, point (c) (ii) of Directive 2005/36/EC on the recognition of professional qualifications, as last amended by Directive 2013/55/EU. The level of training corresponds to point (c) of Article 11 of the Directive.
Legal basis National curriculum, Federal Law Gazette II no. 262/2015 current version in conjunction with II no.383/2021. Examination specification BMHS (concerning the final exams in vocational schools and colleges), Federal Law Gazette II no. 177/2012 current version.	

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE
1. Training and education as defined by the National Curriculum for Secondary Colleges of Materials and Environmental Technology 2. External certification as defined in Federal Law Gazette II no. 362/1979 current version
Additional information Entry requirements: successful completion of school year 8; if necessary entrance examination Duration of Education: 5 years Duration of compulsory work placement: totally 8 weeks Educational objectives: Intensive five-year initial training program in occupation-related practice and occupation-related theory, as well as in general education subjects, technical-scientific and business-related subjects. Independent use of thinking methods as well as attitudes towards work and decision-making which qualify graduates to immediately exercise professions at executive level in the engineering, arts and crafts sector in industry and trade as well as to take up higher studies. Use of personal and social competences in the way they are required for modern forms of work and communication – including in multicultural teams. Modern frames of mind and attitudes to work such as a cosmopolitan approach, creativity and innovation capacity. Subjects include: see List of Subjects in the Reifeprüfung-Certificate and VET-Diploma More information (including a description of the national qualification system) is available at: http://www.zeugnisinfo.at and http://www.bildungssystem.at and https://www.bmb.gv.at National Europass Center: europass@oead.at