



FINNISH NATIONAL
BOARD OF EDUCATION

Requirements for Vocational Qualifications

VOCATIONAL QUALIFICATION IN WOOD PROCESSING 2010

Study Programme/Specialisation in Industrial Joinery,
Joiner

Regulation 33/011/2010

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Upper secondary vocational education and training providers
Qualification committees in the field

Provisions on which the competence to
issue the Regulation is based:
Act 630/1998, Section 13 (2)
Decree 811/1998, Section 10 and 12
Act 631/1998, Section 13 (2)

Repeals National Board of Education Regulation(s)
No. 32/011/2000 of 17 February 2000
Study programme in Joinery
No. 21/011/2002 of 24 May 2002
And, for this qualification, the following Regulation(s)
No. 42/011/2001 of 1 August 2001
No. 34/011/2002 of 19 June 2002
No. 28/011/2004 of 27 August 2004
No. 32/011/2005 of 30 September 2005
No. 5/011/2007 of 13 February 2007

REQUIREMENTS FOR VOCATIONAL QUALIFICATIONS
Vocational Qualification in Wood Processing

Amends National Board of Education Regulation(s)
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The Finnish National Board of Education has decided on the Qualification Requirements (the National Core Curriculum and the Requirements of the Competence-based Qualification) for the Vocational Qualification in Wood Processing in accordance with the Annexe.

The Regulation must be observed in all upper secondary education and training (curriculum-based education and training) and competence-based qualifications started after 1 August 2010. All education and training and competence-based qualifications that have been started prior to entry into force of this Regulation may be completed in accordance with Regulation No. 32/011/2000, Study programme in Joinery, of 17 February 2000, and No. 21/011/2002 of 24 May 2002 by 31 July 2020, subject to the provisions of other statutes and regulations.

In curriculum-based education and training, the education provider must draw up and approve a curriculum in compliance with the provisions of these Qualification Requirements.

In providing training leading to a competence-based qualification, the education provider determines the educational content and provision in accordance with the Qualification Requirements. Those participating in preparatory training must be provided with an opportunity to complete the competence-based qualification as part of the training.

The education provider, the competence test organiser and the Qualification Committee shall comply with the terms specified in this Regulation and shall not deviate from it in any way.

Director General Timo Lankinen

Counsellor of Education Jouni Suoheimo

ANNEXE

Vocational Qualification in Wood Processing

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INTRODUCTION

A vocational qualification can be completed either as a curriculum-based or competence-based qualification. The Qualification Requirements for an upper secondary vocational qualification include both the National Core Curriculum for the upper secondary vocational qualification and the Requirements of the Competence-based Qualification and their terminology has therefore been made more uniform. The Qualification Requirements document is a regulation guiding both providers of curriculum-based education and training and organisers of competence-based qualifications and the electronic version of the Qualification Requirements document allows one to distinguish, when necessary, between the sections relating to curriculum-based upper secondary vocational education and training and competence-based training. Chapter 1 and Chapter 4 together with the parts describing the occupational field and the value basis in Chapter 9 are common. Chapters 2, 5, 6, 7 and 8 only concern vocational qualifications completed in upper secondary vocational education and training and Chapter 3 covers those completed as competence-based qualifications.

The term ‘qualification module’ corresponds to the term ‘study module’ used previously in curriculum-based education and training. A qualification consists of vocational qualification modules, complete with core subjects and free-choice modules in upper secondary vocational education and training. Additional modules can be included in a qualification when it is necessary from the point of view of field-specific or local skills requirements or enhancing the student’s or candidate’s vocational skills.

The Qualification Requirements for a vocational qualification state the objectives set for the qualification and study programme or specialisation, the qualification structure, module-specific skills requirements or objectives, targets of assessment and assessment criteria for core subjects, as well as the ways of demonstrating vocational skills in the case of vocational qualification modules. These requirements also include other provisions concerning upper secondary vocational education and training as well as competence-based qualifications.

The vocational skills requirements of vocational qualification modules and the objectives of core subjects have been defined as learning outcomes (knowledge, skills, competence). This forms the basis for describing the targets of assessment through mastering work processes, working methods, equipment and material as well as fundamental knowledge and the key competences for lifelong learning.

An education provider approves a curriculum for upper secondary vocational education and training based on the Qualification Requirements. When arranging preparatory training for competence-based qualifications, the provider decides its contents and how to arrange it in compliance with the Qualification Requirements.

OBJECTIVES AND STRUCTURE OF THE VOCATIONAL QUALIFICATION IN WOOD PROCESSING

1.1 OBJECTIVES OF THE VOCATIONAL QUALIFICATION IN WOOD PROCESSING

The Study Programme in Industrial Joinery, Joiner, in the Vocational Qualification in Wood Processing provides broad basic readiness to work in different tasks within the wood products and joinery industries. In addition, the student or candidate has more specialised skills and vocational skills required by working life in at least one qualification module in wood processing, so that he/she can find employment, perform the tasks of his/her occupational field in the changing operating environment and also develop his/her vocational skills.

A person who has completed the Vocational Qualification in Wood Processing has diverse vocational skills and he/she develops them continuously. He/she is creative and has courage and initiative to make independent decisions when working as an employee or an entrepreneur. He/she is co-operative and knows how to perceive his/her job as part of larger work entities and knows how to take into consideration the tasks of professionals in related fields in his/her own work, the most important of which include the new process industry and arts and crafts.

The Vocational Qualification in Wood Processing provides students with broad readiness to work in joinery work assignments in the Finnish wood products industry and woodworking industry or as an independent entrepreneur. A person who has completed the qualification knows how to work in different product manufacturing processes in the joinery industry and related process control and maintenance tasks. He/she acts in accordance with the company's quality and environmental system. A joiner takes the requirements and objectives of sustainable development into consideration in his/her actions.

He/she possesses the key competence for lifelong learning, specifically the ability to develop one's learning skills and problem-solving skills, work in co-operation with different stakeholders in the mechanical wood industry both within one's own organisation and externally. A person who has completed the Vocational Qualification of a joiner adheres to jointly agreed rules and takes into consideration aspects related to the maintenance of health and safety. He/she must understand the importance of occupational safety matters and activities maintaining working ability

in one's own health, working ability and coping at work. He/she takes the most important health hazards related to work into consideration and develops his/her work to reduce the risk of occupational diseases and accidents. He/she knows how to take care of his/her own health and, in that way, maintain his/her working ability and ability to function. He/she knows how to work ergonomically in compliance with occupational health and safety provisions and instructions.

A wood processing professional supports the fulfilment of equal opportunities and equality through his/her actions. He/she knows how to use modern technological equipment and devices. A person who has completed the Vocational Qualification in Wood Processing has the readiness required by society to use the information and communication technology and obtain and transfer information. A joiner is familiar with the central legislation and agreement systems of his/her field and complies with them in his/her work and other activities. Both the content and structure of the wood processing industry are continuously developing.

A joiner who has completed the Vocational Qualification in Wood Processing has the problem-solving skills needed in new situations and he/she knows how to act innovatively. He/she constantly follows the diverse development of the wood processing industry in both Finland and abroad. A joiner working in an international operating environment knows how to communicate in a foreign language, and he/she has the ability to adjust to a variety of conditions and cultures as well as to be tolerant of different people.

In addition, he/she knows how to create international contacts and has an up-to-date understanding of the state of the international wood processing field and employment opportunities offered within it. In addition, upper secondary vocational education and training shall support the development of students into good and balanced individuals and members of society and provide them with the information and skills that they need in terms of further studies, hobbies and diverse development of personality as well as support for lifelong learning (Act 630/1998, Section 5).

1.2 STRUCTURE OF THE VOCATIONAL QUALIFICATION IN WOOD PROCESSING

VOCATIONAL QUALIFICATION IN WOOD PROCESSING, 120 CR.	
IN UPPER SECONDARY VOCATIONAL EDUCATION AND TRAINING	IN A COMPETENCE-BASED QUALIFICATION
4. Vocational modules	4. Vocational modules
The modules include a minimum of 20 credits of on-the-job learning, 5 credits of entrepreneurship and a final project (a minimum of 2 cr.).	
4.1 Compulsory modules 4.1.1 Materials and manufacturing technology, 20 cr. 4.1.2 Customer-focused production activities, 10 cr.	4.1 Compulsory modules 4.1.1 Materials and manufacturing technology 4.1.2 Customer-focused production activities
4.2 Optional modules (specialisation options) A total of 1–3 modules (20–60 cr.) to be chosen from the following: 4.2.1 Manufacturing of solid-wood products, 20 cr. 4.2.2 Manufacturing of panel products, 20 cr. 4.2.3 CNC programming and machining, 20 cr. 4.2.4 Joinery processing work, 20 cr. 4.2.5 Sharp tool technology and machine maintenance, 20 cr.	4.2 Optional modules (specialisation options) 1–3 modules to be selected 4.2.1 Manufacturing of solid-wood products 4.2.2 Manufacturing of panel products 4.2.3 CNC programming and machining 4.2.4 Joinery processing work 4.2.5 Sharp tool technology and machine maintenance

IN UPPER SECONDARY VOCATIONAL EDUCATION AND TRAINING	IN A COMPETENCE-BASED QUALIFICATION
<p>4.3 Optional modules for all specialisation options A total of 0–40 credits to be chosen from items 4.3.1–4.4 so that the combined number of credits from the compulsory and the previously selected modules is 90. A maximum of 10 credits should be selected from item 4.4. If one of modules 4.3.5–4.3.8 is selected, another one from the same group should also be selected.</p> <p>4.3.1 Door manufacturing, 10 cr. 4.3.2 Window manufacturing, 10 cr. 4.3.3 Stair manufacturing, 10 cr. 4.3.4 Sharp tool technology, 10 cr. 4.3.5 Installation work, 5 cr., and one of items 4.3.6–4.3.8: 4.3.6 Furniture installation, 5 cr. 4.3.7 Door and window installation, 5 cr. 4.3.8 Stair installation, 5 cr. 4.3.9 Joinery, 10 cr. 4.3.10 Manufacturing of planed products, 10 cr. 4.3.11 CNC machining, 10 cr. 4.3.12 Production automation technology in wood processing, 10 cr. 4.3.13 Manufacturing of metal furniture, 10 cr. 4.3.14 Manufacturing of form-pressed components, 10 cr. 4.3.15 Restoration and wood repairs, 10 cr. 4.3.16 Selling wood processing products, 10 cr. 4.3.17 Technical design and making prototypes, 10 cr. 4.3.18 Manufacturing of prefabricated units for wooden houses, 10 cr. 4.3.19 Production activities in joinery, 10 cr. 4.3.20 Drying, 10 cr. 4.3.21 Surface finishing, 10 cr. 4.3.22 Modules from upper secondary vocational qualifications, 0–10 cr. 4.3.23 Module from further vocational qualifications 4.3.24 Module from specialist vocational qualifications 4.3.25 Modules from polytechnic degrees 0–10 cr. 4.3.26 Locally offered modules, 10 cr.</p>	<p>4.3 Optional modules for all specialisation options A maximum of 4 modules should be selected from the following so that the combined number of credits from items 4.1–4.3 corresponds to the nominal scope of 90 credits.</p> <p>4.3.1 Door manufacturing 4.3.2 Window manufacturing 4.3.3 Stair manufacturing 4.3.4 Sharp tool technology 4.3.5 Installation work, and one of items 4.3.6–4.3.8: 4.3.6 Furniture installation 4.3.7 Door and window installation 4.3.8 Stair installation 4.3.9 Joinery 4.3.10 Manufacturing of planed products 4.3.11 CNC machining 4.3.12 Production automation technology in wood processing 4.3.13 Manufacturing of metal furniture 4.3.14 Manufacturing of form-pressed components 4.3.15 Restoration and wood repairs 4.3.16 Selling wood processing products 4.3.17 Technical design and making prototypes 4.3.18 Manufacturing of prefabricated units for wooden houses 4.3.19 Production activities in joinery 4.3.20 Drying 4.3.21 Surface finishing 4.3.22 Modules from upper secondary vocational qualifications 4.3.23 Modules from further vocational qualifications 4.3.24 Modules from specialist vocational qualifications</p>

IN UPPER SECONDARY VOCATIONAL EDUCATION AND TRAINING		IN A COMPETENCE-BASED QUALIFICATION
4.4	Other optional modules in upper secondary vocational education and training	
4.4.1	Entrepreneurship, 10 cr.	
4.4.2	Workplace instructor training in upper secondary vocational education and training, 2 cr.	
4.4.3	Advanced and enhancing vocational modules, 0–10 cr.	
4.4.4	Core subjects, 0–10 cr.	
4.4.5	General upper secondary studies, 0–10 cr.	
4.5	Final project included in vocational qualification modules	
4.6	Modules providing individual advanced vocational competence	4.6 Modules providing individual advanced vocational competence
4.6.1	Business operations	4.6.1 Business operations
4.6.2	Modules from upper secondary vocational qualifications	4.6.2 Modules from upper secondary vocational qualifications
4.6.2.1	Modules from upper secondary vocational qualifications	
4.6.2.2	Modules from further vocational qualifications	4.6.3 Modules from further vocational qualifications
4.6.2.3	Modules from specialist vocational qualifications	4.6.4 Modules from specialist vocational qualifications
4.6.3	Locally offered modules providing individual advanced vocational competence in curriculum-based upper secondary vocational education and training	

IN UPPER SECONDARY VOCATIONAL EDUCATION AND TRAINING		
5. Core subjects in curriculum-based vocational education and training, 20 credits		
5.1	Compulsory modules for all	Optional
5.1.1	Mother tongue	4 credits
5.1.2	Second national language	0–4 credits
	5.1.2.1 Second national language, Swedish	1 credit
	5.1.2.2 Second national language, Finnish	0–4 credits
5.1.3	Foreign language	2 credits
5.1.4	Mathematics	0–4 credits
5.1.5	Physics and chemistry	3 credits
5.1.6	Social, business and labour-market subjects	2 credits
5.1.7	Physical education	1 credit
5.1.8	Health education	0–4 credits
5.1.9	Arts and culture	1 credit
5.2	Optional modules	
5.2.1	Optional additional modules to compulsory core subjects, see Chapters 5.1.1–5.1.9 above	
5.2.2	Environmental studies	0–4 credits
5.2.3	Information and communications technology	0–4 credits
5.2.4	Ethics	0–4 credits
5.2.5	Cultural knowledge	0–4 credits
5.2.6	Psychology	0–4 credits
5.2.7	Entrepreneurship	0–4 credits
		16 credits
		4 credits

*) In education provided in Swedish, the scope of studies in the second national language is 2 credits, the scope of compulsory core subjects is 17 credits, and the scope of optional modules is 3 credits. The scope of compulsory studies is 1 credit each in both physical education and health education. The education provider may divide compulsory studies in physical education and health education differently, however, in such a way that their overall scope totals 2 credits.

6. Free-choice modules in curriculum-based vocational education and training, 10 cr.

The qualification modules comprise a minimum of 1.5 credits of guidance and counselling.

Principles of the structure of an upper secondary vocational qualification

Upper secondary vocational qualifications consist of vocational qualification modules, which may be compulsory or optional. In addition, qualifications to be completed as upper secondary vocational education and training contain compulsory and optional modules from core subjects as well as free-choice modules. Additional modules which expand the scope of the qualification completed can also be included individually in a qualification when it is necessary from the point of view of field-specific or local vocational skills requirements in working life and enriching the student's or candidate's vocational skills. Qualification-specific rules regarding optional modules are presented above in the table introducing the structure of the Vocational Qualification in Wood Processing.

The student or candidate may also include modules from other vocational qualifications in the upper secondary vocational qualification.

The student may choose general upper secondary school studies, and even take the matriculation examination, to improve his/her eligibility to pursue further studies. These studies may compensate for core subjects, other optional modules and free-choice modules.

In order to facilitate choices and recognition of skills, the compensation principles for studies completed or to be completed at general upper secondary school have been described in Section 5, Core subjects. Defining the principles of compensation also promotes cooperation between education providers and the use of common training provision.

Completion of the entire qualification is the primary objective of education and training leading to an upper secondary vocational qualification arranged in accordance with the Vocational Education and Training Act. A student can also complete a vocational upper secondary qualification one or more modules at a time to obtain more vocation-specific competence when it is appropriate in terms of the individual's readiness to study, life situation or employability. The student must be provided with flexible opportunities to complete the qualification at a later date. In these kinds of situations, the education provider draws up a plan for the student or candidate, preferably in cooperation with the employer, for completing the qualification.

1.3 KEY COMPETENCES FOR LIFELONG LEARNING

These key competences for lifelong learning are taken to mean such competences as are needed for continuous learning, for seizing future and new situations as well as for coping with the changing working life environment. They are an important part of vocational skills and reflect an individual's intellectual flexibility and ability to manage different situations. They increase the general vocational learning and citizenship skills needed in all fields and help students or candidates to keep up with changes in society and working life as well as to act under changing conditions. They also play a major part in one's quality of life and development of personality.

In addition to common emphases of the previous National Core Curricula for Upper Secondary Vocational Education and Training, the Requirements of Competence-based Qualifications and key competences common to all vocational fields, the key competences for lifelong learning are considered to include cross-curricular themes from basic and general upper secondary education together with the recommendations for the key competences for lifelong learning (COM(2005)548, 2005/0221 (COD)) made by the European Parliament and the Council.

The key competences for lifelong learning are included in the objectives of core subjects and the vocational skills requirements of vocational qualification modules and their assessment criteria. The key competences for lifelong learning to be assessed separately consist of the following: Learning and problem solving, interaction and co-operation, vocational ethics, and health, safety and ability to function.

Key competences for lifelong learning include:

1. Learning and problem solving
2. interaction and co-operation
3. vocational ethics
4. health, safety and ability to function
5. initiative and entrepreneurship
6. sustainable development
7. aesthetics
8. communication and media skills
9. mathematics and natural sciences
10. technology and information technology
11. active citizenship and different cultures.

Description of the key competences for lifelong learning

Learning and problem solving

The student or candidate plans his/her activities and develops himself/herself and the work. He/she assesses his/her own competence, solves problems and makes decisions and choices in his/her work. The student/candidate is adaptive, innovative and creative in his/her line of work, acquires information and analyses, assesses and applies it.

Interaction and co-operation

The student or candidate acts appropriately in different interactive situations and also expresses different views clearly, constructively and in a way that builds confidence. He/she works co-operatively with different people and as a member of a team and also treats all people equally. He/she observes the general code of conduct and regulations. He/she makes use of feedback received.

Vocational ethics

The student or candidate observes the value basis of the occupation. He/she is committed to his/her work and acts responsibly following the contracts made and work ethics.

Health, safety and ability to function

The student or candidate acts safely and responsibly at work and in leisure time as well as in traffic and also leads a healthy life and maintains his/her ability to function and work. He/she works ergonomically and takes the physical exercise needed in the occupation and also acts in a manner that prevents the dangers and health hazards relating to the work and the working environment.

Initiative and entrepreneurship

The student or candidate works towards completing the objectives set. He/she takes initiative and acts in a customer-oriented way as an employee and/or entrepreneur. He/she plans activities and works to reach the objectives set. He/she acts economically and is results-orientated. He/she sets personal goals in line with the overall objectives.

Sustainable development

The student or candidate acts according to the ecological, economic, social and cultural principles of sustainable development in the occupation. He/she observes the rules, regulations and contracts of sustainable development prevailing in the field.

Aesthetics

The student or candidate takes into consideration the aesthetic factors in his/her line of work. He/she contributes to and maintains the pleasantness and aesthetics of the working environment.

Communication and media skills

The student or candidate uses his/her language skills in a way that is appropriate, varied and interactive considering the situation. The student/candidate observes, interprets and assesses different media products critically. He/she uses media and information technology and also produces media material.

Mathematics and natural sciences

The student or candidate uses basic mathematics to solve mathematic equations at work and in everyday life. He/she uses formulae, graphs, patterns and statistics, for example, to help solve work-related assignments and problems. The student/candidate applies methods and practices that are based on the laws of physics and chemistry at work.

Technology and information technology

The student or candidate makes versatile use of technologies used in his/her occupation. He/she considers the benefits, limitations and risks of technology. He/she makes versatile use of information technology at work and as a citizen.

Active citizenship and different cultures

The student or candidate participates constructively in the activities and decision-making of the community. He/she acts according to his/her rights and responsibilities both at work and in everyday life. He/she observes the acts governing equality and non-discrimination. He/she acts appropriately and in keeping with the requirements of working life with people from different cultural backgrounds both at home and in international operations.

1.4 ELIGIBILITY FOR FURTHER STUDIES

According to section 4 of the Vocational Education and Training Act, upper secondary vocational studies grant the student eligibility for further studies at universities or polytechnics.

IMPLEMENTATION OF NATIONAL REQUIREMENTS IN CURRICULUM-BASED VOCATIONAL EDUCATION AND TRAINING

2.1 DESIGN AND CONTENTS OF THE CURRICULUM

According to the Vocational Education and Training Act (630/1998, section 14), the education provider must approve a curriculum for its education and training that is based on the qualification requirements laid down in this document. It must contain procedures to achieve the tasks and objectives set for education and training (Act 630/1998, section 5). A curriculum must be approved separately for education provided in Finnish, Swedish and Saami and also for education in any other language as required. The curriculum of an education provider is a public document. The curriculum regulates and directs the education and training offered by the provider and all other activities closely related to it. In order to guarantee students' legal protection, the curriculum must provide adequate information about the modules and studies included in the qualification, assessment and arrangements concerning completion of the studies.

The curriculum must be compiled so that it enables students to select vocational studies individually as well as to complete general upper secondary studies and the matriculation examination. The curriculum also acts as the basis for internal and external evaluation and allows the effectiveness of the education offered by the education provider to be evaluated.

The education provider reserves the resources needed for the education and training. The education provider also ensures that the curriculum allows the student to achieve the objectives set for the qualification, to receive the amount of teaching and counselling that he/she needs regardless of the way in which the education is organised on each school day, also during on-the-job learning and skills demonstrations.

The curriculum consists of a common part for all qualifications and fields of vocational education and training and qualification-specific parts.

2.1.1 Common part of the curriculum

The common principles and procedures for all the upper secondary vocational qualifications and core values of the education provider are defined in the common part of the curriculum.

The common part of the curriculum consists of at least:

- ◆ providing education and training as curriculum-based vocational education and training, as training arranged at a workplace in connection with practical work assignments and as apprenticeship training (Act 630/1998, sections 3, 15 and 17);
- ◆ arranging education and training as contact teaching, distance, multi-modal (Act 630/1998, section 15) and e-learning;
- ◆ plans and methods for completing a module or modules as well as students' opportunities to add to their studies and complete the whole qualification;
- ◆ providing education in co-operation with other education providers and the world of work (Act 630/1998, sections 14 and 10);
- ◆ teaching-related measures promoting community spirit, which provides an opportunity for reflecting values and getting to know our cultural heritage (Decree 811/1998, sections 9);
- ◆ common practices on performing student assessment (Act 601/2005, section 25a) in accordance with Chapter 7;
- ◆ compliance with the provisions of Chapter 8;
- ◆ staff development plan.

The education provider must include plans on how to promote equality, non-discrimination and sustainable development in the curriculum. When organising education and training, the education provider must also take into account the obligations in other statutes concerning education and training.

2.1.2 Qualification-specific part of the curriculum

The qualification-specific part of the curriculum determines the organisation of the vocational qualification modules and the core subjects in co-operation with other education providers and the world of work. It also determines the timing of the education, learning environments and teaching methods, which allow the student to achieve the vocational skills requirements and the objectives of the qualification.

The qualification-specific part also lists the studies that the education provider offers from other qualifications as well as the student's opportunities to complete more than one qualification. It specifies the assessment plan for the vocational modules and core subjects, including vocational skills demonstrations and other assessment of competence.

The qualification-specific part of the curriculum is to cover at least:

- ◆ the composition of the qualification of compulsory and optional vocational modules and core subjects;
- ◆ progression, timing and sequence of studies;
- ◆ provision of free-choice modules;
- ◆ a plan for provision of individual advanced vocational modules (modules that expand the scope of an upper secondary vocational qualification);
- ◆ a plan for assessment of the modules and methods used for assessment of competence;
- ◆ a plan for assessing vocational modules in a way that includes a plan on implementation and assessment of skills demonstrations approved by the local board for vocational skills demonstrations;
- ◆ locally offered modules, their skills requirements, targets of assessment and criteria as well as the objectives, targets of assessment and assessment criteria for the additional optional modules of compulsory core subjects.

2.1.3 Individual study plan

The Vocational Education and Training Act (630/1998, section 14) lays down provisions on a student's right to make individual choices in his/her studies. The Vocational Education and Training Decree (811/1998, sections 3, 4 and 12a) contains provisions on dissemination of information on the education and training offered, guidance and counselling and recognition of prior learning and competence. In order to guarantee a student's right to make individual choices, the education provider must prepare an individual study plan for the student based on his/her individual circumstances and update it throughout the period of education and training.

COMPLETING A VOCATIONAL QUALIFICATION AS A COMPETENCE-BASED QUALIFICATION

3.1 OVERVIEW OF THE COMPETENCE-BASED QUALIFICATION SYSTEM

The competence-based qualification system offers adults a flexible way of demonstrating, renewing and maintaining their vocational competence, or when duties change, qualifying for a new occupation. In a competence-based qualification, a person's vocational competence can be acknowledged nationally and qualitatively irrespective of whether the skills have been acquired through work experience, studies or other activities. In the competence-based qualification system, the employer side, the employee side and the educational sector work in close co-operation when developing the qualification structure, drawing up qualification requirements, planning and arranging competence tests as well as when assessing test performances.

Upper secondary, further and specialist vocational qualifications can be completed as competence-based qualifications. The Requirements of Competence-based Qualifications describe vocational skills as working life skills requirements. The qualifications are made up of modules, which are independent work entities.

3.2 ARRANGING COMPETENCE-BASED QUALIFICATIONS

The Qualification Committees appointed by the Finnish National Board of Education and comprising representatives of employers, employees, teachers and, when necessary, self-employed people, are responsible for arranging and controlling competence-based qualifications and they award qualification certificates. The Qualification Committees sign contracts for arranging competence-based qualifications with education providers and, when necessary, with other organisations and foundations. Competence-based qualifications must not be arranged without a valid contract with the Qualification Committee concerned.

3.3

COMPLETING A COMPETENCE-BASED QUALIFICATION

A competence-based qualification is completed by successfully demonstrating the skills required for practical work assignments and activities in a competence test. Each module must be assessed separately. Assessment is jointly carried out by representatives of employers, employees and the educational sector. In vocational fields where self-employment is typical, this also needs to be considered when appointing assessors. The Qualification Committee makes the final decision on assessment. A qualification certificate can be awarded when all modules required to make up the qualification have been completed successfully.

3.4

REQUIREMENTS OF COMPETENCE-BASED QUALIFICATIONS

The Requirements of Competence-based Qualifications define the modules to be included in each specific qualification and any possible specialisations made up of different modules, the qualification contents, the vocational skills required in each module, the guidelines for assessment (targets and criteria of assessment) as well as ways of demonstrating vocational competence.

Each qualification module constitutes a specific occupational area which can be isolated from a natural work process into an independent and assessable component. The vocational skills requirements defined in modules focus on occupation-specific key activities, mastery of processes and occupational practices relevant in the field concerned. They include the skills commonly required in working life, such as social skills.

The targets and criteria of assessment are derived from the vocational skills requirements. The targets of assessment define the areas of competence to which special attention will be paid during assessment. Definition of the targets of assessment also makes it easier to assess vocational competence in the work activity concerned. Assessment must cover all the targets listed in the Requirements of the Competence-based Qualification. Assessment criteria determine the quality and quantity levels for successful performance.

The ways of demonstrating vocational skills include further instructions on how to complete a qualification. The vocational skills are, in the main, demonstrated in actual work assignments or tasks. The ways of demonstrating vocational skills may also include, for example, instructions on how a test performance can be supplemented, if necessary, in order to fulfil all the skills requirements comprehensively.

3.5 INDIVIDUALISATION IN COMPETENCE-BASED QUALIFICATIONS

The education provider is responsible for individualising the application procedure for a competence-based qualification and for preparatory training, completing the qualification as well as acquisition of the vocational skills required. The Finnish National Board of Education has issued a separate regulation on individualisation.

3.6 ASSESSMENT OF VOCATIONAL SKILLS IN A COMPETENCE-BASED QUALIFICATION

Assessment of vocational skills must thoroughly and carefully examine the extent to which a candidate has demonstrated that he/she masters what the Requirements of the Competence-based Qualification specify for the vocational skills requirements of the module in question. Assessment must be carried out using the assessment criteria defined in the Requirements of the Competence-based Qualification. In terms of assessment, a variety of different and primarily qualitative assessment methods should be used. Using one method only does not necessarily yield a reliable result. The special characteristics of each field and qualification are taken into consideration in the assessment process in accordance with the Qualification Requirements.

If a person completing a qualification has reliable evidence of previously demonstrated competence, the assessors check its correspondence with the skills requirements described in the Requirements of the Competence-based Qualification. The assessors suggest the corresponding document to the Qualification Committee for recognition as part of a competence-based qualification. If the candidate has previously demonstrated his/her skills in one of the modules of this qualification either in curriculum-based education and training or as part of a competence-based qualification, the previously completed qualification or its module must be presented for recognition as part of the competence-based qualification to be completed. There is no general time limit for previously acquired and demonstrated skills but the validity of such skills can be verified. The Qualification Committee makes the final decision on recognition of previously demonstrated and reliably documented skills. If necessary, the candidate must demonstrate the correspondence of his/her skills with the skills requirements of the qualification in question.

Assessing vocational skills is a process where collecting assessment material and documenting the assessment process are of key importance. Representatives of the world of work and teachers carry out a careful and comprehensive tripartite assessment. Every person completing a qualification must be informed of the assessment criteria. The candidate must be given an opportunity to self-assess his/her perfor-

mance. The provider of a competence-based qualification must draw up minutes covering assessment of the module, which must be signed by the assessors. The candidate is given feedback as part of a good assessment process. The Qualification Committee makes the final decision on assessment.

Assessors

Those assessing a candidate's vocational skills are required to have good vocational skills themselves in the area of the competence-based qualification in question. The Qualification Committee and the provider of the competence-based qualification agree on the assessors in the contract for arranging competence-based qualifications.

Rectification of assessment

A person completing a qualification may request rectification of assessment from the Qualification Committee competent in the field and domain within which the qualification in question falls, within the statutory period of time. A written request for rectification shall be addressed to the Qualification Committee. Having heard the assessors, the Committee can oblige them to carry out a reassessment. There can be no appeal against a Qualification Committee's decision on a request for rectification of assessment.

3.7 CERTIFICATES

The Qualification Committee awards a qualification certificate or a certificate for completion of one or more modules. A representative of the education provider issues a certificate on completed preparatory training. The Finnish National Board of Education has issued a regulation on the information to be included on the certificates.

A certificate for completion of one or more qualification modules is awarded at the request of a person completing a competence-based qualification. The representatives of the Qualification Committee and the education provider sign the qualification certificate or a certificate given after completion of one or more individual modules.

An entry in the Certificate of Vocational Skills approved by the Finnish National Board of Education in proof of completion of a competence-based qualification is comparable to a qualification certificate. The provider of the competence-based qualification acquires and signs the Certificate of Vocational Skills. A Certificate of Vocational Skills is subject to a fee.

3.8 PREPARATORY TRAINING FOR COMPETENCE-BASED QUALIFICATIONS

In the case of a competence-based qualification, no preconditions to attend preparatory training can be set. However, these qualifications are primarily taken in connection with such preparatory training. The education provider decides on the contents and arrangement of preparatory training for competence-based qualifications in compliance with the Qualification Requirements. The training and tests must be structured according to the qualification modules to be completed. A person attending such preparatory training must be provided with an opportunity to participate in competence tests and to complete the qualification as part of the training.

4

VOCATIONAL MODULES, VOCATIONAL SKILLS REQUIREMENTS AND ASSESSMENT OF THE VOCATIONAL QUALIFICATION IN WOOD PROCESSING

4.1 COMPULSORY MODULES

4.1.1 Materials and manufacturing technology

Materials and manufacturing technology covers the basic machinery, measuring tools and professional drawings of the joinery industry, the most common materials in the field as well as machine-specific and general occupational safety. In addition, the basics of the most common joints, gluing and surface finishing are covered. The focus of this qualification module is on safe and ergonomic working as well as mastering the use of machines.

Vocational skills requirements

The student or candidate is able to:

- ◆ read professional drawings and plan a working order based on them;
- ◆ create simple professional drawings;
- ◆ create a cutting and crosscutting list;
- ◆ use measuring tools of the field;
- ◆ use materials and other substances correctly for their intended use;
- ◆ measure the moisture content of wood;
- ◆ make product structures and joints;
- ◆ manufacture products in accordance with specified quality requirements;
- ◆ finalise the products he/she manufactured in a manner required by the surface finishing;
- ◆ apply surface finishing on the product in an appropriate manner;
- ◆ work in a safe manner, taking the obligations of the ATEX directive into consideration as well;
- ◆ maintain orderliness in the workplace and clean his/her work area.

The student or candidate is able to use at least the following basic machines:

- ◆ circular saw
- ◆ band saw
- ◆ surface planer
- ◆ rotary planer
- ◆ vertical spindle moulder
- ◆ router
- ◆ gang drilling machine
- ◆ pneumatic clamp
- ◆ CNC machine
- ◆ belt sander.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	occasionally needs guidance when planning his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs some guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs some guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects	assesses his/her work realistically in relation to the objectives	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Technical drawing	knows how to read product drawings	knows how to make component or assembly drawings in accordance with instructions provided	knows how to make component and assembly drawings
Compiling bills of material	occasionally needs guidance when compiling bills of material	knows how to compile bills of material almost flawlessly	knows how to compile bills of material
Measuring devices	knows how to use a tape measure reliably and a slide gauge for the most part correctly	masters the use of a tape measure and a slide gauge reliably and in a natural manner; knows how to use other measuring devices with guidance	uses the measuring devices required in the work effectively, diversely and reliably
Using machines and equipment	occasionally needs guidance when selecting and setting the right sharp tools and machining values	knows how to select and set the right sharp tools and machining values in accordance with instructions provided	knows how to select and set the right sharp tools and machining values nearly independently
	works with guidance, taking occupational safety and tidiness into consideration	works in accordance with instructions provided, taking occupational safety and tidiness into consideration	works nearly independently, taking occupational safety and tidiness into consideration
	knows how to use almost all basic machines nearly independently, but needs assistance with sharp tool settings	knows how to use almost all basic machines independently, but needs minimal assistance with sharp tool settings	knows how to use basic machines independently and adjust sharp tool settings
Selecting materials	needs some guidance in order to select the materials specified for a product	knows how to select the materials specified for a product in accordance with instructions provided	knows how to select the materials specified for the product independently
Finalisation and quality control	knows how to finalise products, but there are several flaws in finalisation and quality control	manages the finalisation of components but there are minor flaws in quality control	manages all aspects of finalisation and quality control flawlessly
Surface finishing	knows how to apply surface finishing with manual tools in accordance with the minimum requirements of the product	knows how to apply surface finishing on product components using a spray gun with guidance	knows how to apply surface finishing on product components in accordance with the quality requirements

Machine and sharp tool maintenance	knows how to sharpen manual sharp tools but there are flaws in the outcome	knows how to sharpen manual sharp tools	knows how to sharpen manual sharp tools at the right time and independently
	participates in machine maintenance measures	knows how to perform basic maintenance of machines	knows how to perform most of the basic maintenance measures for machines independently and at the right time

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Knowledge of materials	knows the most common types of wood used in the joinery industry	recognises the most common types of wood used in the joinery industry	recognises the most common types of wood used in the joinery industry; knows their intended uses
	knows the most common types of panel used in the joinery industry	recognises the most common types of panel used in the joinery industry	recognises the most common types of panel used in the joinery industry; knows their properties and intended uses
	understands how wood behaves when its moisture content changes	understands the importance of anisotropy of wood materials in the manufacture and structures of products	knows the physical and chemical properties of wood and their impact; knows the importance of wood structure in wood-working
	knows the most common glues and other materials used in the joinery industry	recognises the most common glues and other materials used in the joinery industry	recognises the most common glues and other materials used in the joinery industry; knows their intended uses
Drying technique	knows how to determine the moisture content of wood	understands why wood is dried to the usage moisture content	knows how to determine the moisture content of wood by means of a weighing method and masters the concept of equilibrium moisture content
Mathematics and natural sciences	knows how to calculate the material costs of a finished product	knows how to calculate the costs of all materials used to manufacture a product	understands the composition of the price of a product and knows how to calculate all material costs independently

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
4. Key competences for lifelong learning	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
	has completed first aid and occupational safety training		
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work	knows how to act in interactive situations required by work	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by independently manufacturing a simple product or product components in accordance with verbal instructions or by interpreting written work plans. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ using machines and tools from mastering working methods, equipment and material;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.1.2 Customer-focused production activities

In customer-focused production activities, the product's appearance, dimensions and quality requirements are determined, documents needed in manufacturing are compiled and the product or a product component is manufactured in accordance with quality criteria and the schedule. The focus of the module is on compliance with measuring accuracy, quality criteria and the schedule.

Vocational skills requirements

The student or candidate is able to:

- ◆ determine the client's needs;
- ◆ compile the documents required for manufacturing the product;
- ◆ manufacture the product in accordance with the criteria provided;
- ◆ finalise the product as required by the surface finishing.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
1. Mastering work processes	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Planning the work	occasionally needs guidance when planning his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs some guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs some guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects	assesses his/her work realistically in relation to the objectives	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Accepting the work	knows how to determine the product's appearance, dimensions and quality criteria with guidance	knows how to determine the product's appearance, dimensions and quality criteria in accordance with instructions provided	knows how to independently determine the product's appearance, dimensions, quality criteria and other details
	needs some guidance when drawing up a schedule	knows how to draw up a schedule for manufacturing a product, but needs some guidance	knows how to draw up a realistic schedule for manufacturing a product
Using materials	needs guidance with using materials	primarily knows how to use materials economically and in accordance with product quality requirements	knows how to use materials economically and in accordance with product quality requirements

Using machines and equipment	knows how to change the sharp tools of machines and adjust simple sharp tool settings	knows how to use machines diversely using the correct methods	knows how to independently use machines diversely and carry out the machining steps in the correct order
	is able to manufacture a product with guidance in accordance with occupational safety instructions provided and without causing danger	manufactures a product in accordance with instructions provided, fairly quickly and taking occupational safety into consideration	manufactures a product independently, quickly and taking occupational safety into consideration
Finalisation	needs guidance in the finalisation of a product	knows how to finalise a product as required by the surface finishing in accordance with instructions provided	knows how to finalise the product as required by the surface finishing

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Knowledge basis related to using machines	needs guidance applying vocational knowledge to manufacturing a product	independently applies vocational knowledge to manufacturing a product	applies vocational knowledge to manufacturing a product in an independent, justified and natural manner
Documents	knows how to compile the documents used in manufacturing with guidance	knows how to compile the documents used in manufacturing nearly flawlessly	knows how to compile the documents used in manufacturing
Mathematics and natural sciences	knows how to calculate the material costs of a finished product	knows how to calculate the costs of all materials used to manufacture a product	understands the composition of the price of a product and knows how to calculate all material costs independently

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work

Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	knows how to act in interactive situations necessary for work	knows how to act in interactive situations required by work	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations
Learning and problem solving	understands and, with guidance, takes into consideration the client's needs in the manufacturing of a product	understands and takes into consideration the client's needs in the manufacturing of a product	understands and independently takes into consideration the client's needs in the manufacturing of a product

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by independently manufacturing a product or product components in accordance with verbal instructions or by interpreting written work plans. Assessment of work focuses on adherence to the work schedule and the quality of the completed product. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ using materials, machines and tools and finalisation from mastering working methods, equipment and material;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.2 OPTIONAL MODULES

4.2.1 Manufacturing of solid-wood products

The manufacturing of solid-wood products primarily covers the manufacture of products or their components from wood using the most central machining tools in the joinery industry.

Vocational skills requirements

The student or candidate is able to:

- ◆ manufacture solid-wood products or their components;
- ◆ read work drawings and compile a bill of materials;
- ◆ select the wood and other materials suitable for the intended use of the product;
- ◆ use woodworking machines, equipment and sharp tools used in the manufacturing process;
- ◆ select different jointing methods, templates and/or production methods related to the manufacture of a solid-wood product;
- ◆ work in a customer-focused manner.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	occasionally needs guidance when planning his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently
Mastering the work as a whole	initially needs some guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and independently
Company-oriented, high-quality and economical activities	needs some guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects	assesses his/her work realistically in relation to the objectives	assesses his/her work realistically and independently

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Manufacturing products	uses correct working methods with guidance	selects the correct working methods and manages their use in accordance with instructions provided	selects the correct working methods and knows how to work independently
	knows how to use templates in manufacturing	knows how to make templates in accordance with instructions	knows how to make different templates nearly independently

Using machines and equipment	knows how to use machines and equipment and adjust sharp tool settings with guidance, taking occupational safety into consideration	masters the safe use of machines and equipment; knows how to adjust sharp tool settings in accordance with instructions provided	masters the safe use of machines and equipment; uses tools safely
	knows how to change and set sharp tools and machining values with guidance	knows how to select, change and set sharp tools and machining values in accordance with instructions provided	knows how to select, change and set the most suitable sharp tools for each work stage and select the suitable machining values for the sharp tools independently
Finalisation and quality control	knows how to finalise products, but there are flaws in finalisation and quality control	manages the finalisation of components but there are minor flaws in quality control	finalises the work stages independently and to a high quality
Selecting the material	needs some guidance in order to select the correct materials for a product	knows how to select the correct materials for a product in accordance with instructions	knows how to select the correct materials for products independently and use them economically

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Ability to read drawings	recognises production drawings and knows how to read them with guidance	reads drawings nearly independently	knows how to read drawings
Gluing technique	knows that different kinds of glues and gluing methods are used for different applications	knows which glue is used in common applications and is familiar with different gluing methods	knows the most common glues being used, their applications and properties and knows how to select the correct gluing method independently
Knowledge of materials	recognises the most common types of Finnish wood	recognises the types of Finnish wood and their central properties	recognises the most common types of wood and their properties and knows how to select a suitable raw material based on the application
	knows that drying is important for wood material	understands the importance of drying to wood material	understands the importance of drying to wood material
	recognises the most common physical and chemical properties of wood with guidance	recognises the most common physical and chemical properties of wood	knows the most common physical and chemical properties of wood and understands their importance

Fittings	recognises different fittings and fasteners and knows how to install them with guidance	recognises different fittings and fasteners and knows how to install them in accordance with instructions provided	recognises different fittings and fasteners and knows how to install them in the correct targets independently
Material calculation	understands the basics of material calculation and knows how to calculate the amount and cost of material used in the product with guidance	understands the basics of material calculation and knows how to calculate the amount and cost of material used in the product nearly independently	calculates the amount and cost of material used in the product and knows how to compare different options
Sharp tool technology	recognises the sharp tools related to different work stages with guidance	recognises the sharp tools most suitable for each work stage in accordance with instructions provided	knows how to select the sharp tools most suitable for each work stage and the rotation speed and feed rate required by machining
	recognises different sharp tool materials with guidance	knows different sharp tool materials and their markings and is familiar with some of their applications	knows the sharp tool materials and their properties and knows how to select the sharp tool based on its application

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question

Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	knows how to act in interactive situations necessary for work	knows how to act in interactive situations required by work	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by manufacturing a solid-wood product in accordance with instructions provided. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one’s own work from mastering work processes;
- ◆ manufacturing products, using materials, machines and tools and selecting the material from mastering working methods, equipment and material;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.2.2 Manufacturing of panel products

The manufacturing of panel products covers the upgrading of various panels in the wood products industry into completed products and component parts as well as further processing of various panels. Manufacturing can take place on machine lines or individual machines.

The manufacturing of panel products consists of, for example, the following types of joinery tasks:

- ◆ production of fixtures and their components;
- ◆ production of various kinds of furniture from panels;
- ◆ further processing of different wood product panels.

Vocational skills requirements

The student or candidate is able to:

- ◆ adjust sharp tool settings and make adjustments on machines for processing panel furniture;
- ◆ select sharp tools and replace them in the machines he/she uses;
- ◆ use machines both on the machine line and individual machines;
- ◆ use the NC technique in the manufacturing of panel products;
- ◆ overlay panels in the wood products industry;
- ◆ produce high-quality and accurately dimensioned components;
- ◆ make panel furniture assemblies.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	occasionally needs guidance when planning his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs some guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects	assesses his/her work realistically in relation to the objectives	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Selecting the material	needs guidance in the selection of materials for products	selects the materials needed in products nearly independently	selects the materials needed in products independently
Adjusting machine settings	manages adjustment of settings for individual machines nearly independently	is able to adjust machine settings nearly independently and select the sharp tools in accordance with manufacturing documents	is able to select sharp tools needed in woodworking independently and adjust machine settings in accordance with manufacturing documents

Maintaining and using machines	needs some guidance in the use of machines	manages the use of machines nearly independently	manages the use of machines without problems and is able to maintain high-quality production
	knows how to change sharp tools in woodworking machines	monitors the condition of machines and sharp tools but does not know how to schedule sharp tool replacement	independently recognises the need for replacement of sharp tools in woodworking machines; knows how to replace sharp tools independently
Using NC machines	needs some guidance in the use of machines	is able to use machines independently	in addition to using machines independently, knows how to make changes to woodworking programs
Overlaying panels (sawing or cutting, connecting and gluing veneers)	manages the basics but not the whole process; shortcomings in mastering different work stages	knows how to perform different stages of panel overlay with minimal guidance	manages all stages of panel overlay independently
Finalisation and quality control of manufactured components	knows how to finalise products, but there are flaws in finalisation and quality control	manages component finalisations but needs some guidance in quality control	manages all aspects of finalisation and quality control flawlessly
Managing assemblies	manages simple component assemblies and fastens the fittings provided	manages a more extensive assembly and fastens fittings nearly independently	manages the assembly of products independently
High-quality work	knows the principles of high-quality manufacturing of panel furniture.	knows how to use the quality instructions of panel furniture manufacturing.	applies the quality instructions of panel furniture manufacturing in practice independently.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
Manufacturing documents	The student or candidate recognises the manufacturing documents and knows how to read them with guidance	understands manufacturing documents and acts accordingly with minimal guidance	knows how to carry on manufacturing independently using the documents

Knowledge of materials	recognises some of the most common wood materials in panel product manufacturing	recognises the most commonly used materials in panel product manufacturing	recognises the most commonly used materials in panel product manufacturing; knows their properties and applications
	knows how to calculate material amounts with guidance	is able to price the materials of the product being manufactured	is able to price the material batches manufactured independently, taking all materials into consideration
	knows structure solutions used in the field	knows how to look for and present different structure solutions	knows how to look for and apply different structure and joint solutions in practice independently
Knowledge basis related to using machines	applying vocational knowledge to production requires guidance	applies vocational knowledge to production independently	applies vocational knowledge to production in an independent, justified and natural manner
Standards	knows the basic principles of standard dimensions.	knows how to use standards guiding furniture manufacturing.	knows how to use and apply standards guiding furniture manufacturing.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question

Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Learning and problem solving	knows how to ask for assistance in problem situations	knows how to present solutions to problematic situations	solves problem situations which emerge in his/her work and knows how to present solution options; avoids problem situations
Interaction and co-operation	knows how to act in interactive situations necessary for work	knows how to act in interactive situations required by work	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by upgrading panels in the wood products industry into completed products or component parts or further processing different panels. Manufacturing can take place either on machine lines or using individual machines in a wood products industry factory or a panel furniture manufacturing environment which is as authentic as possible. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ everything else except overlay, finalisation and quality control of panels and high quality activities from mastering working methods, equipment and material;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.2.3 CNC programming and machining

CNC programming and machining covers the generation of 2D/3D CAM tool paths intended for manufacturing wood products and components as well as high-quality machining of components with a CNC machine. The geometry needed for generating tool paths is drawn with a CAD program or modelled as a 3D image.

Vocational skills requirements

The student or candidate is able to:

- ◆ make working drawings with a CAD program;
- ◆ master the basics of 3D modelling;
- ◆ generate 2D/3D CAM tool paths;
- ◆ use a CNC machining tool.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	occasionally needs guidance when planning his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods

Mastering the work as a whole	knows how to manufacture a product using existing programs with a CNC machine with some guidance	knows how to draw or model a product and make a program as well as to manufacture a product with a CNC machine with guidance	knows how to draw or model a product and make a program of it as well as to manufacture a product with a CNC machine
Company-oriented, high-quality and economical activities	needs some guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Satisfactory 1	Good 2	Excellent 3
Technology and information technology	uses a CAD program but requires some guidance	knows how to use a CAD program for drawing and/or modelling	knows how to use a CAD program for drawing and/or modelling a product
	uses a CAM program but requires some guidance	knows how to use a CAM program with minimal guidance	knows how to use a CAM program nearly independently
Use of equipment	knows how to fasten sharp tools into chucks in a safe manner	knows how to fasten sharp tools into chucks in a safe manner and perform the required tools measurements with guidance	knows how to fasten sharp tools into chucks in a safe manner and perform the required tools measurements
	understands the importance of the machine equipment in its use	knows how to set the machine equipment with guidance	knows how to set the machine equipment
	knows how to position fasteners correctly and mount a piece in a safe manner	knows how to use different fastening templates	knows how to make different fastening templates and document machining files with guidance
	understands the importance of tool path optimisation in productivity	knows how to optimise the tool paths effectively in terms of productivity	knows how to optimise all factors affecting the manufacturing of a product effectively in terms of productivity

Maintenance	is able to perform machine maintenance with some guidance	is able to perform machine maintenance with minimal guidance	is able to perform machine maintenance independently
Sharp tools	knows how to select the correct sharp tools for different materials with guidance.	knows how to select the correct sharp tools for different materials and determine their machining values with guidance.	knows how to select the correct sharp tools for different materials and determine their optimal machining values.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Technology and information technology	understands the key principle of the CNC technology	masters the key concepts of CNC technology and CAD/CAM programs nearly independently	masters the key concepts of CNC technology and CAD/CAM programs independently and is able to apply them in his/her work
Knowledge of materials	understands the importance of the cutting direction in different materials.	knows how to select the correct cutting directions for different materials with minimal guidance.	knows how to select the cutting directions and machining values for different materials.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided on work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question

Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	knows how to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The candidate demonstrates his/her vocational skills by independently making a product which he/she drew or modelled with a CAD program, using a CNC machine. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely, with the exception of maintenance;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.2.4 Joinery processing work

The actual joinery tasks in joinery processing work consist of ensuring that the machine line(s) can process high-quality and accurately dimensioned joinery products effectively and economically. Joinery processing work may, for example, cover the following types of production:

- ◆ further processing of sawn timber and timber;
- ◆ making different kinds of load-bearing structures;
- ◆ manufacturing wood panels;
- ◆ manufacturing various interior design products in wood construction.

Vocational skills requirements

The student or candidate is able to:

- ◆ work within the joinery industry working process in accordance with instructions and at normal speed;
- ◆ set and make adjustments to the machines on the machine line as part of the production process;
- ◆ select and replace sharp tools in the machines on the machine line and perform other maintenance and cleaning tasks as part of the responsibilities of a line maintenance technician;
- ◆ monitor and supervise the quality of the products manufactured in the production process and the condition of the machines;
- ◆ take appropriate action in possible problem situations;
- ◆ use automation technology in the production process;
- ◆ make use of the NC technology in manufacturing in a production-specific manner;
- ◆ work in a team;
- ◆ use production management systems.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

The assessment of the quality of work should, as much as possible, be based on the general quality requirements defined in documentation.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	occasionally needs guidance when planning his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	adheres to work hours	adheres to work hours	adheres to work hours
	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Receiving, monitoring and sorting materials	receives materials with a more experienced work partner / employee	receives materials needed in the process independently	receives materials needed in the process; knows how to monitor material consumption and report it
	needs guidance in the visual sorting of materials	knows how to perform visual sorting of materials nearly correctly	manages the correct visual sorting of materials independently

Process work	needs help from a more experienced work partner in adjusting machine settings	manages adjustment of machine settings on an individual machine	knows how to adjust machine settings on several machines in the production process
	knows how to use the machines in the production process	knows how to use and adjust settings on an individual machine in the production process	knows how to use and adjust settings on several machines
	knows how to monitor the quality of the production process with the guidance of a work partner	knows how to monitor the quality of the production process nearly independently	manages monitoring of the quality of the production process independently
	needs help from a more experienced work partner in the use of different measuring devices in the production process	uses the production measuring devices nearly independently	uses different production measuring devices independently
Production automation	needs guidance in the use of production automation	manages the use of production automation nearly independently	knows how to use production automation independently
	uses an NC machine with the help of instructions	is able to use an NC machine independently	uses an NC machine independently; when needed, knows how to make changes in machining programs
Finalising steps of process manufacturing	needs the guidance of a more experienced work partner in order to finalise, package and ship manufactured products.	manages some of the tasks involved in final production independently.	manages the tasks related to quality control, packaging and shipping of the end product in accordance with instructions.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
Ability to read drawings	recognises production drawings and knows how to read them with guidance	recognises production drawings and knows how to read them	knows how to proceed with manufacturing after reading the drawings
Knowledge of materials	recognises the most common wood materials in manufacturing	also recognises the other raw materials used in manufacturing	recognises the most commonly used materials in manufacturing; knows their properties and applications
	knows structure solutions used in manufacturing	knows how to look for and present different structure solutions	knows how to look for and present different structure and joint solutions in practice independently
Mathematics and natural sciences	knows how to perform calculations related to manufacturing with the assistance of a work partner	knows how to perform calculations related to manufacturing independently	knows how to apply mathematics in manufacturing related to the field

Knowledge basis related to using machines	has some room for development in applying vocational knowledge in practice	applies vocational knowledge to production independently	applies vocational knowledge to production in an independent, justified and natural manner
High-quality work	knows the principles of high-quality manufacturing	knows how to use manufacturing quality instructions	applies manufacturing quality instructions in practice independently
Standards	knows what the standards guiding production mean	knows what the standards guiding production mean and what they contain	knows how to use and apply standards guiding production in production work

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	knows how to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by upgrading wood into high-quality and accurately dimensioned joinery products in process-like manufacturing in plants which process wood or in a process work manufacturing environment work which is as authentic as possible. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ mastering process work and production automation completely, receiving, monitoring and sorting material as well as the final steps of process manufacturing from mastering working methods, equipment and material;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.2.5 Sharp tool technology and machine maintenance

Sharp tool technology and machine maintenance covers the key basic concepts of the field, sharpening of woodworking sharp tools, making a setting of a desired shape on the machine, making profile tools, and compiling a maintenance plan and carrying out related maintenance on woodworking machines.

Vocational skills requirements

The student or candidate is able to:

- ◆ determine the condition of the sharp tool and identify defects;
- ◆ make profile tools using a sharp tool template;
- ◆ perform sharpening of the most common woodworking sharp tools and sharpen commonly used manual tools;
- ◆ select the correct rotation and feeding speed in accordance with the quality requirements of the surface being worked on;
- ◆ set the sharp tools, assemble the required sharp tool packs and use them to make the required sharp tool settings on the machining tool;
- ◆ compile a maintenance plan, carry out maintenance and document it.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs some guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations

Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Working methods and machines	uses sharpening equipment and tools with guidance in his/her work	uses sharpening equipment and tools in accordance with instructions in his/her work; maintains and repairs working equipment and supplies	uses sharpening equipment and tools independently in his/her work; maintains and repairs working equipment and supplies in accordance with instructions
Using materials	selects and uses supplies and materials in accordance with documents and instructions provided	uses supplies and materials as required by their properties	uses supplies and materials meticulously and economically, taking sustainable development into consideration
Making profile tools	is able to make a profile tool in accordance with a plan with guidance	is able to make a profile tool in accordance with a plan with minimal guidance and knows how to take into consideration the difference between the shape of the sharp tool and that generated by machining	is able to make a profile tool in accordance with a plan nearly independently
Adjusting a machine setting	adjusts a machining tool setting in accordance with a plan with guidance	adjusts a machining tool setting with minimal guidance	adjusts a machining tool setting in accordance with a plan independently
Compiling a maintenance plan and maintaining machines	knows how to compile a machine maintenance plan and carry out maintenance accordingly with guidance.	knows how to compile a machine maintenance plan and carry out maintenance accordingly with minimal guidance.	knows how to compile a machine maintenance plan and independently carry out maintenance accordingly.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Materials	knows the most common grinding and sharp tool materials	knows the differences between different grinding and sharp tool materials	knows the grinding and sharp tool materials and knows their interdependence
	knows the most common lubricating agents used in machine maintenance	knows the most common materials used in machine maintenance	knows the most common materials used in machine maintenance and their most important properties
Managing concepts	knows the most common basic concepts of sharp tool technology	manages the basic concepts of sharp tool technology	manages and applies his/her knowledge in practice
Determining the condition of a sharp tool and when to sharpen it	knows how to determine with guidance the timing of sharpening so that it makes sense in terms of production	knows how to determine nearly independently the timing of sharpening so that it makes sense in terms of production	knows how to determine the timing of sharpening so that it makes sense in terms of production
	knows how to determine the condition of a sharp tool and recognise defects in it with some guidance	knows how to determine the condition of a sharp tool, recognise defects in it as well as the causes of defects and also assess the wood processing outcome generated nearly independently	knows how to determine the condition of a sharp tool, recognise defects in it as well as the causes of defects and also assess the generated wood processing outcome independently
Determining the need for machine maintenance	knows how to determine when to carry out machine maintenance so that it makes sense from a financial standpoint with guidance	knows how to determine when to carry out machine maintenance so that it makes sense from a financial standpoint nearly independently	knows how to determine when to carry out machine maintenance so that it makes sense from a financial standpoint independently
Determining the maintenance method of sharp tools	knows how to select the correct maintenance methods, machines and grinding wheels for each sharp tool material and type with guidance	knows how to select the correct maintenance methods for each sharp tool material and type nearly independently	knows how to select maintenance methods independently

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
4. Key competences for lifelong learning	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Learning and problem solving	knows how to apply knowledge he/she learned in work assignments	knows how to assess his/her learning and the success of his/her work	acknowledges his/her learning needs, learning process and style
Interaction and co-operation	knows how to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by carrying out sharpening, setting and maintenance work in the work assignments of sharp tool maintenance in a work environment which is as authentic as possible. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills are demonstrated in terms of the key skills requirements in a skills demonstration.

A vocational skills demonstration is to comprise at least

- ◆ systematic work from mastering work processes;
- ◆ working methods and machines from working methods, materials and equipment;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3 OPTIONAL MODULES FOR ALL SPECIALISATION OPTIONS

4.3.1 Door manufacturing

Door manufacturing covers the manufacture of interior and exterior doors in accordance with the RT building information file.

Vocational skills requirements

The student or candidate is able to:

- ◆ read working drawings;
- ◆ select the correct materials and supplies;
- ◆ use the basic machines needed for manufacturing;
- ◆ carry out assembly and install basic fittings;
- ◆ search for the required information and standards in the RT building information file;
- ◆ finalise a product to the surface finishing stage.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs some guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Mastering working methods	uses the correct working methods	is able to use the correct working methods in accordance with instructions	is able to select the correct working methods independently
Using materials	knows how to use the correct materials with guidance	knows how to select the correct materials independently	knows how to select the correct materials independently and understands the importance of using materials economically
Using machines and equipment	knows how to use machines needed for manufacturing safely with some guidance	adheres to instructions in machining tasks	acts independently in machining tasks

Finalisation	knows how to finalise the product as required by the surface finishing	knows how to finalise a product as required by the surface finishing in accordance with instructions provided	knows how to finalise the product as required by the surface finishing
Assembly and fittings installation	works with guidance.	works nearly independently in accordance with instructions.	is able to work independently.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Knowledge of materials	recognises materials being used	recognises the materials being used; knows how to search for information on supplies	recognises the supplies and materials being used
Mastering the RT building information file	knows how to search for information from the file with guidance.	knows how to search for information from the file independently.	knows how to search for information from the file independently and apply it in his/her work.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question

Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by manufacturing doors in accordance with the documents provided, in compliance with the agreed quality and dimension requirements. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ planning the work, mastering the work as a whole and assessing one’s own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function, ability to co-operate as well as co-operation from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.2 Window manufacturing

Window manufacturing covers the manufacture of windows in accordance with the RT building information file.

Vocational skills requirements

The student or candidate is able to:

- ◆ read working drawings;
- ◆ select the correct materials and supplies;
- ◆ use the basic machines needed for manufacturing;
- ◆ carry out assembly and install basic fittings;
- ◆ finalise the product to the surface treatment stage;
- ◆ search for the required information and standards in the RT building information file;
- ◆ compile the required documents concerning the product.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs some guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations

Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Mastering working methods	uses correct working methods with guidance	is able to use the correct working methods in accordance with instructions	is able to select the correct working methods independently
Using materials	knows how to use the correct materials	knows how to select and use the correct materials independently	knows how to select the correct materials independently; understands the importance of using materials economically
Using machines and equipment	knows how to use machines needed for manufacturing safely	adheres to instructions in machining tasks	acts independently in machining tasks
Finalisation	knows how to finalise a product as required by the surface finishing with some guidance	knows how to finalise a product as required by the surface finishing in accordance with instructions provided	knows how to finalise the product as required by the surface finishing
Assembly and fittings installation	works with guidance.	works nearly independently in accordance with instructions.	is able to work independently.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Knowledge of materials	recognises materials being used	recognises the materials being used; knows how to search for information on supplies	recognises the supplies and materials required
Mastering the RT building information file	knows how to search for information from the file with guidance.	knows how to search for information from the file independently.	knows how to search for information from the file independently and apply it in his/her work.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by manufacturing windows in accordance with the documents provided, in compliance with the agreed quality and dimension requirements. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in some other form of assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ planning the work, mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.3 Stair manufacturing

Stair manufacturing covers the manufacture of stairs and railings in accordance with the RT building information file.

Vocational skills requirements

The student or candidate is able to:

- ◆ read working drawings;
- ◆ select the correct materials and supplies;
- ◆ use the basic machines needed for manufacturing;
- ◆ carry out assembly and install basic fittings;
- ◆ finalise a product for the surface finishing stage;
- ◆ search for the required information and standards in the RT building information file and other building regulations.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs some guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community

Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.
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TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Mastering working methods	uses the correct working methods with some guidance	is able to use the correct working methods in accordance with instructions	is able to select the correct working methods independently
Using materials	knows how to use the correct materials	knows how to select and use the correct materials independently	knows how to select the correct materials independently and understands the importance of using materials economically
Using machines and equipment	knows how to use machines needed for manufacturing safely	adheres to instructions in machining tasks	acts independently in machining tasks
Finalisation	knows how to finalise a product as required by the surface finishing with some guidance	knows how to finalise a product as required by the surface finishing in accordance with instructions provided	knows how to finalise the product as required by the surface finishing
Assembly and fittings installation	works with guidance.	works nearly independently in accordance with instructions.	is able to work independently.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
3. Fundamental knowledge	The student or candidate		
Knowledge of materials	recognises materials being used	recognises the materials being used; knows how to search for information on supplies	recognises the supplies and materials required
Mastering regulations	knows how to search for information from files with guidance.	knows how to search for information from files independently.	knows how to independently search for information from files and apply it in his/her work.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
4. Key competences for lifelong learning	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by manufacturing stairs in accordance with the documents provided, in compliance with the agreed quality and dimension requirements. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in some other form of assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ planning the work, mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.4 Sharp tool technology

Sharp tool technology covers the central basic concepts of the field, their practical applications, and sharpening of common manual tools and woodworking sharp tools.

Vocational skills requirements

The student or candidate is able to:

- ◆ determine the condition of sharp tools and identify repair needs;
- ◆ repair the most common woodworking sharp tools;
- ◆ sharpen the most common woodworking sharp tools mechanically.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Determining the condition of a sharp tool and when to sharpen it	knows how to determine the condition of the sharp tool and identify the need for repair with guidance	knows how to determine the condition of the sharp tool and identify the need for repair in accordance with instructions	knows how to determine the condition of the sharp tool and identify the need for repair
Working methods	uses sharpening equipment and tools with guidance in his/her work.	uses sharpening equipment and tools in accordance with instructions in his/her work; maintains and repairs working equipment and supplies.	uses sharpening equipment and tools independently in his/her work; maintains and repairs working equipment and supplies in accordance with instructions.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Managing concepts	knows the most common basic concepts of sharp tool technology	manages the basic concepts of sharp tool technology	manages and applies his/her knowledge in practice
Knowledge of materials	knows the most common grinding and sharp tool materials.	knows the differences between different grinding and sharp tool materials.	knows the grinding and sharp tool materials and knows their interdependence.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Learning and problem solving	knows how to apply knowledge he/she learned in work assignments	knows how to assess his/her learning and the success of his/her work	acknowledges his/her learning needs, learning process and style

Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.
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Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by carrying out sharpening tasks in work assignments of sharp tool maintenance in a work environment which is as authentic as possible. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in some other form of assessment in terms of other skills.

A vocational skills demonstration is to comprise at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ working methods from mastering working methods, equipment and material;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required cannot be fully demonstrated in a vocational skills demonstration, mastering fundamental knowledge can be demonstrated by means of other types of assessment of competence related to completed studies.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.5 Installation work

Installation work covers installation in the different fields of the joinery industry using central installation tools and fastening supplies in compliance with the occupational safety instructions of the field.

Vocational skills requirements

The student or candidate is able to:

- ◆ carry out the preparation and finalisation work related to installation work;
- ◆ carry out simple installation work;
- ◆ use the basic machines, equipment and tools needed for installation work;
- ◆ read drawings and graphical symbols related to installation work;
- ◆ use fastening supplies related to installation work;
- ◆ make calculations related to installation work.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs some guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs some guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community

Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects	assesses his/her work realistically in relation to the objectives	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome
	presents his/her work, assesses it as well as its quality and corrections.	presents his/her work, assesses it as well as its quality and corrections on a job-specific basis and participates in compilation of a list of defects.	knows how to present a completed installation work as well as assess and discuss its quality and corrections and compile a list of defects.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Mastering installation work	carries out receipts of products to be installed with some guidance	carries out receipts of products to be installed in accordance with instructions	carries out receipts of products to be installed independently
	carries out some individual work stages and assists with installation tasks	carries out installation work but needs some guidance in the different stages	installs products nearly independently and finalises the work meticulously
Use of equipment	uses the basic machines, equipment and tools required in installation work with guidance	uses the basic machines, equipment and tools required in installation work with minimal guidance	uses the basic machines, equipment and tools required in installation work nearly independently
Mastering materials, supplies and products	uses the most central materials, supplies and products in installation work but needs guidance in their use.	uses the most central materials, supplies and products in installation work in accordance with instructions.	uses the most central materials, supplies and products in installation work in accordance with plans.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Mastering drawings and graphical symbols	knows how to read installation drawings with guidance and knows the most common graphical symbols	knows how to read installation drawings and knows the most common graphical symbols	knows how to read installation drawings and applies work instructions correctly
Product knowledge	knows the most common products to be installed	is familiar with the most common products to be installed and their basic structures	is familiar with the products to be installed and their basic structures and installation methods

Knowledge of the properties of materials	knows the most common materials and supplies used for installation work and knows some of their applications	is familiar with the most common materials and supplies used for installation work and knows their primary applications	is familiar with and knows how to apply materials and supplies used for installation work in their different applications
Mathematics and natural sciences	calculates the material consumption of installation with guidance.	calculates the labour input and material consumption in accordance with instructions.	calculates the labour input and material consumption based on the target being worked on.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Learning and problem solving	needs some guidance in solving the most common problem situations	solves the most common problem situations with minimal guidance	solves the most common problem situations
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by carrying out installation work in the joinery industry in accordance with drawings and work instructions at an installation target or other equivalent environment. Installation work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and, in terms of other skills, in other assessment.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.6 Fitment installation

Fitment installation covers the installation of fixtures, kitchen, bathroom and storage fitments as well as store, office and special fitments.

Vocational skills requirements

The student or candidate is able to:

- ◆ plan his/her work in accordance with construction drawings and fitment diagrams;
- ◆ carry out organisation, demolition and protection tasks at the installation site;
- ◆ receive the products and materials needed for fitment installation;
- ◆ check the correct quality and quantity of the product;
- ◆ use machines and equipment needed for fitment installation;
- ◆ install the fitments in accordance with fitment diagrams;
- ◆ compile the necessary documents for the products received, compile a list of defects and also deliver the work he/she completed.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs some guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations

Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects	assesses his/her work realistically in relation to the objectives	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome
	presents his/her work, assesses it as well as its quality and corrections with guidance.	presents his/her work, assesses it as well as its quality and corrections on a job-specific basis and participates in compilation of a list of defects.	knows how to present a completed installation work as well as assess and discuss its quality and corrections and compile a list of defects.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Preparation and receipt of installation work	carries out preparation, demolition and protection work related to installation with guidance	carries out organisation, preparation, demolition and protection work related to installation in accordance with instructions	carries out preparation, demolition and protection work related to installation independently
	receives the products included in the installation with guidance and prepares them for installation	receives the products included in the installation and prepares them for installation in accordance with instructions	receives the products included in the installation and prepares them for installation
	checks the quality and quantity of the products to be installed with guidance	checks the quality and quantity of the products to be installed and participates in compilation of a list of defects	checks the quality and quantity of the products to be installed and compiles a list of defects; is able to order the supplementary products needed independently

Mastering fitment installation	carries out individual work stages and assists with fitment installation tasks with guidance	carries out fitment installation tasks but still needs guidance in the different work stages and implementation of installation methods	carries out fitment installation work independently and knows how to apply fitment and installation diagrams so that the end result complies with the diagrams
Installation instructions and building regulations	needs guidance in order to understand installation instructions and building regulations	for the most part, knows how to work in accordance with installation instructions and building regulations	works in accordance with installation instructions and building regulations
Use of equipment	uses machines, equipment and tools needed for fitment installation with guidance	uses machines, equipment and tools needed for fitment installation with minimal guidance	knows how to use machines, equipment and tools needed for fitment installation
Mastering materials and products	uses products and materials related to installation with guidance.	uses products and materials related to installation in accordance with instructions with minimal guidance.	uses products and materials related to installation in accordance with the fitment diagram and plans.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Fitment diagrams and construction drawings	knows how to read the fitment diagrams and construction drawings of the installation target and their symbols with guidance	knows how to read the fitment diagrams and construction drawings of the installation target and understands their symbols	knows how to read the fitment diagrams and construction drawings of the installation target and knows how to apply the diagrams to achieve an end result according to plans
Knowledge of the products and materials to be installed	knows the products, materials and mechanisms to be installed as well as their mounting methods	is familiar with the products to be installed and their structures, materials and mechanisms as well as mounting methods	applies the products to be installed and their structures, materials, mechanisms and various mounting methods in his/her work
Installation instructions and building regulations	knows that the installation instructions and building regulations related to fitments guide the installation activities.	is familiar with the installation instructions of the most common equipment to be installed in fitments and the building regulations related to fitments.	knows how to independently search for and apply information from the installation instructions of the most common equipment to be installed in the fitments and the building regulations related to fitments.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
4. Key competences for lifelong learning	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by carrying out fitment installation in accordance with fitment diagrams and work instructions at a construction site or in an equivalent environment. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

4.3.7 Door and window installation

Door and window installation covers the installation of doors and windows in, for example, terraced houses, blocks of flats or detached houses.

Vocational skills requirements

The student or candidate is able to:

- ◆ plan his/her work with the help of drawings and work instructions;
- ◆ carry out the necessary organisation, demolition and protection tasks at the work site;
- ◆ receive and store the products and materials needed for door and window installations;
- ◆ check the quality and quantity of the products to be installed and compile a list of defects;
- ◆ carry out window and door installation tasks;
- ◆ use machines, equipment and tools required for door and window installation;
- ◆ make calculations related to installation work.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations

Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects	assesses his/her work realistically in relation to the objectives	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome
	presents his/her work, assesses it as well as its quality and corrections with guidance.	presents his/her work, assesses it as well as its quality and corrections on a job-specific basis and participates in compilation of a list of defects.	knows how to present a completed installation work as well as assess and discuss its quality and corrections and compile a list of defects.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Preparation and receipt of installation work	carries out organisation, demolition and protection work related to installation with guidance	carries out organisation, demolition and protection work related to installation in accordance with instructions	carries out organisation, demolition and protection work related to installation independently
	receives and stores the products and materials with guidance	receives and stores the products and materials in accordance with instructions	receives and stores the products and materials independently
	checks the quality and quantity of the products to be installed with guidance	checks the quality and quantity of the products to be installed for the most part correctly; participates in compilation of a list of defects	checks the quality and quantity of the products to be installed correctly; compiles a list of defects
Mastering window and door installation tasks	carries out individual work stages and assists with window and door installation tasks	carries out window and door installation but needs guidance in the different stages of installation work	installs windows and doors, including sealing and moulding, independently

Use of equipment	uses machines, equipment and tools with guidance	uses machines, equipment and tools with minimal guidance	uses machines, equipment and tools independently
Mastering materials and products	uses products and materials related to installation with guidance.	uses products and materials related to installation in accordance with instructions with minimal guidance.	uses products and materials related to installation in accordance with the plans.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Mastering drawings and work instructions	reads drawings with guidance	reads window and door installation drawings and work instructions; knows how to discuss them	reads window and door installation drawings and work instructions; knows how to make work plans based on them
Structures	knows the most common structures of windows and doors	is familiar with the most common basic structures and type markings of windows and doors	is very familiar with the most common basic structures and type markings of windows and doors and their accessories
Materials	recognises the most common materials and supplies used for installation work and knows their applications	is familiar with the most common materials and supplies used for installation work and knows their primary applications	is familiar with and knows how to apply materials and supplies used for installation work in their different applications
Mathematics and natural sciences	calculates the labour input and material consumption with guidance.	calculates the labour input and material consumption in accordance with instructions.	calculates the labour input and material consumption based on the target being worked on.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work

Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Learning and problem solving	needs guidance in solving the most common problem situations	solves the most common problem situations with minimal guidance	solves the most common problem situations
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by installing windows or doors or window elements in accordance with drawings at a construction site or in an equivalent environment. Installation work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

4.3.8 Stair installation

Stair installation covers the installation of different stair products made of wood. The installation work may consist of the installation of stairs in a new or renovated terraced house or detached house, for example.

Vocational skills requirements

The student or candidate is able to:

- ◆ plan his/her work with the help of drawings and work instructions;
- ◆ carry out organisation, demolition and protection tasks at the work site;
- ◆ receive and store the products and materials needed for stair installation;
- ◆ check the quality and quantity of the products to be installed and compile a list of defects;
- ◆ install stairs with a wooden structure in accordance with drawings;
- ◆ use the machines, equipment and other tools required by stair installation.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations

Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects	assesses his/her work realistically in relation to the objectives	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome
	presents his/her work, assesses it as well as its quality and corrections with guidance.	presents his/her work, assesses it as well as its quality and corrections on a job-specific basis and participates in compilation of a list of defects.	knows how to present a completed installation work as well as assess and discuss its quality and corrections and compile a list of defects.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Preparation and receipt of installation work	carries out organisation, preparation, demolition and protection work related to installation with guidance	carries out organisation, preparation, demolition and protection work related to installation in accordance with instructions	carries out organisation, preparation, demolition and protection work related to installation independently
	receives and stores products and materials with guidance	receives and stores products and materials in accordance with instructions	receives and stores products and materials independently
	checks the quality and quantity of the products to be installed with guidance	checks the quality and quantity of the products to be installed for the most part correctly; participates in compilation of a list of defects	checks the quality and quantity of the products to be installed correctly; compiles a list of defects
Mastering installation work	carries out individual work stages and assists with stair installation tasks	carries out stair installations but needs some guidance in the different stages of installation work	installs stairs and railings nearly independently and finalises the work meticulously
Assembly and customisation	carries out stair assembly and customisation with guidance alone or as a member of a team	carries out stair assembly and customisation in accordance with work instructions	carries out stair assembly and customisation nearly independently based on the installation target

Use of equipment	uses machines, equipment and tools with guidance	uses machines, equipment and tools with minimal guidance	uses machines, equipment and tools independently
Mastering materials and products	uses products and materials related to installation with guidance.	uses products and materials related to installation in accordance with instructions with minimal guidance.	uses products and materials related to installation in accordance with plans.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Mastering drawings and work instructions	reads drawings and work instructions with guidance	reads stair installation drawings and work instructions; knows how to discuss them	reads stair installation drawings and work instructions; knows how to make work plans based on them
Structures	knows the most common basic structures of stairs	is familiar with the most common basic structures and models of stairs and their accessories	is very familiar with the most common basic structures and models of stairs and their accessories; knows how to discuss structure options
Materials	recognises the most common materials and supplies used for installation work and knows their applications	is familiar with the most common materials and supplies used for installation work and knows their primary applications	is familiar with and knows how to apply materials and supplies used for installation work in their different applications
Mathematics and natural sciences	calculates the labour input and material consumption with guidance.	calculates the labour input and material consumption in accordance with instructions.	calculates the labour input and material consumption based on the target being worked on.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work

Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by installing stairs or stair elements in accordance with drawings at a construction site or in an equivalent environment. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

4.3.9 Interior joinery

Interior joinery covers the installation, renovation and finalisation work with wood processing industry products in a building. The targets may include, for example, private residences, public spaces, commercial spaces or offices.

Vocational skills requirements

The student or candidate is able to:

- ◆ plan his/her work with the help of construction drawings and work instructions;
- ◆ use different measurement devices and carry out measurements related to interior construction;
- ◆ receive and store the products and materials needed for joinery work;
- ◆ carry out furnishing and installation work using products made of wood materials;
- ◆ when needed, carry out small-scale repairs of interior surfaces;
- ◆ use machines, equipment and tools needed for furnishing work.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations

Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects	assesses his/her work realistically in relation to the objectives	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome
	presents his/her work, assesses it as well as its quality and corrections with guidance.	presents his/her work, assesses it as well as its quality and corrections on a job-specific basis and participates in compilation of a list of defects.	knows how to present a completed installation work as well as assess and discuss its quality and corrections and compile a list of defects.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Furnishing work	carries out individual work stages and assists with furnishing tasks with guidance	carries out his/her work in accordance with instructions with minimal guidance	carries out his/her work nearly independently in accordance with work instructions or documents
	carries out small-scale repairs of interior surfaces with guidance	carries out small-scale repairs of interior surfaces nearly independently	carries out small-scale repairs of interior surfaces independently
Mastering working equipment	uses machines, equipment and tools needed for furnishing work with guidance	uses machines, equipment and tools needed for furnishing work with minimal guidance	uses machines, equipment and tools needed for furnishing work nearly independently
Mastering materials and products	uses products and materials related to furnishing work with guidance.	uses products and materials related to furnishing work in accordance with instructions with minimal guidance.	uses products and materials related to furnishing work in accordance with the plans.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Mastering drawings and work instructions	knows how to read drawings related to furnishing work with guidance; familiarises him-/herself with work plans	knows how to read drawings and work plans; knows how to discuss work assignments based on them	knows how to read drawings and work plans; knows how to discuss and modify plans to suit his/her work target
Knowledge of the properties of materials	knows the most common materials and supplies used in the work and knows some of their applications	is familiar with the most common materials and supplies used in the work and knows their primary applications	is familiar with and knows how to apply materials and supplies used in the work in their different applications
Mathematics and natural sciences	calculates the material consumption of the target being worked on with guidance.	calculates the labour input and material consumption in accordance with instructions.	calculates the labour input and material consumption based on the target being worked on.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question

Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by carrying out joinery work at a work site or in an equivalent work environment. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and, in terms of other skills, in other assessment.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.10 Manufacturing of planed products

Manufacturing of planed products covers dimensioning and profiling of sawn timber using a beading plane.

Vocational skills requirements

The student or candidate is able to:

- ◆ use a beading plane;
- ◆ make a setting with a beading plane;
- ◆ carry out daily maintenance tasks related to use of the machine;
- ◆ solve problem situations;
- ◆ monitor the quality of production and carry out the necessary corrective measures.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community

Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.
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TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Making a setting	knows how to set the milling cutters for the machine with guidance	knows how to adjust settings in accordance with instructions provided with minimal guidance	knows how to adjust settings independently in accordance with drawings or other work instructions
	knows how to adjust the controls and pressers of the machine with guidance	knows how to perform the basic adjustments of controls and presses in accordance with instructions	knows how to make adjustments and change them during work, if needed
	is aware of how to adjust the feeding speed of the machine	knows how to adjust the feeding speed of the machine in accordance with instructions	knows how to determine and adjust the correct feeding speed independently
Maintenance	knows how to perform simple daily maintenance tasks on the machine with guidance	performs maintenance on the machine in accordance with instructions provided with minimal guidance	performs the machine maintenance measures assigned to the operator independently
Condition of sharp tools	recognises sharp tools in a poor condition with guidance	detects the condition of the sharp tools based on the quality of work	knows how to anticipate the condition of the sharp tools during the course of work
Knowledge of materials	knows how to feed the material being worked on correctly into the machine with guidance.	knows how to feed material into the machine independently and correctly.	knows the impact of the most common types of timber on the machine adjustments and end result.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
3. Fundamental knowledge	The student or candidate		
Machines and equipment	knows the machines and equipment used in them on a superficial level	is familiar with the machines and equipment used in them	is very familiar with machines and equipment used in them as well as their adjustment possibilities

Sharp tools	is familiar with the most commonly used types of sharp tools and knows how their condition affects the quality of the completed surface	knows the applications of different types of sharp tools	knows how to select the correct sharp tools independently
Materials	knows the most common types of domestic timber used in planed products and their applications	is familiar with the most common types of timber used in planed products and their applications	knows the most common types of timber used in planed products, their applications and properties in planing
Planed products	knows the most common planed products.	is familiar with the most common planed products and their applications.	is familiar with the most common quality grades.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
4. Key competences for lifelong learning	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development

Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.
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Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by working in a planing mill or in an equivalent work environment. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in some other form of assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ making a setting, condition of sharp tools and materials from mastering working methods, tools and materials;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.11 CNC machining

CNC machining covers the generation of 2D/3D CAM tool paths intended for manufacturing wood products and components as well as high-quality machining of components with a CNC machine.

Vocational skills requirements

The student or candidate is able to:

- generate tool paths;
- use a CNC machine in three-axis machining.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	occasionally needs guidance when planning his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has a proactive attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Using the machine	knows how to retrieve an existing program and manufacture a product with guidance	knows how to make programs needed for manufacturing a product with guidance and to manufacture a product	knows how to make programs needed for manufacturing a product and to manufacture a product
Use of equipment	knows how to attach blades into chucks in a safe manner with guidance	knows how to fasten sharp tools into chucks in a safe manner and perform the required tools measurements with guidance	knows how to fasten sharp tools into chucks in a safe manner and perform the required tools measurements
	understands the importance of machine customisation in its use	knows how to set machine customisation with guidance	knows how to set machine customisation
Maintenance	knows how to perform with guidance maintenance for which an operator is responsible	knows how to perform with minimal guidance maintenance for which an operator is responsible	knows how to independently perform maintenance for which an operator is responsible
Sharp tools	knows how to select the correct sharp tools for different materials with guidance.	knows how to select the correct sharp tools for different materials and with guidance determine their machining values.	knows how to select the correct sharp tools for different materials and determine their optimal machining values.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
3. Fundamental knowledge	The student or candidate		
Managing concepts	understands the key principle of CNC technology	masters the key concepts of CNC technology and the CAD/CAM program nearly independently	masters the key concepts of CNC technology and the CAD/CAM program independently; is able to apply them in his/her work
Knowledge of materials	understands the importance of the cutting direction in different materials.	knows how to select the correct cutting directions for solid wood with minimal guidance.	knows how to select the cutting directions and machining values for solid wood.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
4. Key competences for lifelong learning	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by manufacturing a product using a CNC machine independently. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in some other form of assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ♦ mastering the work as a whole and assessing one's own work from mastering work processes;
- ♦ mastering working methods, equipment and material completely, with the exception of maintenance;
- ♦ fundamental knowledge sufficient for the work assignments in question;
- ♦ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.12 Production automation technology in wood processing

Production automation technology in wood processing covers the basic concepts of pneumatic, hydraulic or programmable systems, carrying out related connections and fixing the most common malfunctions in production machinery.

Vocational skills requirements

The student or candidate is able to:

- ♦ read connection diagrams and troubleshoot causes of malfunctions and carry out the repairs needed;
- ♦ carry out connection tasks of pneumatic, hydraulic or programmable systems.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Working methods and equipment	selects a work method suitable for the situation in order to achieve an acceptable end result with guidance	selects an appropriate work method for the situation in order to achieve an acceptable end result	selects the most suitable work method for the situation in order to achieve an economical and high-quality end result
	uses and maintains work equipment with guidance	uses and maintains work equipment on his/her own initiative in accordance with instructions	selects the work equipment most suitable for the situation, uses it correctly and maintains the equipment he/she used
Components and supplies	selects and uses supplies and components with guidance.	uses supplies and components as required by their properties.	uses supplies and components meticulously and economically.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Components and supplies	knows the most common components and supplies	is familiar with the most common components and supplies	is familiar with the most common components and supplies and their applications
Mastering concepts and reading drawings	knows the basic concepts of the most common systems.	knows how to apply his/her knowledge with minimal guidance.	manages and applies his/her knowledge on his/her own initiative.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by carrying out basic maintenance work in production plants or in an equivalent environment. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration or a competence test, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.13 Manufacturing of metal furniture

Manufacturing of metal furniture covers the manufacture of a piece of furniture or a furniture frame from metal components.

Vocational skills requirements

The student or candidate is able to:

- ◆ use the correct materials;
- ◆ use the machines and equipment commonly used in the manufacture of metal furniture safely;
- ◆ cut and form-press metal sheets and pipes;
- ◆ weld simple seams;
- ◆ use various mechanical jointing methods (riveting, screwing, gluing).

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community

Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.
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TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Machines and equipment	knows how to work with machines with guidance	knows how to work with minimal guidance and to ask for advice	works independently and asks for advice, when needed
Materials	knows how to handle and use materials with guidance	is familiar with the basics of materials	knows how to make use of the properties of materials
Working methods	knows how to use the correct methods with guidance.	knows how to use the correct work methods in accordance with instructions.	knows how to select the correct work method and is able to work nearly independently.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Materials	knows the most common materials to be used and knows how to search for information with guidance	knows the basics of the most common materials and their delivery formats	is familiar with the properties and applications of the most common materials
Working methods	knows the general outlines of the methods to be used	is familiar with the work methods and techniques to be used and their applications	is familiar with the information on which the work methods are based
Mathematics and natural sciences	knows how to calculate material consumption	knows how to calculate material costs	knows how to plan economical use of materials

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work

Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by manufacturing a piece of metal furniture or its components in a production plant or in an equivalent environment. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.14 Manufacturing of form-pressed components

Manufacturing of form-pressed products covers the form-pressing of different raw materials used in the wood processing industry into components which meet the quality, structure and dimension requirements set for the product. Various pressing and drying techniques can be used in the manufacture.

Vocational skills requirements

The student or candidate is able to:

- ◆ plan his/her work with the help of drawings and material information;
- ◆ select and work with the raw materials in a manner required by the end product;
- ◆ use the necessary machines and equipment and adjust the settings;
- ◆ check the quality and dimensional accuracy of the product.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Systematic work	proceeds in his/her work in accordance with instructions provided	participates in the planning of his/her work and proceeds in the work systematically with minimal guidance	knows how to plan the workflow and proceeds in his/her work systematically without guidance
Managing the work entity	is familiar with the work entity but needs continuous guidance	manages the work entity but occasionally needs guidance	is able to work independently with supervision
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Selecting materials and technology	needs guidance in the selection of materials for products	selects the materials as well as machines and equipment needed for manufacturing a product nearly independently	selects the materials, structures as well as machines and equipment needed for manufacturing a product independently
	needs guidance in his/her work	is familiar with the quality specifications, uses the correct materials economically and knows how to perform quality inspections on products nearly independently	is familiar with the quality specifications, uses the correct materials economically and knows how to perform quality inspections on products
Using machines, equipment and tools	needs guidance in making settings and adjustments and in using machines	is able to make settings and adjustments nearly independently	is able to make settings and adjustments independently

Equipment maintenance	needs guidance.	recognises deviations in the operation of machines and equipment and maintains them nearly independently.	recognises deviations in the operation of machines and equipment and maintains them independently.
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TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Understanding drawings and instructions	needs guidance in reading instructions and drawings	knows how to read drawings and instructions and apply information nearly independently	knows how to read drawings and instructions and apply information independently
Knowledge of materials	has gaps in terms of knowledge of materials	is familiar with the materials to be used and knows how to use them nearly independently	is familiar with the materials to be used and knows how to use them independently
	applies the knowledge with guidance.	is familiar with the systems to be applied and knows how to apply them nearly independently in his/her work.	is familiar with the systems to be applied and knows how to apply them independently in his/her work.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question

Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by manufacturing a form-pressed product or product components in processes which meet the conditions and characteristics of production typical of the vocation in a workplace or other environments. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.15 Restoration and wood repairs

Restoration and wood repairs cover the restoration of an old piece of furniture to a surface finishing stage using traditional methods and respecting the old.

Vocational skills requirements

The student or candidate is able to:

- ◆ determine the need for restoration of a piece of furniture;
- ◆ select the materials to be used for the piece of furniture;
- ◆ use suitable glues;
- ◆ repair broken wooden parts and joints without damaging the intact parts.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Systematic work	proceeds in his/her work in accordance with instructions provided	participates in the planning of his/her work and proceeds in the work systematically with minimal guidance	knows how to plan the workflow and proceeds in his/her work systematically without guidance
Managing the work entity	is familiar with the work entity but needs continuous guidance	manages the work entity but occasionally needs guidance	is able to work independently with supervision
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community

Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.
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TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Working methods	uses the correct working methods and equipment with guidance	selects the correct working methods and manages their use in accordance with instructions provided	selects the correct working methods and knows how to repair or restore using traditional methods
Using materials	knows how to select the materials with guidance	knows how to select the materials	in addition, knows how to prepare and use traditional materials with guidance
		knows how to replace the old material with an equivalent new one	knows how to make a conscious decision to use a newer and more appropriate material, if the target being worked on so requires
	respects the old object and asks for advice before starting work.	recognises traditional materials used.	knows how to study, recognise and document previously used materials.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Repair methods	respects the old object and asks for advice	knows the difference between conservation, restoration and repair	knows how to plan object-specific conservation, restoration returning the object to its original condition, or repair and refurbishment of the object to working order
Materials and structures	understands the requirements set for the selection of materials for an old object	recognises different materials and structures	recognises the era of the object from its materials and structures
Styles	knows how to search for information on different styles.	is familiar with different styles.	recognises the style of the product.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
4. Key competences for lifelong learning	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by restoring or repairing an old piece of furniture, door or window. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ♦ mastering the work as a whole and assessing one's own work from mastering work processes;
- ♦ mastering working methods, equipment and material completely;
- ♦ fundamental knowledge sufficient for the work assignments in question;
- ♦ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.16 Selling wood processing products

Selling wood processing products covers the customer service tasks, storage and shipping of products to customers in sales operations.

Vocational skills requirements

The student or candidate is able to:

- ♦ carry out sales and provide customer service;
- ♦ store products;
- ♦ compile documentation;
- ♦ ship products;
- ♦ use a forklift.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
1. Mastering work processes	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Customer service	understands the importance of customer service in his/her work but there are flaws in the service provided	knows the importance of customer service and knows how to act nearly independently	masters customer service
Company-oriented, high-quality and economical activities	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	achieves the quality and time objectives set for his/her work
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Working equipment	knows how to use the required equipment and devices with guidance	knows how to use the required equipment and devices nearly independently	knows how to use the required equipment and devices
Moving materials	knows how to drive a forklift and move materials, but there are flaws in the handling of loads	knows how to drive a forklift and masters the handling of different materials to be moved undamaged	knows how to operate a forklift as well as store, unload and load materials correctly and safely
Sales work	knows how to carry out sales work with guidance together with a senior employee.	knows how to carry out sales work nearly independently.	knows how to carry out sales work independently.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Sales tasks	recognises the sales tasks and stages with guidance	knows the tasks and stages of sales and knows how to make use of them nearly independently in his/her work	masters the tasks and stages of sales and knows how to make use of them independently
Product knowledge	is familiar with the product categories.	is familiar with the product selection and applications.	is familiar with the product selection and the properties and applications of products.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development

Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.
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Ways of demonstrating vocational skills

The student or candidate demonstrated his/her vocational skills in practical sales tasks. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ customer service and assessing one’s own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.17 Technical design and making prototypes

When making prototypes, a plan is fine-tuned with a designer into one that can be implemented. The suitability of different manufacturing methods in the manufacturing of the final product are searched for and experimented with.

Vocational skills requirements

The student or candidate is able to:

- ◆ make different kinds of structure solutions in order to manufacture a product;
- ◆ take the machinery used in manufacturing into consideration;
- ◆ take the budget set for the product into consideration;
- ◆ communicate constructively with the designer throughout the process;
- ◆ have a critical view of the prototype;
- ◆ find improvement suggestions in term of the prototype and manufacturing technique.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations

Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Selecting materials	knows how to select materials suitable for the purpose with guidance	knows how to select materials suitable for the purpose nearly independently	knows how to select the materials most suitable for the purpose independently
	knows how to select the fittings suitable for the purpose with guidance	knows how to select the fittings suitable for the purpose nearly independently	knows how to select the fittings most suitable for the purpose independently
Aesthetics	manufactures a prototype that is aesthetically and functionally suitable for the purpose with guidance	manufactures a prototype that is aesthetically and functionally reasonably suitable for the purpose nearly independently	manufactures a prototype that is aesthetically, structurally and functionally suitable for the purpose independently
Finalisation and quality control	knows how to finalise products, but there are several flaws in finalisation and quality control.	manages the finalisation of components but there are minor flaws in quality control.	manages all aspects of finalisation and quality control flawlessly.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Aesthetics	is familiar with earlier and current styles and with guidance understands their meaning to the design of the product	is familiar with earlier and current styles and detects their key features in the design of the product	is familiar with earlier and current styles and recognises their impact on the product design
	understands the aesthetic, functional and structural manufacturing properties of the prototype	assesses the aesthetic, functional and structural manufacturing properties of the prototype fairly critically and realistically	assesses the aesthetic, functional and structural manufacturing properties of the prototype critically and realistically

Knowledge of the properties of materials	knows the most common materials and supplies used in the work and knows some of their applications	is familiar with the most common materials and supplies used in the work and knows their primary applications	is familiar with and knows how to apply materials and supplies used in the work in their different applications
Mathematics and natural sciences	knows how to calculate material consumption.	knows how to calculate material costs.	knows how to plan the economic efficiency of material use and working methods.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by making a prototype based on a plan, actively participating in the design and implementation of the technical details. He/she presents improvement suggestions concerning the appearance, functioning and manufacturing methods of the prototype. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.18 Manufacturing of prefabricated units for wooden houses

The manufacturing of prefabricated units for wooden houses covers the manufacturing of various prefabricated parts of buildings which are assembled into wooden homes. The prefabricated units are primarily manufactured from wood-based building materials and usually in a factory-like work environment.

Vocational skills requirements

The student or candidate is able to:

- ◆ read drawings so that he/she is able to manufacture prefabricated units for wooden houses;
- ◆ work with different materials used in prefabricated units;
- ◆ use the most common carpentry machines, manual tools and different pneumatic nail guns;
- ◆ use a forklift;
- ◆ install the materials used in prefabricated wooden units correctly by working together with a senior professional as a pair, such as
 - ◆ load-bearing frames
 - ◆ insulation
 - ◆ interior materials in the prefabricated frame
 - ◆ exterior materials in the prefabricated frame
 - ◆ building parts and materials to be installed inside the prefabricated frame
- ◆ install doors, windows and the required architraves in the prefabricated units
- ◆ manufacture a pediment.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	occasionally needs guidance when planning his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Selecting materials	knows how to select materials with the assistance of a work partner	knows how to select materials nearly independently	knows how to select different materials for prefabricated units based on drawings
Mastering working equipment	uses common working equipment but occasionally needs guidance	uses the correct tools in accordance with the work stages	knows how to use the correct working equipment skilfully in varying situations
Manufacturing of prefabricated wooden units and other building parts	carries out tasks to assist in the manufacturing of prefabricated units	manages different work stages in the manufacturing of prefabricated units with guidance	manages the different work stages in the manufacturing of prefabricated units nearly independently
	works as an assistant when working in a pair	is able to work in accordance with instructions provided when working in a pair	manages tasks as a nearly equal partner when working in a pair

Moving materials	knows how to drive a forklift and move materials, but there are flaws in the handling of loads.	knows how to drive a forklift and masters the handling of different materials to be moved undamaged.	knows how to operate a forklift as well as store, unload and load materials correctly and safely.
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TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Reading drawings	is familiar with the most commonly used drawing symbols	knows the drawing symbols and knows how to find the information he/she needs from drawings	knows the drawing symbols and knows how to read drawings both directly and as mirror images
Knowledge and use of materials	is familiar with the most common wood-based materials and insulation	in addition to wood-based materials and insulation, is also familiar with other structures and building parts to be installed inside prefabricated units	is familiar with all materials used in prefabricated structures and their correct installation
	knows how to install the aforementioned materials correctly in prefabricated units	knows how to install the aforementioned materials correctly in prefabricated units	knows how to install the different materials and components used in prefabricated units economically and also masters the sorting of different material types independently
Prefabricated structures	is familiar with the different prefabricated structures of wooden houses	knows how to determine the prefabricated units to be used in the building using a component list of prefabricated units	in addition to determining the prefabricated units to be used, is also aware of different structure sections
Safety regulations	is familiar with safety regulations related to the manufacturing of prefabricated units.	works in accordance with safety regulations.	works in accordance with safety regulations and avoids hazardous situations and knows how to give first aid, if needed.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work

Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Learning and problem solving	knows how to ask for advice in problem situations in order to avoid such situations	knows how to present solutions to problem situations	solves problem situations which emerge in his/her work and knows how to present alternative solutions; avoids getting into problem situations
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by manufacturing prefabricated units needed in construction using wood-based materials in prefabricated unit factories or equivalent environments. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ♦ mastering the work as a whole and assessing one's own work from mastering work processes;
- ♦ everything else except moving materials from mastering working methods, equipment and material;
- ♦ fundamental knowledge sufficient for the work assignments in question;
- ♦ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.19 Production activities in joinery

The production activities in joinery cover working in a joinery production line or company. The work consists of manufacturing simple products in accordance with the instructions of the work area, taking the company's way of working into consideration.

Vocational skills requirements

The student or candidate is able to:

- ♦ make use of source materials and expert information in technical manufacturing and production planning in the wood processing industry;
- ♦ use machines and equipment required by production;
- ♦ manufacture products in accordance with production instructions;
- ♦ finalise products as required by the surface finishing;
- ♦ work in accordance with the requirements of serial production;
- ♦ maintain machines, equipment and tools needed for manufacturing and keep them in working order;
- ♦ maintain orderliness and tidiness in the workplace.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In curriculum-based education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	occasionally needs guidance when planning his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Mastering drawings and work instructions	uses drawings and work instructions with guidance	knows how to use drawings and work instructions nearly independently	works in accordance with drawings and work instructions
Knowledge of materials	knows how to select materials suitable for the application with guidance	knows how to select materials suitable for the application nearly independently	knows how to select materials suitable for the application independently
	understands the moisture and strength requirements set on wood by the application	takes the moisture and strength requirements set by the application on wood into consideration nearly independently	takes the moisture and strength requirements set by the application on wood into consideration independently

Manufacturing a product	knows how to manufacture a product which meets the quality requirements with guidance	knows how to manufacture a product which meets the quality requirements nearly independently, primarily with methods suitable for serial production	knows how to manufacture a product which meets the quality requirements independently, with methods suitable for serial production
Service and maintenance of machines and equipment	understands the importance of the condition of sharp tools and machines and knows how to perform maintenance tasks with guidance.	detects sharp tools in need of repair and machine items to be serviced and knows how to perform maintenance tasks nearly independently.	detects sharp tools in need of repair and machine items to be serviced and knows how to perform maintenance tasks independently.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Mastering the general instructions in the workplace	understands the workplace instructions with guidance	understands the workplace instructions nearly independently	understands the workplace instructions independently
Materials	is familiar with the most commonly used materials	as a rule, understands the importance of materials in the manufacture and structures of products	is familiar with the importance of materials in the manufacture of products and their impact on structures
Calculating material costs	understands the general outlines of the product price composition and knows how to calculate material costs with guidance.	understands the product price composition and knows how to calculate material costs nearly independently.	understands the product price composition and knows how to calculate material costs independently.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work

Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by working in a joinery company. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one’s own work from mastering work processes;
- ◆ mastering working methods, equipment and material completely, with the exception of service and maintenance of machines and equipment;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.20 Drying technique

The drying technique covers the drying process and management of the kiln as well as use of related methods and equipment.

Vocational skills requirements

The student or candidate is able to:

- ◆ determine the initial and final moisture of wood with a weighing method and an electronic method;
- ◆ plan and manage the drying process;
- ◆ make a load to be dried and prepare it for the drying process;
- ◆ use a kiln;
- ◆ select a drying formula/instruction based on the type of timber in question and use it.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

The assessment of the quality of work should, as much as possible, be based on the general quality requirements defined in documentation.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	occasionally needs guidance when planning his/her work	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work realistically in relation to the objectives.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Mastering the drying process	knows how to select the drying program with guidance	knows how to select and use a drying program	knows how to take different initial conditions into consideration when selecting the drying program and use it independently
	knows how to monitor the progress of the drying process and to set a possible alarm during the drying process	knows how to monitor the progress of the drying process and if needed, make changes to the programs with guidance	knows how to monitor the progress of the drying process and if needed, make changes to the programs
	recognises various drying errors with guidance	recognises various drying errors in accordance with instructions provided	recognises various drying errors and knows the most common causes for them
	needs guidance in making the load to be dried	knows how to make the load to be dried in accordance with instructions provided	knows how to make the load to be dried independently

Determining the moisture of wood	measures the initial and final moisture with an electronic meter in accordance with instructions given.	measures the initial and final moisture with both a weighing method and an electronic moisture meter in accordance with instructions given.	performs the required measurements and knows how to use graphic charts independently when determining the moisture of wood.
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TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Moisture of wood	knows the importance of moisture in wood material and in how it behaves	knows the importance of moisture in wood material and in how it behaves and knows the different grades of dryness based on application	knows the importance of moisture in wood material and knows what causes it
	knows the concept of equilibrium moisture	is familiar with the equilibrium moisture of wood and knows the factors affecting it	knows how to determine the equilibrium moisture of wood
Drying methods	knows different drying methods	is familiar with different drying methods and knows how to select them correctly based on the intended use with minimal guidance	is familiar with different drying methods and selects the correct drying method based on the intended use
Drying process	knows the drying stages and the conditions in the kiln	knows the drying stages and the importance of the conditions in the kiln in the drying speed and quality of sawn timber	knows how to perceive what impact a change in the conditions has on the end result
Types of kiln	knows different types of kiln	knows the types of kiln and their applications	knows the different types of kiln, their characteristics and operating principles
Quality	knows the concept of drying quality and is familiar with the most common drying errors.	recognises drying errors.	recognises drying errors and as a rule, knows what causes them.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work

Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by making the load to be dried and monitoring and managing the drying process in accordance with instructions provided. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ♦ mastering the work as a whole and assessing one's own work from mastering work processes;
- ♦ mastering working methods, equipment and material completely;
- ♦ fundamental knowledge sufficient for the work assignments in question;
- ♦ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.21 Surface finishing

Surface finishing covers the painting and/or lacquering of wood products with manual tools and a spray gun.

Vocational skills requirements

The student or candidate is able to:

- ◆ carry out the required grinding work manually and mechanically;
- ◆ carry out the required repairs, patching and puttying as preparation, taking the final appearance of the product into consideration;
- ◆ prepare the substances to be used safely, taking occupational safety and the environment into consideration;
- ◆ perform staining, lacquering and painting with both manual tools and spray guns, such as HVLP spray guns and Airmix spray guns;
- ◆ clean and maintain the working equipment to be used;
- ◆ handle any waste generated.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning the work	plans his/her work with guidance	plans his/her work in accordance with instructions provided	plans his/her work independently and knows how to present alternative operating methods
Mastering the work as a whole	needs guidance in getting started and proceeding from one work stage to the next	works systematically with minimal guidance in his/her work	works systematically and knows how to solve problem situations
	achieves an end result which meets the minimum quality requirements set for the completed surface with guidance	achieves an end result which meets the quality requirements with minimal guidance	achieves an end result which meets the quality requirements independently
Company-oriented, high-quality and economical activities	needs guidance in order to achieve the minimum objectives set for his/her work	achieves the quality objectives set for his/her work	uses materials economically; achieves the quality and time objectives set for his/her work
	has an attitude of not wilfully causing financial damage in his/her work	has an enterprising attitude and knows how to assess the financial implications of his/her actions	shows initiative and works for the good of the working community
Assessing one's own work	assesses his/her work in relation to the objectives but is not realistic in all aspects.	assesses his/her work in relation to the objectives and general quality requirements realistically.	assesses his/her work realistically; knows how to develop his/her actions in order to achieve a better outcome.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student or candidate		
Mastering working methods	is familiar with the working methods used in the surface finishing of wood products and knows how to act with guidance	knows how to select the correct working methods for the target being treated	masters the methods well; knows how to select the correct working methods independently

Working equipment	is familiar with the working equipment but needs guidance using them	knows how to select and use working equipment independently but needs guidance making adjustments	knows how to independently select and use working equipment and keep them in a working order
	knows how to clean the working equipment with guidance	knows how to clean the working equipment with the correct methods independently	
Materials	knows how to prepare the materials being used with guidance	knows how to select the correct materials and knows how to prepare them independently	is able to independently select the correct materials and prepare them
	knows how to take care of materials with guidance	independently takes care of sealing packages and storing materials	
	knows how to find material safety data sheets	knows how to act based on material safety data sheets	
	knows what a spreading amount means	knows how to calculate and measure spreading amounts; achieves nearly correct spreading amounts with guidance	knows how to perceive the correct spreading amount nearly independently
Sustainable development	recognises the hazardous waste generated in his/her work and knows how it is treated.	knows how to handle and sort waste independently in accordance with instructions provided.	avoids the generation of unnecessary waste in his/her work.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Knowledge of materials	is familiar with the most common surface finishing agents and primers as well as their applications	knows how to select the correct materials for the target being worked on	is familiar with the properties of surface finishing agents and primers and their impact on the completed surface
	as a rule, knows the grinding coarseness suitable for each work stage	knows the grinding coarseness most suitable for each work stage and the ways to use them and their working methods	knows the impact of grinding on the quality of the completed surface
Knowledge of tools and working equipment	is familiar with the most common grinding equipment, manual tools and spray guns and their applications	is familiar with the equipment being used and knows the impact of spray gun adjustments on the end result	is familiar with the equipment being used and knows how to adjust spray guns

Vocational knowledge	is familiar with the most common methods and ways of working in surface finishing and drying	is familiar with and knows how to select the correct working methods and ways of working with guidance	is familiar with and knows how to select the correct working methods and ways of working independently
Skills in mathematics and natural sciences	knows how to calculate the amounts of substances in accordance with instructions provided from the mixing ratios.	knows how to calculate the substance consumption needed in the work.	knows how to calculate the substance consumption needed in the work, including wastage.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Vocational ethics	adheres to the agreed work hours and instructions	adheres to the rules and instructions of the working community; works in an agreed and responsible manner	works in accordance with good vocational practices and values his/her work
Health, safety and ability to function	has a positive attitude towards safe activities; avoids risks in his/her work	is independently responsible for the safety of his/her activities	develops the safety of his/her activities independently
	adheres to the safety instructions provided for work and does not cause danger	adheres to the instructions of the working community; takes other members of the working community into consideration	notices and recognises dangers related to his/her work and reports them
	uses protective equipment, tools and working methods in accordance with instructions safely	ensures the safety of protective equipment, tools and materials; decommissions and sends any defective tools and protective equipment to maintenance	assesses the suitability of protective equipment, tools and working methods for the task in question
Sustainable development	understands the environmental impact of handling raw materials and chemicals; works in accordance with the principles of sustainable development with guidance	takes the environmental impact of handling raw materials and chemicals into consideration nearly independently; for the most part works in accordance with the principles of sustainable development	takes the environmental impact of handling raw materials and chemicals into consideration independently; works in accordance with the principles of sustainable development
Interaction and co-operation	is able to act in interactive situations necessary for work.	knows how to act in interactive situations required by work.	knows how to act flexibly and in a manner which promotes co-operation in different interactive situations.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by performing the surface finishing of an untreated wood product. Work is carried out to the extent that it can be established that vocational skills meet the skills requirements.

In curriculum-based education and training, vocational skills in the key skills requirements are demonstrated in a skills demonstration and in an assessment in terms of other skills.

A vocational skills demonstration is used to assess at least

- ◆ mastering the work as a whole and assessing one's own work from mastering work processes;
- ◆ working equipment and material from mastering working methods, equipment and material;
- ◆ fundamental knowledge sufficient for the work assignments in question;
- ◆ vocational ethics and health, safety and ability to function from key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

In the competence test of competence-based training, the vocational skills are primarily demonstrated in an authentic work environment. If the vocational skills required for the module cannot be fully demonstrated in a competence test, it is to be supplemented by interviews, assignments and other reliable methods.

4.3.22 Modules from upper secondary vocational qualifications

A total of 10 credits of modules from the following upper secondary vocational qualifications can be included in a Vocational Qualification in Wood Processing:

- ◆ Vocational Qualification in Surface Treatment Technology
- ◆ Vocational Qualification in Crafts and Design
- ◆ Vocational Qualification in Upholstery and Interior Design
- ◆ Vocational Qualification in Boat-building
- ◆ Vocational Qualification in Process Industry
- ◆ Vocational Qualification in Forestry
- ◆ Vocational Qualification in Construction
- ◆ Vocational Qualification in Metalwork and Machinery
- ◆ Vocational Qualification in Business and Administration

In a competence-based qualification system, a certificate of a completed qualification module is always awarded by the Qualification Committee in charge of the qualification in question. The Qualification Committee responsible for the Vocational Qualification in Wood Processing accepts the module in question as part of the Vocational Qualification in Wood Processing based on the certificate.

4.3.23 Modules from further vocational qualifications

Modules from further vocational qualifications can be included in the Vocational Qualification in Wood Processing, in accordance with the student's or candidate's individual study plan.

The education provider must have a valid contract for arranging the further vocational qualification in question or the education provider can purchase the competence tests from an education provider with a contract.

In upper secondary vocational education and training, a certificate of a completed further vocational qualification module is always awarded by the Qualification Committee in charge of the qualification in question and the education provider approves the further vocational qualification module to be included on the student's qualification certificate.

In the competence-based qualification system, a certificate of a completed vocational qualification module is always awarded by the Qualification Committee in charge of the vocational qualification concerned. The Qualification Committee for the wood processing field approves the module in question as part of the Vocational Qualification in Wood Processing based on the certificate.

4.3.24 Modules from specialist vocational qualifications

Modules from specialist vocational qualifications can be included in the Vocational Qualification in Wood Processing in accordance with the student's or candidate's individual study plan.

The education provider must have a valid contract for arranging the specialist vocational qualification in question or the education provider can purchase the competence tests from an education provider with a contract.

In upper secondary vocational education and training, a certificate of a completed specialist vocational qualification module is always awarded by the Qualification Committee in charge of the specialist vocational qualification concerned and the education provider approves the module to be included on the student's qualification certificate.

In the competence-based qualification system, a certificate of a completed vocational qualification module is always awarded by the Qualification Committee in charge of the vocational qualification concerned. The Qualification Committee for the wood processing field approves the module in question as part of the Vocational Qualification in Wood Processing based on the certificate.

4.3.25 Modules from polytechnic degrees

Modules from polytechnic degrees can be included in the Vocational Qualification in Wood Processing.

The education provider for the Vocational Qualification in Wood Processing approves the studies in question to be included in the Vocational Qualification in Wood Processing. Skills demonstration assessments are not required for polytechnic studies.

4.3.26 Locally offered modules

In its approved curriculum, the education provider offers modules that include vocational skills requirements based on the needs of the local and regional world of work. The names of such modules must reflect functional areas in the world of work. Vocational skills requirements and assessment criteria as well as ways to demonstrate vocational skills must be drawn up for them in line with Section 9.3 in the Appendix under ‘Vocational skills requirements, targets of assessment and general assessment criteria’.

The provider of the competence-based qualification may also organise a competence test for a workplace-oriented module which supplements the Vocational Qualification in Wood Processing well. Vocational skills requirements, targets of assessment and assessment criteria as well as ways to demonstrate vocational skills must be drawn up for this module, and these must be approved by the Qualification Committee before accepting the skills demonstration.

4.4 OTHER OPTIONAL MODULES IN UPPER SECONDARY VOCATIONAL EDUCATION AND TRAINING

In its approved curriculum, the education provider offers optional modules, which can be advanced or enhancing optional modules, core subjects or general upper secondary studies.

Advanced or enhancing vocational modules may include modules with contents based on the needs of the local or regional world of work, modules from other vocational qualifications as well as competence acquired at work. The modules must be assigned names and vocational skills requirements, objectives and assessment criteria, while the ways of demonstrating vocational skills must also be defined for vocational modules.

In terms of offering other optional modules, the education provider may work together with the world of work and other education provider and provide the student with an opportunity to select these qualification modules.

The scope of core subjects and general upper secondary studies must not exceed 10 credits in optional modules.

4.4.1 Entrepreneurship

Vocational skills requirements

As part of a team, the student is able to:

- ◆ assess commodification opportunities;
- ◆ assess the operating opportunities of a proposed business;
- ◆ specify a financially profitable business idea and develop a mission statement;
- ◆ find a working partner company;
- ◆ draw up a preliminary business and financial plan;
- ◆ present the business and financial plan to business consultants and financiers;
- ◆ negotiate the enterprise's operating opportunities and the initial financing required,
- ◆ set up a business;
- ◆ plan and launch business operations;
- ◆ work within the business and carry out its core tasks;
- ◆ work with providers of business support services, such as accounting companies and advertising agencies;
- ◆ terminate the business activities on completion of studies or continue them as part of his/her business operations studies (10 credits) aiming at setting up a business of his/her own.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
1. Mastering work processes	Satisfactory 1	Good 2	Excellent 3
	The student		
Planning one's own work and drawing up plans	contributes to planning business operations and works as a team member	plans business operations and works spontaneously and responsibly as a team member	plans business operations innovatively and works spontaneously, responsibly and supportively as a team member
	assumes responsibility for his/her work as agreed	assumes joint responsibility for the tasks agreed	assumes responsibility for the activities of the whole team for completing the tasks agreed under joint responsibility
Mastering the work as a whole	proceeds systematically in his/her work with guidance	proceeds systematically and fluently in his/her work	advances systematically and fluently in his/her work adjusting it to the activities of the team
	participates in agreed meetings with the partner networks	acquires partners and acts in partner networks	acquires partners and makes use of partner networks to develop operations
High-quality operations	works in accordance with quality objectives set for his/her work and changes his/her own activities based on feedback received	works in accordance with the quality objectives set together and assesses his/her own activities in reaching them	works in accordance with the quality objectives set together and develops his/her activities to reach them
	works in a service-oriented manner.	works in a service-oriented manner and promotes customer satisfaction.	works in a service-oriented manner and promotes customer satisfaction.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Tyydyttävä T1	Hyvä H2	Kiitettävä K3
	Opiskelija		
Use of equipment	uses the most common company tools, such as equipment and machinery, computers and applications	uses company tools, such as equipment and machinery, computers and applications	uses the company tools, such as equipment and machinery, computers and applications independently.
	observes the principles of information security.	observes the principles of information security.	observes the principles of information security.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
3. Fundamental knowledge	The student		
Assessing commodification opportunities and operating conditions	makes use of the business opportunities in commodification offered by his/her own field or other fields in co-operation with the team	makes use of the business opportunities in commodification offered by his/her own field or other fields in co-operation with the team	makes use of the business opportunities in commodification offered by his/her own field or other fields in co-operation with the team
		searches for information available via different networks	makes use of information available via different networks
	surveys businesses operating in the field and finds information on acting as an entrepreneur in the field, working under supervision as part of a team	surveys businesses operating in the field and finds information on acting as an entrepreneur in the field, working as part of a team	surveys businesses operating in the field and finds information on acting as an entrepreneur in the field, working as part of a team
	follows developments in the field from a business point of view, working under supervision as part of a team	follows developments in the field from a business point of view, working as part of a team	follows developments and outlook in the field from a business point of view, working as part of a team
	assesses his/her own possibilities as an entrepreneur, working with guidance as part of a team	assesses his/her own possibilities as an entrepreneur, working as part of a team	independently assesses his/her possibilities as an entrepreneur and sets personal development objectives
Refining the business plan	finds out about the operating opportunities of the enterprise to be set up, working with guidance as part of a team	finds out about and reports on the operating opportunities of the enterprise to be set up in co-operation with the team	finds out about and reports on the operating opportunities of the enterprise to be set up in co-operation with the team.
	selects a form of enterprise and draws up the documents needed for setting up a business, working under supervision as part of a team	selects a form of enterprise and draws up the documents needed for setting up a business, working as part of a team	selects a form of enterprise and draws up the documents needed for setting up a business, working as part of a team
		takes part in acquiring information from key authorities	acquires information from key authorities independently
	takes part in searches for information needed when planning operations, such as how to make a product or provide a service, how to sell these and how to manage finances, working under supervision as part of a team	takes part in searches for information needed when planning operations, such as how to make a product or provide a service, how to sell these and how to manage finances, working as part of a team	makes use of information needed when planning operations on how to make a product or provide a service, how to sell these and how to manage finances, working as part of a team

Planning business operations and working within the company	takes part in searches for information needed when planning company logistics, working under supervision as part of a team	takes part in searches for information needed when planning company logistics, working as part of a team	makes use of information needed when planning company logistics, working as part of a team
	acquires information on support services available when setting up a business and running it, e.g. accounting services, working as part of a team	acquires information on support services available when setting up a business and running it, e.g. accounting services, working as part of a team	acquires information on support services available when setting up a business and running it, e.g. accounting services, working as part of a team
	applies the fundamental knowledge needed to complete agreed tasks, working under supervision	applies the fundamental knowledge needed to run the business	independently applies the fundamental knowledge needed to run the business
	finds out with guidance what legislation requires of bookkeeping	finds out what legislation requires of bookkeeping	finds out what legislation requires of bookkeeping and why
	acknowledges that the business operations are governed by the Accounting Act and is aware of the meaning of the Accounting Act	acknowledges that the business operations are governed by the Accounting Act and is aware of the meaning of the Accounting Act	
		keeps the receipts and vouchers needed for bookkeeping	keeps the receipts and vouchers needed for bookkeeping
	knows which receipts and vouchers should be retained for bookkeeping purposes.	interprets the business profit and loss account and balance sheet e.g. with the help of an accounting firm.	interprets the business profit and loss account and balance sheet e.g. with the help of an accounting firm.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
4. Key competences for lifelong learning	Satisfactory 1	Good 2	Excellent 3
Learning and problem solving	The student		
	searches for information on key regulations related to products, services and contracts under supervision	acquires information on key legislation and statutes concerning products, services and contracts	applies key legislation and other statutes concerning products, services and contracts

Interaction and co-operation	participates in preparing choices and decisions as part of the team	makes proposals, choices and decisions as part of the team	makes justified proposals, choices and decisions as part of the team to develop business operations
	assesses his/her own activities and progress made with guidance	assesses his/her own activities and progress made	assesses his/her own activities and progress made in his/her work and business operations
	participates in co-operation negotiations with team members and stakeholders	negotiates on co-operation with team members and participates in negotiations with stakeholders	negotiates on co-operation with team members and stakeholders
Vocational ethics	observes financial, social and sustainability-related values in business operations under supervision	observes financial, social and sustainability-related values in business operations	observes financial, social and sustainability-related values in business operations
Health, safety and ability to function	follows occupational safety regulations in the field in his/her activities and customer service situations.	follows occupational safety regulations in the field in his/her activities and customer service situations	follows occupational safety regulations in the field in his/her activities and customer service situations
	recognises the dangers related to the work and working environment with guidance and protects him-/herself from them	recognises the dangers related to the work and working environment and protects him-/herself from them	recognises the dangers related to the work and working environment and protects him-/herself from them.
	takes care of his/her own safety and that of colleagues and customers in different situations with guidance.	takes care of his/her own safety and that of colleagues and customers in different situations.	ensures his/her own safety and that of colleagues and customers in different situations.
			develops the safety and working capacity of his/her team by developing own working practices and the environment. instructs others to act in a healthy and safe way when working as a team member.

Ways of demonstrating vocational skills

The student demonstrates his/her vocational skills by working in co-operation with team members, representatives of partner companies, stakeholders or other parties in practice enterprises or similar. A vocational skills demonstration is used to assess at least mastering work processes and key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

4.4.2 Workplace instructor training

Vocational skills requirements

The student or candidate is able to:

- ◆ recognise the tasks at the workplace suitable for on-the-job learning or vocational skills demonstrations and find out about their targets of assessment and assessment criteria;
- ◆ negotiate implementation of on-the-job learning and vocational skills demonstrations in the working community;
- ◆ prepare on-the-job learning and skills demonstration plans in co-operation with the teacher and workplace instructor;
- ◆ provide other students with orientation in the tasks, customs and rules at the workplace or at school;
- ◆ present the training and working opportunities in the field e.g. to students on workplace guidance periods;
- ◆ have guidance discussions, develop his/her own activities based on feedback and arbitrate differences of opinion;
- ◆ work with different learners and colleagues;
- ◆ receive and give constructive feedback;
- ◆ self-assess his/her on-the-job learning and skills demonstration in accordance with the targets of assessment and assessment criteria agreed in advance;
- ◆ assess occupational safety risks in his/her work and know how to act and also instruct others to act in accordance with the occupational safety instructions.

The student knows how to work as a workplace instructor after gaining sufficient work experience.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
1. Mastering work processes	Satisfactory 1	Good 2	Excellent 3
	The student		
Planning one's own work and drawing up plans	prepares on-the-job learning and skills demonstration plans under supervision	prepares on-the-job learning and skills demonstration plans as instructed	prepares on-the-job learning and skills demonstration plans independently and proactively
Mastering the work as a whole	requires occasional supervision.	completes given tasks independently.	proceeds fluently in his/her work, adjusting it to the activities of the working environment.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Satisfactory 1	Good 2	Excellent 3
	The student		
Guiding a student	orients other students under supervision	orients other students as instructed and holds guidance discussions	orients other students, acts flexibly with different people and arbitrates differences of opinion
Assessing a student	accepts and gives feedback on tasks under supervision and self-assesses on-the-job learning and skills demonstrations under supervision, based on targets and criteria of assessment agreed in advance.	accepts and gives feedback on tasks and self-assesses on-the-job learning and skills demonstrations based on targets and criteria of assessment agreed in advance.	holds constructive feedback discussions and self-assesses on-the-job learning and skills demonstrations based on targets and criteria of assessment agreed in advance.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student		
Knowledge of working life and training opportunities in one's own field	presents some of the working and training opportunities within the field	presents working and training opportunities within the field	presents working and training opportunities within the field independently and diversely
Knowledge of curricula	recognises the subject matter to be learnt during on-the-job learning and the competence to be assessed through skills demonstrations under supervision.	recognises the subject matter to be learnt during on-the-job learning and the competence to be assessed through skills demonstrations as instructed.	independently recognises the subject matter to be learnt during on-the-job learning and the competence to be assessed through skills demonstrations.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
4. Key competences for lifelong learning	The student		
Health, safety and ability to function	assesses occupational safety risks involved in his/her work and complies with occupational safety instructions.	assesses occupational safety risks involved in his/her work and complies with occupational safety instructions.	assesses occupational safety risks involved in his/her work, complies with and also instructs others to comply with occupational safety instructions.

Ways of demonstrating vocational skills

The student demonstrates his/her vocational skills by planning a skills demonstration or on-the-job learning. He/she studies the activities, tasks, working culture and rules of the working community and assesses its occupational safety risks and ergonomics issues in terms of his/her own work. The student examines opportunities to arrange his/her on-the-job learning and skills demonstration assessments at the workplace. The student analyses the assessments of his/her own on-the-job learning and skills demonstration.

The skills demonstration is mainly given in connection with another skills demonstration under the supervision of responsible representatives of working life.

In accordance with the assessment criteria, the skills demonstration of this qualification module should be demonstrated at least

- ◆ mastering work processes;
- ◆ mastering working methods, equipment and material; assessment of the student;
- ◆ fundamental knowledge; knowledge of curricula and national skills demonstration materials;
- ◆ key competences for lifelong learning: taking health, safety and ability to function into consideration.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

4.4.3 **Advanced and enhancing vocational modules**

In its approved curriculum, the education provider offers advanced or enhancing vocational modules, the contents of which are based on the needs of the local or regional world of work. The names of such modules must reflect the functional areas in the world of work while vocational skills requirements, objectives and assessment criteria as well as the ways of demonstrating vocational skills must be drawn up for them in line with Section 9.3 in the Appendix under ‘Vocational skills requirements, targets of assessment and general assessment criteria’. In terms of offering other optional modules, the education provider can work together with the world of work and other education providers.

4.4.4 **Core subjects**

In its curriculum, the education provider offers core subjects which increase the student’s opportunities to choose from the core subjects listed in Chapter 5. The modules can be optional additional modules to the compulsory ones (see Section 5.2.1 of the Qualification Requirements). The education provider defines the objectives, core contents and assessment of these modules. The modules may also be optional modules from core subjects presented in Sections 5.2.2–5.2.7 of the Qualification Requirements. The education provider may also offer them in co-operation with other education providers. The student can also choose these modules from modules offered by other education providers.

4.4.5 **General upper secondary studies**

In its curriculum, the education provider offers students an opportunity to include in their qualification general upper secondary studies arranged by general upper secondary schools in accordance with the general upper secondary school curriculum, for which the general upper secondary school in question awards a certificate. The education provider can also decide that students can choose general upper secondary studies (such as online studies) from the courses offered by different general upper secondary education providers.

4.5 FINAL PROJECT IN CURRICULUM-BASED VOCATIONAL EDUCATION AND TRAINING

The final project demonstrating the student's vocational skills is only included in curriculum-based vocational education and training.

The student will plan and complete a final project that will demonstrate his/her competence or special competence in a qualification module. It can be, for example, a product, demonstration of skills or portfolio. The student recognises his/her vocational key strengths and develops his/her creativity, innovativeness and promotes personal vocational growth while completing the final project. He/she must be able to work independently, consistently and systematically as well as search for required information from different sources. The student presents and assesses his/her final project as well as its planning process and realisation. With the final project, the student promotes his/her own employment.

4.6 MODULES PROVIDING INDIVIDUAL ADVANCED VOCATIONAL COMPETENCE (MODULES THAT EXPAND THE SCOPE OF AN UPPER SECONDARY VOCATIONAL QUALIFICATION)

The student or candidate may individually include in his/her upper secondary vocational qualification more modules, when it is necessary from the point of view of field-specific or local skills requirements or strengthening his/her vocational skills.

Modules providing advanced individual vocational competence should be implemented, as far as possible, at workplaces in co-operation with the world of work.

4.6.1 Business operations

Vocational skills requirements

The student or candidate is able to:

- ◆ assess the possibilities of commodification of his/her own competence (product or service);
- ◆ study the business environment of the enterprise to be established;
- ◆ identify and acquire co-operation businesses and partners;
- ◆ find, recognise and assess the company's operating potential;
- ◆ select a financially profitable business idea and develop a mission statement;
- ◆ draw up a business plan for the enterprise;
- ◆ make a financial management plan for the enterprise and find out about the resources required to run it;
- ◆ present the business and financial plan to business consultants and financiers;
- ◆ negotiate the company's operating opportunities and the initial financing required;
- ◆ plan the manufacturing of the enterprise's products and provision of services;
- ◆ prepare and report a marketing plan and report on it as well as decide on marketing activities;
- ◆ make the necessary logistics decisions;
- ◆ prepare a risk analysis for the enterprise;
- ◆ plan implementation and key tasks of profitable business operations;
- ◆ select the form of enterprise, establish a business and close it down.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the study module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
1. Mastering work processes	The student or candidate		
Planning one's own work and drawing up plans	plans business operations with guidance	plans the operations of his/her enterprise and acts independently and responsibly	plans the operations of his/her enterprise innovatively and acts independently, responsibly and supportively

Mastering the work as a whole	proceeds systematically in his/her work with guidance	proceeds systematically and fluently in his/her work	proceeds systematically and fluently in his/her work
	acquires a partner company with guidance	acquires partners and acts in partner networks	obtains co-operation partners makes use of co-operation networks in the development of operations
High-quality operations	works in accordance with quality objectives set for his/her work and changes his/her own activities based on feedback received	acts in accordance with quality objectives set and assesses his/her own activities in achieving them	acts in accordance with quality objectives set and develops his/her own activities to achieve them
	works in a service-oriented manner.	works in a service-oriented manner and promotes customer satisfaction.	works in a service-oriented manner and promotes customer satisfaction.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
2. Mastering working methods, equipment and material	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Technology and information technology	uses customary tools needed when setting up his/her business, such as equipment and machinery, computers and software	uses tools needed when setting up his/her business, such as equipment and machinery, computers and software	independently uses tools needed when setting up his/her business, such as equipment and machinery, computers and software
	observes the principles of information security.	observes the principles of information security.	observes the principles of information security.

TARGET OF ASSESSMENT	ASSESSMENT CRITERIA		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student or candidate		
Assessment of commodification opportunities	makes use of his/her own field's business opportunities in commodification with guidance	makes use of his/her own field's business opportunities in commodification	makes use of his/her own field's business opportunities in commodification
	searches for information available via different networks with guidance	searches for information available via different networks	makes use of information available via different networks
	identifies companies operating in the field and finds information on entrepreneurship in the field under supervision	identifies companies operating in the field and finds information on entrepreneurship in the field	identifies companies operating in the field and finds information on entrepreneurship in the field

Looking into the business environment	follows developments in the field from the point of view of starting business operations under supervision	follows developments in the field from the point of view of starting business operations	follows developments and the outlook in the field from the point of view of starting business operations
	assesses his/her chances as an entrepreneur with guidance	assesses his/her chances as an entrepreneur	independently assesses his/her possibilities as an entrepreneur and sets personal development objectives
Choosing a business idea	finds out about the operating opportunities of the enterprise to be established with guidance	finds out about and reports on the operating opportunities of the enterprise to be established	finds out about and reports on the operating opportunities of the enterprise to be established
	acquires information from key authorities under supervision	acquires information from key authorities	acquires information from key authorities independently
	acquires information needed in planning business operations under supervision, such as how to make a product or provide a service, how to sell these and how to manage finances	acquires information needed in planning his/her business operations, such as how to make a product or provide a service, how to sell these and how to manage finances	makes use of information needed in planning his/her business operations, such as how to make a product or provide a service, how to sell these and how to manage finances
Compiling a business plan	acquires information needed for planning company logistics under supervision	acquires information needed for planning company logistics	makes use of information needed for planning company logistics
	uses information needed for company risk analysis under supervision	uses information needed for company risk analysis	applies information needed for company risk analysis
	acquires information on support services available for setting up and running a business under supervision, such as accounting services	acquires information on support services available for setting up and running a business, such as accounting services	acquires information on support services available for setting up and running a business, such as accounting services
	acknowledges that the business operations are governed by the Accounting Act and is aware of the meaning of the Accounting Act	acknowledges that the business operations are governed by the Accounting Act and is aware of the meaning of the Accounting Act	acknowledges that the business operations are governed by the Accounting Act and is aware of the meaning of the Accounting Act
	acquires information on the entrepreneur's role in book-keeping and profit and loss analysis under supervision	acquires information on the entrepreneur's role in book-keeping and profit and loss analysis	acquires information on the entrepreneur's role in book-keeping and analysing the profit and loss account and balance sheet
	searches for information on key regulations related to products, services and contracts under supervision	acquires information on key legislation and statutes concerning products, services and contracts	applies key legislation and other statutes concerning products, services and contracts

Choosing a form of enterprise and setting up and closing down a business	chooses a form of enterprise and draws up the documents needed for setting up and closing down a business under supervision.	chooses a form of enterprise and draws up the documents needed for setting up and closing down a business.	chooses a form of enterprise and draws up the documents needed for setting up and closing down a business.
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TARGET OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
Key competences for lifelong learning	The student or candidate		
Learning and problem solving	makes decisions under supervision	makes choices and decisions	makes valid proposals, choices and decisions to develop business operations
	assesses his/her own activities and progress made with guidance	assesses his/her own activities and progress made	independently assesses his/her own activities and progress in his/her work and business operations
Interaction and co-operation	negotiates co-operation with stakeholders with guidance	negotiates co-operation with stakeholders	innovatively negotiates co-operation with stakeholders
Vocational ethics	complies with the financial, social and sustainability-related values agreed when planning business operations under supervision	complies with the financial, social and sustainability-related values agreed when planning business operations	complies with the financial, social and sustainability-related values when planning business operations
Health, safety and ability to function	prepares plans on compliance with occupational safety regulations in his/her business under supervision	prepares plans on compliance with occupational safety regulations in his/her business	independently prepares plans on compliance with occupational safety regulations in his/her business
	recognises dangers related to the work and working environment with guidance.	recognises dangers related to the work carried out in the enterprise and the work environment and makes plans to protect from them.	on his/her own initiative, recognises the dangers related to the work carried out in the enterprise and the work environment and makes plans to protect from them.

Ways of demonstrating vocational skills

The student or candidate demonstrates his/her vocational skills by planning the operations of his/her own enterprise and acting in co-operation with different stakeholders.

A vocational skills demonstration must completely cover:

- ◆ mastering work processes;
- ◆ mastering working methods, equipment and material;
- ◆ fundamental knowledge;
- ◆ mastering key competences for lifelong learning.

If the vocational skills required for the module cannot be fully demonstrated in a vocational skills demonstration or a competence test, it is to be supplemented by other types of assessment of competence, such as interviews, assignments and other reliable methods.

4.6.2 Modules from upper secondary vocational qualifications

1. Modules from upper secondary vocational qualifications

Modules from upper secondary vocational qualifications can be included in the Vocational Qualification in Wood Processing in accordance with the student's or candidate's individual study plan.

In the competence-based qualification system, a certificate of a completed vocational qualification module is always awarded by the Qualification Committee in charge of the vocational qualification concerned. The Qualification Committee for the field approves the module in question as part of the Vocational Qualification in Wood Processing based on the certificate.

2. Modules from further vocational qualifications

Modules from further vocational qualifications can be included in the Vocational Qualification in Wood Processing, in accordance with the student's or candidate's individual study plan.

The education provider must have a valid contract for arranging the further vocational qualification in question or the education provider can purchase the competence tests from an education provider with a contract.

In upper secondary vocational education and training, a certificate of a completed further vocational qualification module is always awarded by the Qualification Committee in charge of the qualification in question and the education provider approves the further vocational qualification module to be included on the student's qualification certificate.

In the competence-based qualification system, a certificate of a completed vocational qualification module is always awarded by the Qualification Committee in charge of the vocational qualification concerned. The Qualification Committee for the field approves the module in question as part of the Vocational Qualification in Wood Processing based on the certificate.

3. Modules from specialist vocational qualifications

Modules from specialist vocational qualifications can be included in the Vocational Qualification in Wood Processing in accordance with the student's or candidate's individual study plan.

The education provider must have a valid contract for arranging the specialist vocational qualification in question or the education provider can purchase the competence tests from an education provider with a contract.

In upper secondary vocational education and training, a certificate of a completed specialist vocational qualification module is always awarded by the Qualification Committee in charge of the specialist vocational qualification concerned and the education provider approves the module to be included on the student's qualification certificate.

In the competence-based qualification system, a certificate of a completed vocational qualification module is always awarded by the Qualification Committee in charge of the vocational qualification concerned. The Qualification Committee for the field approves the module in question as part of the Vocational Qualification in Wood Processing based on the certificate.

4.6.3 Locally offered modules providing individual advanced vocational competence in curriculum-based vocational education and training

In its approved curriculum, the education provider can provide students with a chance to take individually advanced vocational modules that meet the skills requirements of the local or regional world of work and students' individual needs for in-depth vocational skills. The modules must be named and their skills requirements, assessment criteria and ways of demonstrating vocational skills must be determined.

5

THE OBJECTIVES AND ASSESSMENT OF CORE SUBJECTS IN CURRICULUM-BASED VOCATIONAL EDUCATION AND TRAINING, 20 CREDITS

The key contents are provided in the targets of assessment.

5.1 COMPULSORY MODULES

5.1.1 Mother tongue, 4 credits

5.1.1.1 MOTHER TONGUE, FINNISH

Objectives

The student

- ◆ communicates and acts in an interactive situation so that he/she can practise the occupation, participate in working life, be an active citizen and pursue further studies;
- ◆ possesses the textual skills needed in working life;
- ◆ knows how to act in a multicultural and multilingual environment;
- ◆ understands the key concepts, essential contents and meaning of texts related to the field of wood processing;
- ◆ acquires information from different sources in different ways and conveys it orally and in writing;
- ◆ interprets different text types and literary works;
- ◆ assesses his/her mother tongue skills and develops them continuously;
- ◆ knows how to act in different interactive situations in working life;
- ◆ masters different public speaking situations, for example describing wood processing-related work, presenting a final project and different types of meetings in the workplace;
- ◆ knows how to draw up the most common written materials in his/her occupational field and community, such as various reports and work specifications;
- ◆ knows how to behave in a job-seeking situation and how to draw up documents relevant to applying for a job;
- ◆ makes use of trade journals of the wood processing field and other media;

- ♦ is critical in his/her use of media and knows the principles of the use of sources;
- ♦ develops his/her communication and interaction skills and constructively contributes to communication at work.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Acquiring information	acquires information essential to his/her occupational field from clear texts under supervision	acquires information related to his/her occupational field from different sources and uses reliable texts	acquires information from different sources, even difficult texts, and assesses their reliability
Reading comprehension	understands the core meaning of the text in terms of vocational skills and knows how to combine its information with his/her own experiences and knowledge	understands the meaning and main contents of the text and also knows how to combine and compare its details with his/her own experiences and knowledge	understands both the meaning and message of the text as well as the significance of the details, draws conclusions and evaluates the contents and the way of expression used in the text
Written communication	writes texts that are essential to vocational skills with guidance	writes texts that are essential to vocational skills	writes purposefully and processes his/her texts based on his/her own evaluation and feedback
	knows the basics of spelling	uses fluent phrase and sentence structures and breaks the text into paragraphs	masters the basic norms of language use and also improves the wording and layout of the written text
	draws up documents with guidance, following a model	draws up appropriate documents	draws up appropriate documents and knows how to use document templates
	observes the requirements of the text type following a model	observes the requirements of the text type and also uses his/her knowledge of text types in other respects	applies text type requirements in his/her own texts

Interaction and acting in work-related language situations	acts appropriately in interactive situations, such as when applying for a job	acts appropriately and politely in interactive situations, such as when applying for a job	is customer-orientated, flexible and convincing in different interactive situations
	participates in conversation making statements	participates in the conversation and directs it towards the goal	participates in conversation in an active and constructive way and takes partial responsibility for the communication atmosphere
	justifies his/her own opinions	gives a variety of grounds for his/her opinions and claims	gives a variety of grounds for his/her own views and also assesses the points made
	knows how to give a short presentation	creates contact with his/her listeners as he/she speaks and knows how to construct his/her statement in a way that is easy to follow	can maintain interaction while speaking, knows how to exemplify his/her presentation and how to construct its contents logically
Media skills	knows the central media in the occupational field	uses key communication tools and assesses media texts	makes versatile use of communication tools and assesses media texts critically
	observes copyrights with guidance	sees copyrights as rights and obligations and observes them by citing his/her sources	knows how to cite the sources used and asks permission to use them if necessary
Knowledge of language and culture	recognises the meaning of his/her own language and the meaning of cross-cultural communication	takes cross-cultural communication into account in his/her own interaction	applies cross-cultural communication and his/her own cultural skills and acts in an open-minded manner
	uses literature and other art forms to acquire experiences.	knows how to construe literature and other art forms.	knows how to analyse and interpret literature and other art forms.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 7. Aesthetics, 8. Communication and media skills, 10. Technology and information technology, 11. Active citizenship and different cultures.

In recognition of prior learning, general upper secondary school courses *Language, texts and interaction* (ÄI1), *Structures and meanings of texts* (ÄI2), *Means of influence* (ÄI4) and one of *Literary texts* (ÄI3), *Text, style and context* (ÄI5), *Language, literature and identity* (ÄI6) or *Oral communication* (ÄI7) compensate for *mother tongue*, Finnish studies in core subjects.

5.1.1.2 MOTHER TONGUE, SWEDISH

In education and training provided in Swedish, the objectives and assessment criteria for mother tongue studies are the same as for the equivalent studies in Finnish.

5.1.1.3 MOTHER TONGUE, SAAMI

Objectives

The student

- ◆ acquires versatile experiences in Saami, both orally and literally;
- ◆ understands his/her linguistic roots and the development of his/her own linguistic identity;
- ◆ recognises the meaning of language and culture to the working community;
- ◆ familiarises himself/herself with Saami story-telling traditions and its significance to the Saami language and culture;
- ◆ acquires information from different Saami-language sources and also passes it on both in speech and in writing;
- ◆ expands his/her experience and co-operation to also cover Saami-speaking wood processing colleagues living in other Nordic countries and in Russia;
- ◆ understands the meaning of multiculturalism and multilingualism and also develops his/her linguistic and cultural tolerance;
- ◆ draws up the most common written documents of his/her occupation and community in Saami;
- ◆ writes reports and job applications in Saami;
- ◆ knows how to act in a job-seeking situation and other speech communication situations, for example in the presentation of a work specification related to his/her work;
- ◆ knows how to act in Saami in different interactive situations in working life;
- ◆ knows how to communicate and interact in Saami so that he/she can participate in working life, be an active citizen and pursue further studies;
- ◆ assesses his/her own mother tongue skills.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Knowledge of language and culture	knows the basic features of Saami culture	knows the background of the national Saami language and the formation of Saami culture	strengthens and develops his/her own linguistic identity
	uses Saami story-telling traditions with guidance	knows Saami culture and familiarises himself/herself with its unique character, such as story-telling traditions	uses Saami story-telling traditions and knows the history of Saami people through it
	recognises the variety and significance of languages and cultures	takes the meaning of different cultures and languages in communication situations into account in his/her activities	recognises the common roots of Saami and Finnish languages
Acquiring information and media skills	makes use of trade journals and other media in the field with guidance	uses the key communication tools in the field	acquires and analyses enriching experiences by making use of various communications tools
	knows the key media used in the occupational field	recognises different media influences and evaluates them	makes versatile use of the key media contents in the field and interprets them objectively
Reading comprehension	understands the core of the Saami language text and knows how to combine its information with his/her own experiences and knowledge	understands the meaning of the text and its core content in the Saami language and knows how to combine and compare its details with his/her own experiences and knowledge	understands both the meaning and message of the text, draws conclusions and assesses the content and the way of expression
Written communication	knows the basics of Saami-language spelling	uses fluent phrase and sentence structures and breaks the text into paragraphs	plans his/her writing according to the objective and also improves his/her text based on his/her own assessment as well as that of others
	writes full sentences and uses information technology	compiles a text that is valid in terms of content and layout and matches the title and the meaning of the text	compiles a text that is both diverse in content and fluent and coherent in terms of structure
		communicates in writing according to the situation	compiles written documents in Saami for use in his/her occupational field and community

Interaction and acting in work-related language situations	acts correctly in interactive situations	acts correctly and politely in interactive situations	acts flexibly and convincingly in interactive situations
	participates in conversation making statements	participates in the conversation and directs it towards the goal	participates in conversation in an active and constructive way
	gives a short presentation.	creates contact with his/her listeners when speaking and knows how to construct his/her speech in a way that is easy to follow.	maintains interaction while speaking, knows how to exemplify his/her presentation and how to construct its contents logically.

Key competences for lifelong learning: 2. Interaction and co-operation, 8. Communication and media skills, 11. Active citizenship and different cultures.

In recognition of prior learning, general upper secondary school courses *Language, texts and interaction* (ÄIS1), *Structures and meanings of texts* (ÄIS2) *Means of influence* (ÄIS4) and one of *Literary texts* (ÄIS3), *Text, style and context* (ÄIS5), *Language, literature and identity* (ÄIS6) or *Oral communication* (ÄIS7) compensate for *mother tongue*, *Saami studies* in core subjects.

5.1.1.4 MOTHER TONGUE, SIGN LANGUAGE

Objectives

The student

- ◆ knows how to work in the vocation he/she studies and use other skills related to wood processing using sign language;
- ◆ appreciates sign language skills as a part of his/her identity;
- ◆ knows how to act in sign language in interactive situations that require both spoken and written language;
- ◆ knows how to communicate and interact in sign language in working life, as an active citizen and when pursuing further studies;
- ◆ knows how to communicate in a way that makes social interaction, learning and working life success possible.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Knowledge of language and culture	understands the stature of the sign language community in a multilingual Finnish society	compares the communication used by signed and spoken language cultures	is well versed in the background of the sign language community and knows how to represent the minority culture in the prevailing multilingual culture
	recognises the core characteristics of signed and spoken language	makes use of the characteristics of signed and spoken languages	strengthens and develops his/her own linguistic identity and signs used in the occupational field
Knowledge of sign language linguistics	knows the basic structure of sign language	lists basic features in his/her mother tongue and analyses his/her own language use in relation to others	masters the basic structure of sign language
	uses sign language dictionaries with guidance	uses sign language dictionaries independently	searches for diverse information in sign language dictionaries and textbooks
	recognises the different forms of sign language (standard and colloquial language situations)	reflects on the contents of sign language texts in terms of goals	knows the linguistic characteristics of sign language
Interaction and acting in work-related language situations	uses occupational signs under instruction	knows the general set of signs and the occupational sign set	is well versed in the occupational sign set and the linguistic features related to occupational identity
	acts correctly in interactive situations	participates in the conversation and directs it towards the goal	uses sign language that is structurally fluent and rich in expression
	reads signed (videoed) texts	explains occupational things in sign language in presentations and in instructions prepared for others	reads texts written in sign language objectively and utilises the newly acquired information
	produces and understands sign language	produces short presentations in sign language and uses sign language in conversations	maintains interaction while speaking and produces presentations in sign language
	gives a short presentation in sign language	acts with sign language users and hearing people in different environments	in presentations, makes use of the means of expression and presentation used in the sign language culture

Use of learning skills and aids	knows how to use a sign language interpreter in one-on-one conversations	knows how and when to use an interpreter	knows how to use a sign language interpreter fluently in various situations
	uses trade literature and work instructions with the help of sign language under supervision	uses information search fluently and searches information independently from different sources	interprets the information gathered from different points of view and forwards it using sign language
	uses memory techniques in work assignments under supervision	uses different learning strategies in sign language studies	utilises different learning strategies in his/her sign language studies
	masters the basics of communications technology and information search skills.	produces simple presentations with communication tools.	uses communication tools in a variety of ways when producing presentations in sign language.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 8. Communication and media skills.

In recognition of prior learning, general upper secondary school courses *Language, texts and interaction* (ÄIV1), *Structures and meanings of texts* (ÄIV2), *Texts and influence* (ÄIV4) and one of *Devices and interpretation of literature* (ÄIV3), *Text, style and context* (ÄIV5), *Language, literature and identity* (ÄIV6) or *Advanced oral communication skills* (ÄIV7) compensate for *mother tongue, sign language studies* in core subjects.

5.1.1.5 MOTHER TONGUE, ONE'S OWN MOTHER TONGUE FOR FOREIGN LANGUAGE USERS

Objectives

The student

- ◆ reads, writes and expresses himself/herself in his/her mother tongue;
- ◆ understands his/her linguistic roots and the development of his/her own linguistic identity;
- ◆ uses his/her own mother tongue and Finnish or Swedish in different contexts;
- ◆ acquires information from different sources in different ways and conveys it orally and in writing;
- ◆ knows how to communicate and to interact so that he/she can participate in working life, be an active citizen and pursue further studies;
- ◆ knows how to act in a multicultural society and in occupational situations appreciating his/her own language and Finnish traditions.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Knowledge of language and culture	perceives the writing methods of his/her own language	reads and writes short texts in his/her own language	reads variable texts in his/her own language and writes text for different purposes
	knows how to explain the main characteristics of his/her language environment and culture	familiarises himself/herself with the literature of his/her own language and cultural circle in practical terms	knows the structure and grammar of his/her own mother tongue
	can name the cultural roots of his/her language	knows the cultural roots of his/her own language and its family of languages	achieves strong cultural identity and preserves cultural ties to the environment in which he/she has grown up
		knows the various opportunities to use his/her mother tongue and its variations in his/her region	is interested in his/her mother tongue and linguistic background and is motivated to develop his/her mother tongue skills
Acquiring information and media skills	knows the most important communication channels of his/her own language	acquires information in his/her own mother tongue utilising different communication tools (such as dictionaries, information networks)	acquires information in his/her own mother tongue utilising different communication tools and compares different sources objectively

Interaction and acting in work-related language situations	knows how to give a short presentation in his/her mother tongue	knows how to communicate coherently in his/her own mother tongue in occupational matters	compiles different texts observing the communication traditions of his/her own culture and makes active use of his/her oral skills
	knows the forms of oral expression in his/her own and in Finnish culture	compares the use of his/her own language and Finnish	compares the communication of people who speak the same language and Finnish-speaking people
	expresses himself/herself orally in the most common language situations in his/her cultural circle.	uses the key terms of his/her own occupational field and participates in conversations in his/her own language region	knows how to work in a corresponding occupation in his/her own culture
		understands the meaning of bilingualism to his/her own work.	expands his/her professional vocabulary and develops his/her vocational skills in his/her own language if needed.

Key competences for lifelong learning: 2. Interaction and co-operation, 8. Communication and media skills, 10. Technology and information technology, 11. Active citizenship and different cultures.

In recognition of prior learning, general upper secondary school courses *Native language and its usage* (ÄIM1), *Culture in the language area* (ÄIM3), *Communication and society* (ÄIM4) and *The world of knowledge* (ÄIM6) compensate for *mother tongue, one's own mother tongue for foreign language users* studies in core subjects.

5.1.1.6 MOTHER TONGUE, FINNISH AS A SECOND LANGUAGE

Objectives

The student

- ◆ possesses such communication and interactive skills that he/she has adequate resources for working life, active citizenship and further studies;
- ◆ understands the key contents of oral communication in Finnish, follows the topic being studied with ease and is able to participate in the work;
- ◆ understands the key contents of written study material and is able to use it to make progress in his/her studies;
- ◆ gets inspiration and experiences when studying literature and different text types in Finnish and, if possible, in his/her mother tongue;
- ◆ produces texts required in his/her vocation and other texts;
- ◆ masters the key structures of the Finnish language as well as professional vocabulary and phrases in the field of wood processing;
- ◆ knows how to act in his/her occupation in keeping with the main procedures of the Finnish world of work and society;
- ◆ searches information from different sources, uses dictionaries and makes notes independently and also uses material from printed and online sources to develop his/her language skills and further his/her studies.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Acquiring information	acquires information essential to his/her occupational field from clear texts under supervision	acquires information related to his/her occupational field from different sources and uses reliable texts	acquires information from different sources, even difficult texts, and assesses their reliability

Reading comprehension	understands short practical texts, key words and important details as well as texts of occupational relevance	understands professional texts relating to his/her own field or general topics and also texts that need some inference, knows how to search and combine information from several different texts of a few pages long	independently understands texts, even on abstract topics that can be related to his/her own field of work and occupational safety, quickly perceives the contents and importance of the text and applies it to different assignments
Written communication	writes short structured text on familiar topics in most common written communication contexts and also possesses the vocabulary and structures needed to create general and professional texts	writes texts on familiar abstract as well as occupational topics, uses vocabulary and sentence structures that are needed for a wide variety of writing and also writes understandable and practically flawless language	writes fluent and detailed texts, even on abstract topics and work assignments, combines or summarises information from different sources to his/her text, commands a vast vocabulary and demanding sentence structures and has the language skills to write fluent structured text
Interaction and acting in work-related language situations	understands speech on studying or his/her occupational field and a conversation containing general vocabulary	understands conversations that cover general topics and factual matters or are related to his/her occupational field and masters the vocabulary	understands spoken language dealing with concrete and abstract topics and his/her occupational field, recognises different styles of speech and knows how to summarise key elements and important details from what he/she has heard
	speaks about familiar things and manages informal conversations and also communicates in different occupational situations	speaks about ordinary concrete topics and explains matters related to his/her work and also communicates using a reasonably large vocabulary, variable structures and complicated sentences	communicates clearly in situations related to his/her experience and occupational field as well as in most practical and social situations and formal conversations, uses language structures and a fairly extensive vocabulary
Knowledge of language and culture	knows about Finnish society and culture and understands the importance of cross-cultural communication	understands the norms of Finnish society and working life practices and also takes cross-cultural communication into account in his/her interaction	applies information on Finnish social norms and working life practices and also applies cross-cultural communication and his/her own cultural skills
Language studies	knows different ways of learning languages and the principles of using dictionaries and other information sources.	applies different ways of learning languages and uses dictionaries and other information sources to facilitate understanding.	applies different language learning strategies in his/her studies and also uses dictionaries and other information sources to complete assignments.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 8. Communication and media skills, 11. Active citizenship and different cultures.

When defining the objectives of Finnish studies, the language proficiency scale of the Common European Framework of Reference for language learning, teaching and assessment is applied, level B2.1 of which (basic level of independent language skills) describes a student's excellent skills at the end of the studies in general terms. (Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Published by arrangement with the Council of Europe 2001. *Eurooppalainen viihtekehys. Kielten oppimisen, opettamisen ja arvioinnin yhteinen eurooppalainen viihtekehys*. Translated into Finnish by Irma Huttunen and Hanna Jaakkola 2003.)

In recognition of prior learning, general upper secondary school courses *Mastering the basics* (S21), *Putting language into action* (S22), *Advanced textual skills* (S24) and *Getting to know Finnish culture* (S25) compensate for *mother tongue, Finnish as a second language* in core subjects.

5.1.1.7 MOTHER TONGUE, SWEDISH AS A SECOND LANGUAGE

In education and training provided in Swedish, the objectives and assessment criteria for *Mother tongue, Swedish as a second language* are the same as for *Mother tongue, Finnish as a second language*.

5.1.1.8 MOTHER TONGUE, FINNISH OR SWEDISH FOR SIGN LANGUAGE USERS

Objectives

The student

- ◆ acquires and passes on information according to his/her individual circumstances and communicates in Finnish or Swedish in different situations;
- ◆ is able to consider the connections with working life requirements and the culture and history of the deaf in the texts used;
- ◆ produces texts required in the field of wood processing;
- ◆ uses Finnish or Swedish language typical of the field when interacting in his/her vocation with those who can hear;
- ◆ compares the forms of expression and grammar between sign language and spoken or written language;
- ◆ knows how to work actively in communities and in working life where both Finnish and sign language are used.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Acquiring information	acquires information in Finnish or Swedish with guidance	uses Finnish or Swedish to acquire information in his/her occupational field	acquires information independently from printed and digital sources and assesses them objectively
Reading comprehension	understands the key contents of a general or professional text	understands the contents and style of a general text and compares literary, general and colloquial texts	understands without difficulty both general and professionally oriented written texts
Written communication	writes about general topics and uses understandable language	compiles short written abstracts from a general text	writes fluently understandable, articulate and precise general language and also masters spelling and punctuation rules
	draws up appropriate job applications under supervision and following an example	draws up appropriate job applications	draws up appropriate job applications identifying the applicant's skills
	writes general language so as to cope with familiar communication situations	makes an understandable input in written communication	conveys and explains written texts in sign language comments on texts and information sources critically
Interaction and acting in work-related language situations	reads text samples related to professional, cultural and private life	reacts appropriately to different messages and asks for more information when needed	conveys orders and messages and is able to complete assignments in Finnish or Swedish
	acts co-operatively at work using aids if needed	works co-operatively as a member of a team and knows how to convey messages	works in a team and communicates professionally and responsibly with both deaf and hearing people
Media skills	recognises and observes the changing media environment	critically observes and assesses the contents and ways of expression used in the media	uses glossaries and electronic databases flexibly to understand text
Knowing the grammar features of sign language and spoken language	knows the key differences between sign language and written language.	compares the typical spoken language structures with those in sign language.	knows the principles and form of spoken Finnish or Swedish and compares them with the equivalent structures in sign language.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 8. Communication and media skills.

In recognition of prior learning, general upper secondary school courses *Language, texts and interaction* (V21), *Structures and meanings of texts* (V22), *Texts and influence* (V24) and one of *Devices and interpretation of literature* (V23), *Text, style and context* (V25), *Language, literature and identity* (V26) or *Advanced oral communication skills* (V27) compensate for *mother tongue, Finnish or Swedish for sign language users* studies in core subjects.

5.1.1.9 MOTHER TONGUE, ROMANY

Objectives

The student

- ◆ uses Romany language and cultural heritage as a medium of interaction and thinking in the Romany community and in occupational contexts;
- ◆ acquires information from different Romany language sources;
- ◆ masters such communication and interaction skills that he/she can participate in working life, act as an active citizen and apply for further studies;
- ◆ acts in different interactive situations in working life in Romany;
- ◆ masters different public speaking situations, for example, presenting a work specification related to wood processing;
- ◆ masters the key structures of Romany as well as the professional vocabulary and expressions in the field of wood processing.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Knowledge of language and culture	knows the key features of Romany culture and analyses his/her own language use compared with others	knows the background and culture of the national Romany language and also strengthens and develops his/her own linguistic identity	understands for his/her own part the meaning of linguistic identity and acts according to the Romany culture
Acquiring information	searches for information from clear Romany texts with guidance	searches for many kinds of information from clear Romany texts	masters the sources and materials that exist in the Romany language and uses them in his/her writing
Reading comprehension	understands the essence of a Romany text and knows how to combine its information with his/her own experiences and knowledge	understands the main idea of a Romany factual text and writes different kinds of texts in Romany	understands both the meaning and message of the text, draws conclusions and assesses the content and the way of expression
Interaction and acting in work-related language situations	participates understandably in written and oral communication at work	communicates in Romany orally and in writing according to the situation	communicates in Romany orally and in writing according to the situation and develops his/her skills based on feedback
		reacts appropriately to different messages and asks for more information when needed	manages himself/herself naturally in different situations in Romany
Knowledge of Romany linguistics	has a sufficient vocabulary on familiar things in Romany.	is quite confident in his/her use of language forms in both oral and written communication.	uses fluent Romany clause and sentence structure.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 11. Active citizenship and different cultures.

In recognition of prior learning, general upper secondary school courses *Strengthening the linguistic foundation* (ÄIR1) and *Expanding language skills beyond family and friends* (AIR2), *The Romany language and culture in modern society* (ÄIR6) and one of *Oral and written Romany traditions* (ÄIR3), *History and distribution of the Romany language and culture* (ÄIR4), *Romany literature and other arts* (ÄIR5) or *Romany-language speaking skills and oral culture* (ÄIR7) compensate for *mother tongue*, Romany studies in core subjects.

5.1.2 Second national language

5.1.2.1 SECOND NATIONAL LANGUAGE, SWEDISH, 1 CREDIT

Objectives

The student

- ♦ manages routine work assignments in the field of wood processing and everyday situations in the second national language;
- ♦ understands the significance of both national languages and cultures in a multicultural Finland.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Acquiring information	knows the principles of using dictionaries and other information sources	uses dictionaries as well as some other information sources, such as electronic sources	uses dictionaries, electronic and other sources to acquire further information from simple foreign-language instructions in his/her own field
Reading comprehension and written communication	understands the contents of short and simple written messages related to his/her own work and occupational safety, using helpful tools	writes short work-related texts, such as work and safety instructions, following examples	writes short work-related notes, instructions or order forms
Interaction and acting in work-related language situations	talks about himself/herself in a few words or about familiar things in his/her work	manages routine day-to-day conversation situations, if the other person talks slowly and uses simple, basic vocabulary	acts in common communication situations both face-to-face and on the phone and asks for elaboration or clarification if needed

Significance of language and culture	is aware of the significance of Swedish language and culture	understands the meaning of Swedish language and culture when meeting people from other Nordic countries	understands the position of Swedish language and culture in a multicultural Finland
Language studies	recognises his/her own learning strategies.	recognises the strengths and weaknesses of his/her own learning strategy.	tries new strategies and ways of learning.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 8. Communication and media skills, 11. Active citizenship and different cultures.

Grade Good 2 equals listening and text comprehension language skill level A1.3–A2.1 and speaking and writing skill level A1.3–A2.1 on the language proficiency scale of the Common European Framework of Reference for language learning, teaching and assessment. (Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Published by arrangement with the Council of Europe 2001. *Eurooppalainen viitekehys. Kielten oppimisen, opettamisen ja arvioinnin yhteinen eurooppalainen viitekehys*. Translated into Finnish by Irma Hutunen and Hanna Jaakkola 2003.)

In recognition of prior learning, general upper secondary school courses *Everyday living in the Nordic countries* (RUA1) or *School and leisure* (RUB1) compensate for *second national language, Swedish* studies in core subjects.

5.1.2.2 SECOND NATIONAL LANGUAGE, FINNISH, 2 CREDITS

Objectives

The student possesses such communication and interaction skills that he/she can manage work assignments in the dance sector in Finnish and understands the significance of Finnish in his/her work and private life.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Acquiring information	knows the principles of using dictionaries and other information sources	uses professional dictionaries and Finnish-language databases	uses dictionaries, manuals, reference books and Finnish websites to acquire information
Reading comprehension and written communication	understands the contents of simple Finnish-language instructions or notices related to work or everyday life	understands the contents of Finnish-language instructions or notices related to work or everyday life	reads with ease and understands various professional texts and manuals in Finnish and follows professionally relevant events from Finnish professional publications and social events in Finnish media
	writes short notices, fills in forms and even writes short reports in Finnish, using tools	writes notices, letters and even longer reports or minutes in Finnish, using tools if needed	fills in forms, writes orders, letters and reports and also answers inquiries in writing in Finnish
Interaction and acting in work-related language situations	understands simple instructions and orders related to work or everyday life and is able to address a customer or co-worker in acceptable Finnish and understand questions asked	understands clear instructions and spoken language at a normal tempo at work or on the phone, is able to interact and understand a customer or a co-worker and also follows professional and social events in the media	understands various instructions and professionally related conversations even when spoken at a fast tempo, is able to interact with Finnish-speaking customers naturally and understands their meanings and wishes
	attends to Finnish-speaking customers satisfactorily, copes with everyday situations and handles the most important work assignments in Finnish	attends to Finnish-speaking customers well, answers questions and handles work assignments on the phone and also participates in routine Finnish-language conversations at work	discusses his/her work assignments in Finnish without difficulty, knows how to describe processes and details and starts and carries on conversations in Finnish using a variable speaking tempo
Significance of language and culture	understands the significance of mastering Finnish in everyday interaction as well as in a Finnish working community	works well in a Finnish working community and strives to improve his/her professional language skills	plays an active role in a Finnish working community and shows interest in the Finnish culture
Language studies	recognises his/her own learning strategies.	recognises the strengths and weaknesses of his/her own learning strategy.	tries new strategies and ways of learning.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 8. Communication and media skills, 11. Active citizenship and different cultures.

Grade Good 2 equals listening and text comprehension language skill level B1.2 and speaking and writing skill level B1.1 on the language proficiency scale of the Common European Framework of Reference for language learning, teaching and assessment. (Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Published by arrangement with the Council of Europe 2001. *Eurooppalainen viitekehys. Kielten oppimisen, opettamisen ja arvioinnin yhteinen eurooppalainen viitekehys.* Translated into Finnish by Irma Huttunen and Hanna Jaakkola 2003.)

In recognition of prior learning, general upper secondary school courses *Everyday life and leisure* (FINA1) and one of *Nature and the environment* (FINA2), *Commerce, technology and communications* (FINA3), *Society and the media* (FINA4), *Education, occupational and economic life* (FINA5) or *Finnish culture and literature* (FINA6) compensate for *second national language*, Finnish studies in core subjects.

5.1.3 Foreign language

5.1.3.1 FOREIGN LANGUAGE, A LANGUAGE, 2 CREDITS

Objectives

The student

- ◆ communicates and acts in an interactive situation so that he/she can practise the occupation, participate in working life, be an active citizen and pursue further studies;
- ◆ manages routine work assignments in the field of wood processing in a foreign language;
- ◆ knows how to act in a multicultural and multilingual environment.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Acquiring information	searches for information in work-related materials and instructions under guidance and using dictionaries	searches for professionally relevant information using dictionaries as well as other information sources, such as electronic sources	searches for professionally relevant information in various ways, applies his/her knowledge and skills and justifies his/her decisions
Reading comprehension and written communication	understands short and simple written messages that are related to his/her occupational field	understands written instructions that are related to his/her work, products and processes using tools, asks detailed questions and knows how to act according to answers received	understands written instructions that are related to his/her work, products and processes and feedback received
	writes simple and short work-related texts under guidance	writes simple and short work-related texts following examples	writes common personal messages and short texts and fills in simple work-related documents
Interaction and acting in work-related language situations	understands short and simple oral messages related to his/her occupational field and knows how to act according to them	understands the most common oral instructions related to his/her work, products and processes and knows how to act according to them	understands the main idea of ordinary speech at a normal tempo and acts accordingly
	briefly talks about himself/herself and about tasks in his/her occupational field by answering the questions asked in foreseeable and familiar work situations	talks about himself/herself and his/her duties in a way that he/she is understood and participates in the conversation if the partner talks slowly and uses simple structures	talks about his/her workplace and duties and about related norms and customs in familiar situations, finds out about similar things in other countries and acquires further instructions on the duties if needed
Knowledge of language and culture	is aware of the significance of the language studied as well as the culture it represents	understands the significance of the language studied as well as the culture it represents	applies his/her knowledge and skills in the foreign language and culture
Language studies	recognises his/her own learning strategies.	evaluates the strengths and weaknesses of his/her own learning strategies.	strengthens his/her learning by trying new strategies and ways of learning.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 8. Communication and media skills, 11. Active citizenship and different cultures.

Grade Good 2 equals listening and text comprehension language skill level A2.2 and speaking and writing skill level A2.1 on the language proficiency scale of the Common European Framework of Reference for language learning, teaching and assessment. (Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Published by arrangement with the Council of Europe 2001. *Eurooppalainen viitekehys. Kielten oppimisen, opettamisen ja arvioinnin yhteinen eurooppalainen viitekehys.* Translated into Finnish by Irma Huttunen and Hanna Jaakkola 2003.)

In recognition of prior learning, general upper secondary school A Language courses *Young people and their world* and *Study and work* compensate for *foreign language, A language* studies in core subjects.

5.1.3.2 FOREIGN LANGUAGE, B LANGUAGE, 2 CREDITS

Objectives

The student

- ◆ copes with ordinary everyday service situations;
- ◆ knows how to act in foreseeable and recurring communication situations in working life using the foreign language.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Acquiring information	knows the principles of using dictionaries and other information sources	uses dictionaries and other information sources, including electronic sources, to help him/her understand	uses dictionaries and other information sources, including electronic sources, to help him/her produce texts
Reading comprehension and written communication	writes simple texts, such as instructions, adverts or lists from familiar topics, with guidance and using helpful tools	writes texts that consist of short and simple phrases and sentences, such as instructions, adverts or lists that are related to very familiar topics, using helpful tools	writes, among other things, texts that consist of short and simple phrases and sentences, such as instructions, adverts or lists that are related to familiar topics in both private and in working life, using helpful tools
Interaction and acting in work-related language situations	can talk about himself/herself and his/her work in a few words and recognises tools, titles and assignments	asks simple questions and answers accordingly when dealing with the immediate, concrete environment and himself/herself, when the conversation partner talks slowly and clearly	asks simple questions and answers them when dealing with the immediate, concrete environment and himself/herself, when the conversation partner talks clearly and also asks for clarification if needed
			communicates orally when introducing himself/herself, for example, and in familiar everyday or working life situations
Knowledge of language and culture	recognises and distinguishes new sounds and characters	writes new characters and produces new sounds	advances the learning of the new language by comparing it with other languages he/she already masters
Language studies	recognises his/her own learning strategies.	evaluates the strengths and weaknesses of his/her own learning strategies.	strengthens his/her learning by trying out new strategies and ways of learning.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation.

Grade Good 2 equals listening and text comprehension language skill level A1.1 and speaking and writing skill level A1.1 on the language proficiency scale of the Common European Framework of Reference for language learning, teaching and assessment. (Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Published by arrangement with the Council of Europe 2001. *Eurooppalainen viitekehys. Kielten oppimisen, opettamisen ja arvioinnin*

yhteinen eurooppalainen viitekehys. Translated into Finnish by Irma Huttunen and Hanna Jaakkola 2003.)

In recognition of prior learning, general upper secondary school B1 language courses *Young people and their world* and *Study, work and society* compensate for *foreign language, B language* studies in core subjects.

5.1.4 Mathematics, 3 credits

Objectives

The student

- ♦ masters basic mathematics, percentage calculations and unit conversions and uses them in calculations relevant to the field of wood processing;
- ♦ calculates areas and volumes and also applies geometry to the extent required in wood processing;
- ♦ uses appropriate mathematical solutions to solve problems related to assignments;
- ♦ expresses dependencies of variables using mathematical expressions;
- ♦ creates and forms equations, expressions, charts and drawings needed for the field of wood processing and solves work-related mathematical assignments using equations, deduction and graphs and assesses the correctness of his/her results;
- ♦ uses a calculator, computer and other mathematical tools to help solve problems when needed.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Basic mathematical calculations, percentage calculations and unit variations as well as mathematical key concepts and presentation methods	completes routine work-related calculations and knows mathematical key concepts and presentation methods	completes occupation-ally relevant calculations proficiently and uses some mathematical concepts and presentation methods in his/her presentation	applies calculations that are needed in his/her occupation, assesses the accuracy of results and masters the mathematical concepts and presentation methods that are needed in his/her occupational field
Mathematical procedures, problem-solving and assessment of results	solves basic, work-related mathematical problems by deduction, graphic expression or calculation and also knows how to assess the scale of the results	solves occupationally relevant problems using mathematical procedures and assesses the correctness of the results	applies mathematical procedures in solving and forming occupationally relevant problems and assesses the reliability and precision of the methods
Using a calculator and computer	uses a calculator and computer to help solve basic work-related mathematical assignments	uses a calculator and computer efficiently to help solve occupation-ally relevant mathematical problems	uses a calculator and computer innovatively to help solve occupation-ally relevant mathematical problems
Processing, analysing and producing numeric data	uses statistics, charts and graphical presentations as information sources	uses statistics, charts and graphical presentations to solve occupationally relevant problems	applies statistics, charts and graphical presentations to solve occupationally relevant problems and also presents his/her mathematical results as statistics, charts and graphic presentations
	calculates mathematical averages of material presented according to instructions.	calculates essential statistical parameters.	calculates or defines statistical parameters relating to the material supplied.

Key competences for lifelong learning: 1. Learning and problem-solving, 9. Mathematics and natural sciences.

In recognition of prior learning, general upper secondary school courses *Expressions and equations* (MAB1) and *Geometry* (MAB2) or *Functions and equations* (MAA1) and either *Polynomial functions* (MAA2) or *Geometry* (MAA3) compensate for *mathematics* studies in core subjects.

5.1.5 Physics and chemistry, 2 credits

Objectives

The student

- ◆ applies the most common physical and chemical phenomena, concepts and laws relevant to the field of wood processing;
- ◆ knows how to take the laws of nature into account in his/her work and other activities and act accordingly in order to save energy and the environment;
- ◆ addresses basic environmental problems from a scientific point of view;
- ◆ applies the key laws and concepts of physics relevant to the field of wood processing;
- ◆ knows the key concepts and phenomena of mechanics, thermodynamics and electricity relevant to the field of wood processing so as to be able to use the equipment and systems needed in his/her vocation safely and economically and to work ergonomically;
- ◆ considers relevant chemical phenomena in terms of the environment and the field of wood processing in his/her work, which requires him/her to know the chemical properties of the most common elements and inorganic and organic compounds;
- ◆ stores, correctly uses and appropriately disposes of the substances needed in the field and also calculates contents and concentrations;
- ◆ is able to interpret factors affecting the health effects and safety of substances from product markings and to consider the special properties of substances so that he/she does not endanger his/her own safety or that of the environment;
- ◆ observes and measures physical and chemical phenomena relevant to the field of wood processing;
- ◆ gathers, processes and analyses the observations and measurements made.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Knowing the laws of thermodynamics, mechanics and electricity and taking them into account at work	knows the laws of physics well enough to take the relevant related phenomena into account, but needs some supervision	takes into account the laws of physics in his/her work assignments	knows how to apply the laws of physics in his/her work independently
Knowing chemical substances and compounds as well as their properties and taking them into account at work	handles, stores and correctly disposes of the chemicals he/she uses at work and takes the properties and environmental risks of different substances into account, but needs some supervision	handles, stores and correctly disposes of the chemicals he/she uses at work and takes the properties and environmental risks of different substances into account in familiar work situations	handles, stores and correctly disposes of the chemicals he/she uses at work and takes the properties and environmental risks of different substances into account in changing work situations
	interprets the most common product markings, but needs guidance at times	interprets the most common product markings	independently interprets different product markings in the field
	calculates concentrations and substance quantities with some supervision and searches for information from chemical safety data sheets according to instructions	calculates concentrations and substance quantities and searches for information from material safety data sheets	calculates concentrations and substance quantities flexibly in different work situations using the information he/she has obtained from different sources
Observation and measurement	carries out measurements using the most common methods and equipment in a supervised work situation	independently carries out measurements using the most common methods and equipment and knows how to assess the reliability of results	uses the most suitable measurement methods and equipment skilfully, takes measurements in an organised and cautious way and knows how to assess the precision and reliability of observations and measurements
	documents the measurements and observations made according to instructions and presents them as tables and graphs and calculates results if needed, but needs some supervision	knows how to analyse measurements and observations as well as to draw conclusions from the results	knows how to report and present results as well as how to assess the precision and reliability of results and conclusions
Working safely and ergonomically	works according to safety instructions but needs supervision for ergonomic working.	works ergonomically and in compliance with safety instructions.	works ergonomically and in compliance with safety instructions and takes the risk factors in the working environment into account independently.

Key competences for lifelong learning: 1. Learning and problem-solving, 4. Health, safety and ability to function, 6. Sustainable development, 9. Mathematics and natural sciences, 10. Technology and information technology.

In recognition of prior learning, general upper secondary school courses *Physics as a natural science* (FY1) and *The chemistry of man and of the living environment* (KE1) compensate for *physics and chemistry* studies in core subjects.

5.1.6 Social, business and labour-market subjects, 1 credit

Objectives

The student

- ◆ contributes to the management of common affairs at school and in the on-the-job learning place;
- ◆ assesses his/her abilities to be an active citizen and consumer
- ◆ knows how to use the services offered by society;
- ◆ draws up a plan on how to take care of his/her own finances;
- ◆ assesses the significance of entrepreneurship to the Finnish national economy;
- ◆ searches for information on workplaces in the field of wood processing as well as information on the European Union and its citizens.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Participation at school and in the on-the-job learning organisation	participates in the management of common affairs under supervision	participates in the management of common affairs as agreed and knows the social decision-making process	independently participates in the management of common affairs and knows the social decision-making process

Assessing opportunities to act	assesses his/her opportunities to function as a citizen and consumer under supervision	assesses his/her opportunities to function as a citizen and consumer	assesses his/her opportunities to function as an active citizen and as a consumer
	knows the rights, obligations and ways to influence as a student	knows the rights, privileges, obligations and key ways to influence as a student and citizen	knows the rights, privileges, obligations and key democratic ways to influence as a student and citizen
	searches for information on the basic rights and responsibilities of a consumer	knows the basic rights and responsibilities of a consumer	knows the basic rights and responsibilities of a consumer
Using the services of society	uses the services a student needs and understands the citizens' role in financing them	uses the services society offers and understands the citizens' role in financing them	uses the services society offers independently and understands the citizens' role in financing them
Taking care of personal finances	draws up a plan for his/her funds and expenses under supervision	draws up a plan for his/her funds and expenses	draws up a plan for his/her funds and expenses
	searches for information on financing options and their costs under supervision	searches for information on financing options and their costs	searches for information about financing sources and compares their costs
Assessing the key factors affecting the national economy	assesses the key impact of entrepreneurship on employment	assesses the impact of entrepreneurship and business operations on employment	assesses the impact of entrepreneurship and business operations on the national economy independently
Searching for information on vacancies in the occupational field and on the European Union	searches for information on vacancies in the occupational field locally	searches for information on vacancies in the occupational field regionally and nationally	searches for information on vacancies in the occupational field regionally, nationally and in other EU countries
	searches for information on EU citizens under supervision.	searches for information on the EU and its citizens.	searches for comparative information on the EU and its citizens.

Key competences for lifelong learning: 2. Interaction and co-operation, 5. Initiative and entrepreneurship, 11. Active citizenship and different cultures.

In recognition of prior learning, general upper secondary school courses *Politics and society* (YH1) and *Economics* (YH2) compensate for *social, business and labour-market subjects* in core subjects.

5.1.7 Physical education, 1 credit

Objectives

The student

- ◆ promotes a healthy and active lifestyle through physical exercise while understanding the benefits of physical exercise to one's ability to function and work;
- ◆ gets diversely familiar with physical exercise that benefits health, mental activity level and endurance;
- ◆ keeps up his/her ability to function through exercise;
- ◆ exercises and acts responsibly both alone and in a group;
- ◆ promotes the functioning and safety of the group through his/her actions.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Supporting and strengthening physical ability to function	makes use of the basic skills needed for physical exercise	makes diverse use of the basic skills needed for physical exercise	makes diverse use of the basic skills needed for physical exercise and sport-specific skills
	keeps up his/her physical ability to function under supervision	keeps up his/her physical ability to function	monitors, assesses and keeps up his/her physical ability to function
Keeping up and promoting physical, psychological and social well-being with the help of physical exercise	understands the significance of exercise to physical, psychological and social well-being with guidance	understands the significance of exercise to his/her physical, psychological and social well-being	understands the significance of exercise to physical, psychological and social well-being
Interaction and co-operation	takes part in physical exercise following instructions supplied and observes the principles of fair play	takes an active part in physical exercise observing the principles of fair play	takes an active part in physical exercise promoting the principles of fair play
Considering health, safety and ability to function	usually observes safety in sports.	acts safely when taking physical exercise both independently and in a group.	promotes group safety through his/her actions.

Key competences for lifelong learning: 2. Interaction and co-operation, 4. Health, safety and ability to function.

In recognition of prior learning, general upper secondary school courses *Skill and condition* (LI1) or *Individual and group training* (LI2) compensate for *physical education* studies in core subjects.

5.1.8 Health education, 1 credit

Objectives

The student

- ◆ displays the aspiration and ability to maintain and promote health through his/her actions and knowledge;
- ◆ understands the factors in his/her own lifestyle and environment that have an impact on physical, mental and social ability to function;
- ◆ knows the significance of mental health, sexual health and human relations to human well-being;
- ◆ knows the harms of smoking and intoxicants and knows how to prevent health-damaging factors;
- ◆ knows about health-promoting lifestyles and habits;
- ◆ understands the links between exercise, nutrition, rest, sleep, recreation, human relations and health and takes them into account in his/her actions;
- ◆ recognises the basic factors that burden health and working capacity in his/her vocation and knows how to develop his/her working methods and the safety and healthiness of his/her working environment in co-operation with others;
- ◆ knows how to prevent injuries, copes with the most common first aid situations, knows how to get help as well as how to act ergonomically;
- ◆ knows about the health differences of the population and the risk factors of the most common national diseases and how to prevent them;
- ◆ recognises the factors that influence his/her endurance and knows how to work to promote it;
- ◆ knows how to use student and other health care services and to engage in health-enhancing physical activity and understands their significance to maintaining his/her ability to function.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Maintaining and promoting physical, psychological and social health and well-being	takes the most common health-promoting lifestyles and habits (such as physical exercise, nutrition, rest, sleep, recreation, mental health, human relations, sexual health) into account under supervision and is willing to promote his/her own health and endurance	takes the most common health-promoting lifestyles and habits into account and participates in activities that promote them and his/her own endurance	acts in a way that promotes his/her health, well-being and endurance, prevents factors that are harmful to health and justifies his/her actions with research data and experience that link together lifestyle and health
Following the methods of operation that promote the physical, psychological and social health and safety of the operating environment	complies with the procedures in place in the community geared towards promoting health and safety but needs supervision in new situations	takes the factors that burden health and ability to function into account in his/her actions and wants to promote the health and safety of his/her actions and operating environment	considers factors that have an impact on health and safety from different points of view and promotes the well-being of the community through his/her own actions
Making use of health-enhancing physical activity and health care services	plans and engages in health-promoting exercise under supervision and knows how to search for help from health care services when necessary	engages in health-promoting exercise following his/her own programme and uses health care services when necessary	makes use of the possibilities of health-enhancing physical activity independently to help keep up his/her ability to function and knows how to use health care services accordingly
Prevention of injuries, first aid and ergonomic activity	recognises possible injury risks, knows how to get and give first aid in the most common situations requiring first aid and also follows ergonomic procedures in familiar situations	prevents injuries through his/her actions, knows how to get and give first aid and also follows ergonomic procedures	acts carefully and prevents injuries, knows how to get and give first aid and also follows ergonomic procedures and so as to spare himself/herself

Possessing the knowledge base of factors promoting the physical, psychological and social health and ability to function and factors preventing national diseases and harming health as well as adverse occupational effects	knows about the most common health hazards (such as smoking and substance abuse) and also about the most common factors that burden health and ability to function and about national diseases, but needs supervision to search for information on health promotion.	makes use of the knowledge base that promotes health and ability to function in his/her activities, knows the factors harmful to one's health as well as health hazards due to unhealthy lifestyles and is aware of possible occupational health issues.	makes diverse use of information that promotes health and ability to function in his/her activities and searches for information on possible occupational health issues independently.
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Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 3. Vocational ethics, 4. Health, safety and ability to function, 6. Sustainable development, 8. Communication and media skills, 10. Technology and information technology.

In recognition of prior learning, the general upper secondary school course *Foundations of health* (TE1) compensates for *health education* studies in core subjects.

5.1.9 Arts and culture, 1 credit

Objectives

The student

- ◆ understands the meaning of arts and culture in his/her own life and uses their various forms in a multicultural community;
- ◆ participates in art and cultural events, develops culture in the school community and maintains its aesthetic appearance;
- ◆ expresses ideas, experiences and feelings through means such as music, dance, theatre, literature or visual arts and appreciates other people's visions and ways of expression;
- ◆ complies with the principles of sustainable development in his/her choice of materials and in work.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Making use of arts and culture	participates in art and cultural events	fosters the culture of the school community by maintaining its aesthetic appearance	renews the culture of the school community by developing its aesthetic appearance
Creating a production	plans and creates a product that displays his/her thoughts, experiences and emotions under supervision, in a way that best suits him/her	plans and creates a product that displays his/her thoughts, experiences and emotions in a way that best suits him/her	plans and creates a product, production or performance that portrays and displays his/her thoughts, experiences and emotions in a way that best suits him/her
	takes energy and nature conservation into account in use of material and in his/her work according to instructions	acts so as to conserve nature and energy when using materials and working	chooses the materials for his/her work so as to conserve nature and energy
Appreciation of the expression and views of others	explains about the cultural characteristics that he/she has recognised in the expressions of others.	gives constructive feedback on the expression and views of others.	develops his/her own expression by appreciating the views of others.

Key competences for lifelong learning: 2. Interaction and co-operation, 6. Sustainable development, 7. Aesthetics.

In recognition of prior learning, general upper secondary school courses *Me, visual images and culture* (KU1), *Environment, place and space* (KU2), *Music and me* (MU1) or *A polyphonic Finland* (MU2) compensate for arts and culture studies in core subjects.

5.2 OPTIONAL MODULES

5.2.1 Optional additional modules for compulsory core subjects

The core subjects listed in Section 5.1 can be chosen as optional additional modules for core subjects. The education provider defines their objectives, core contents and assessment.

5.2.2 Environmental studies, 4 credits

Objectives

The student

- ♦ observes ways of working and acting that conform to the principles of sustainable development so as to help him/her achieve and complement vocational skills;
- ♦ acts so as to conserve energy in his/her work;
- ♦ prevents waste generation and sorts waste appropriately and also knows the life cycles of products relevant to his/her vocational skills;
- ♦ works so as to minimise environmental risks and preserve cultural heritage.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Knowing the most important global, regional and local environmental problems and their proposed solutions as well as how to act according to the principles of sustainable development and responsible activity	knows the basic principles of sustainable development in his/her work	knows the challenges of sustainable development and how he/she can try to observe the principles of sustainable development at work	knows the basics of circulation of matter and flow of energy on the Earth knows the challenges of sustainable development and suggested solutions as well as how to act according to the principles of sustainable development in his/her work
Knowledge of vocationally essential waste management and prevention of waste	knows how to prevent waste and how to sort waste under supervision in routine duties	knows how to prevent waste and sorts waste according to instructions	knows how to prevent waste when designing and acquiring products and packaging and sorts waste independently
Preservation of cultural heritage in a way that complements vocational skills	recognises the basics and significance of cultural heritage with guidance	knows how to preserve cultural heritage in his/her occupation	is active in the preservation of the cultural heritage in his/her immediate environment and promotes it in his/her occupation
Choosing eco-efficient working methods and materials as well as recognising the life span of the key products from the point of view of vocational skills	chooses tools and materials that promote eco-efficiency under supervision	chooses tools and methods that promote eco-efficiency	chooses tools and methods that promote eco-efficiency and also recognises their impact on the life cycle
Observing environmental legislation and acting according to environmental quality systems	works according to the essential environmental regulations in his/her occupation with guidance	works according to the environmental regulations in his/her occupation	works according to the environmental regulations in his/her occupation and foresees future changes
	works according to environmental quality systems in his/her occupation under supervision	works according to environmental quality systems in his/her occupation	actively participates in the drawing up and/or development of the environmental quality system at the workplace
Obtaining and using information sources essential from the point of view of acquiring vocational skills	searches for environmental information from different sources under supervision, modifying it to suit occupational needs.	sorts, compares and analyses gathered environmental information and modifies it to suit occupational needs.	sorts, compares and analyses gathered environmental information, modifies it independently and applies it in his/her work.

Key competences for lifelong learning: 1. Learning and problem-solving, 3. Vocational ethics, 6. Sustainable development, 8. Communication and media skills, 10. Technology and information technology.

In recognition of prior learning, the general upper secondary school course *Environmental ecology* (BI3) compensates for *environmental studies* in core subjects.

5.2.3 Information and communications technology, 4 credits

Objectives

The student

- ◆ uses IT tools and systems needed in the field of wood processing to gather, process, edit, save and present data;
- ◆ sets up and applies new IT peripherals, processes and programs (using the help desk if needed);
- ◆ works using efficient methods and procedures, such as touch typing and different mouse techniques;
- ◆ uses operating systems and makes use of application software, such as word processing, spreadsheet, e-mail, presentation graphics and calendar software, to produce, edit and present information needed in work assignments in the vocation;
- ◆ manages files produced by the application software used in the field of wood processing and searches for information needed in work assignments field using different occupational online search engines and applications;
- ◆ uses network communications methods and applications used in work assignments to send and share information;
- ◆ observes copyright, information security and privacy protection instructions and regulations;
- ◆ uses ergonomically correct working postures.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Acquiring and processing information	searches, saves and copies files needed for work assignments and also searches for information needed for work assignments from online services	knows how to use occupationally relevant files and online search engines appropriately and efficiently	takes technical limitations and possibilities into account in file management applies occupationally relevant online search engines case-by-case and situation-by-situation and actively uses them and also assesses the reliability and suitability of the information gathered
Information processing and editing	uses application software in his/her work assignments, such as word processing, spreadsheet, e-mail, presentation graphics and calendar software	uses application software efficiently to produce and edit work-related data	applies application software in a variety of ways to produce and edit information according to different situations and circumstances in the occupational field
Sending and sharing information	uses web communication methods in work assignments	uses different web communication methods efficiently to send and share work-related information	applies the alternatives offered by network communications to the different work-related situations and needs, taking the responsibility and safety aspects concerned into account
Observing copyrights, information security, privacy protection and ergonomics	acts according to copyright, information security, privacy protection and ergonomics instructions and regulations.	uses ergonomically recommended ways of working.	foresees and considers information security and privacy protection risks and develops his/her working environment and methods with information security, privacy protection and ergonomics objectives in mind.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 8. Communication and media skills, 9. Mathematics and natural sciences, 10. Technology and information technology.

The National Core Curriculum for General Upper Secondary Education does not include a course that would compensate for the *information and communications technology* studies in upper secondary vocational education.

5.2.4 Ethics, 4 credits

Objectives

The student

- ◆ reflects on the meaning of values, norms and views in his/her life, in interpersonal relationships and in work;
- ◆ justifies his/her choices and is able to assess their impact on human dignity, justice and sustainable development;
- ◆ shows honesty and responsibility in his/her actions, respects other people and also shows good manners in his/her work and human relationships;
- ◆ reflects on ethical questions and problems that relate to his/her own life, relationships, society, environment and working life;
- ◆ knows how to solve value and norm conflicts related to working life within his/her own field in an ethically acceptable way both independently and in co-operation with others;
- ◆ acts ethically in different conflicting and crisis situations;
- ◆ is capable of participating in development of the value base and ethical principles in his/her field;
- ◆ gathers information on the value base of professional ethics in his/her own and other fields and understands and uses it as a vocational resource at work;
- ◆ observes and recognises ethical problems in his/her occupational field, processes them and presents justified views on them.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Reflecting on ethical questions	discusses values related to his/her own life and relationships with guidance and talks about ethical and philosophical questions	discusses ethical and philosophical questions as well as questions and values related to his/her own life and human relations	reflects on the significance of values, norms and different world views in his/her own life, in relationships between other people and in working life and society as a whole
Ethical actions	observes good manners and responsibilities at work and in problem situations, but needs support and supervision in new situations	acts responsibly and ethically at work and in working life conflict and crisis situations	acts independently, responsibly and ethically in work and working life conflict and crisis situations and knows how to justify his/her actions
Acquiring information and using the ethics knowledge base at work	searches for information on ethical questions in his/her field under supervision and uses the knowledge base in familiar situations	searches for information on the knowledge base of professional ethics within his/her own and other fields and uses it in his/her own life and work	actively acquires information on the knowledge base of professional ethics within his/her own and other fields and uses it as a vocational resource
			justifies his/her choices and wants to participate in development of the ethical principles and value basis within his/her own field
Processing value and norm conflicts at work	knows how to detect ethical problem situations in his/her occupation and solves work-related value and norm conflicts ethically together with members of the community.	recognises ethical problem situations in his/her occupation and searches for solutions to these problems together with others and also assesses the impact of the solution from the point of view of the key parties.	independently recognises the ethical problem situations in working life and in his/her own field, knows how to solve them ethically and assess their impact on the basis of human dignity, justice and sustainable development.

Key competences for lifelong learning: 1. Learning and problem-solving, 3. Vocational ethics, 6. Sustainable development, 8. Communication and media skills, 10. Technology and information technology.

In recognition of prior learning, general upper secondary school courses *Introduction to philosophical thinking* (FI1) and one of units a) *Nature and significance of religion* (UE1), *The Church, culture and society* (UE2) and *Human life and ethics* (UE3), or b) *The Orthodox world* (UO1), *Dogmatics and ethics* (UO2), and *Biblical studies* (UO3) or c) *A good life* (ET1), *The world view* (ET2) and *Individual and community* (ET3) compensate for *ethics* studies in core subjects.

5.2.5 Cultural knowledge, 4 credits

Objectives

The student

- ◆ gets along with people representing different cultures;
- ◆ knows how to greet and receive visitors and talk to them;
- ◆ is able to observe the limits of appropriateness in his/her activities, the different roles of men and women, instructions on dressing and behaviour as well as the unwritten rules and procedures;
- ◆ recognises cultural differences in workplace behaviour and hierarchy and work-related public relations and behaves accordingly in normal work situations, especially in customer service;
- ◆ describes his/her country's common cultural features to representatives of other cultures, such as essential history, sights, arts, sporting achievements and entertainment as well as skills, working methods and innovations of his/her field;
- ◆ ponders the interpretations of historical events in different countries and relates the meaningful events and eras of his/her native region and home country to the history of the neighbouring countries and the world;
- ◆ compares the key cultural flows and icons in his/her country and Europe;
- ◆ recognises the special features of his/her own field in other countries.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Taking into account the most common cultural features	recognises general features of other cultures	recognises cultural differences in other people's activities	takes into account the cultural background of the people he/she meets
Behaviour and dress code in different situations and meeting different people	recognises cultural differences in people's day-to-day activities in Finland and elsewhere	works together with other people despite cultural differences	also relates to foreign co-workers, clients and visitors without cultural conflicts
Taking into account the special features of one's own field	recognises the features of services and products in his/her field in different countries	compares the features of his/her culture with those in other cultures	takes the features of other cultures into account in his/her actions
Behaving according to organisational environment and duties	recognises the key factors in his/her work	tells foreign visitors essential things about Finland and his/her work	develops his/her own organisation based on the experiences he/she received from others
Taking essential cultural history and present situation of immigrants and other minority cultures into account	searches for information on the backgrounds of immigrants and other minority cultures	takes others into account while working despite their ethnic background, language, disability or age	takes others into account while planning his/her work and working despite their ethnic background, language, disability or age
Making use of language skills and cultural knowledge	uses the language skills acquired in familiar situations.	uses the language skills acquired in international interaction situations.	works in international contexts using his/her language skills.

Key competences for lifelong learning: 2. Interaction and co-operation, 8. Communication and media skills, 11. Active citizenship and different cultures.

The National Core Curriculum for General Upper Secondary Education does not include a course that would compensate for the *cultural knowledge* studies in upper secondary vocational education.

5.2.6 Psychology, 4 credits

Objectives

The student

- ♦ observes and diversely understands human beings and the factors affecting their activities;
- ♦ recognises, acknowledges and processes psychological phenomena with the help of psychological knowledge and concepts;
- ♦ applies psychological knowledge to work assignments in his/her occupational field;
- ♦ applies the psychology of learning to his/her own studies;
- ♦ knows how to observe and think critically;
- ♦ knows how to observe the impact of feelings in different interaction and group situations;
- ♦ explains his/her behaviour and that of others using psychological and socio-psychological knowledge;
- ♦ knows how to act in a way that promotes his/her psychological well-being and coping with duties in the occupational field;
- ♦ performs well in customer service and teamwork situations in the field.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Knowledge of psychological concepts and explaining and understanding human behaviour	knows the common concepts of psychology and understands their connection to human behaviour	uses psychological knowledge to explain human behaviour in common everyday and working life situations	is able to apply his/her knowledge of cognitive psychology and personality psychology to common working life situations and is able to use them to explain his/her behaviour and the behaviour of others

Knowledge of the development of human psyche	knows the psychological, biological and social factors that form the basis for individual psychological development	understands the interrelations of the factors forming the foundations for psychological development in different phases of life and at different ages	understands the possible problems of psychological development and understands that the development can be influenced
Learning and self-awareness	knows key factors that affect the learning situation	assesses his/her own learning under supervision, relying on psychological knowledge	understands the learning process through psychological knowledge and applies it in his/her studies
Understanding the effect of motivation, feelings and commitment on his/her work performance and that of others	takes the significance of motivation, feelings and commitment into account in his/her own performance	works with different people in his/her working and learning community and understands the significance of motivation and commitment to performance	applies basic psychological knowledge of human thinking, observation, personality features, feelings and other mechanisms regulating behaviour
		understands the impacts of committing to work and identifying oneself with the group on work performances and satisfaction at work	uses psychological knowledge to improve his/her self-knowledge and self-image acknowledges his/her own feelings and those of others and also controls his/her feelings and attitudes accordingly in working life
Maintaining psychological capacity to work and function	promotes his/her psychological capacity to work and function with guidance	knows how to maintain psychological well-being and contributes to the well-being of the working community	acknowledges the psychological factors that affect his/her own endurance and stress management and also knows how to influence them in a way that promotes his/her endurance
		understands the complexity of defining mental health	knows how to get help in his/her own mental health questions or those affecting his/her family and friends
Acting in human relationship and interactive situations at the workplace	applies the most essential psychological knowledge when acting in common customer service and interactive situations in the workplace	knows the significance of social interaction and culture in psychological human behaviour and recognises different leadership styles and their influence on the workplace culture	works co-operatively in different roles and understands the meaning of leadership
Knowledge of the social aspect of socio-psychology	knows the key concepts of social psychology.	understands the effect of the roles, norms and group dynamics in different social groups.	understands the behaviour of people from different social and cultural backgrounds through social psychology.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 3. Health, safety and ability to function.

In recognition of prior learning, the general upper secondary school course *Mental activity, learning and interaction* (PS1) compensates for one credit of *psychology* studies in core subjects. If the student has also completed *Human psychological development* (PS2), *Motivation, emotions and higher-level cognitive activity* (PS4) and *Personality and mental health* (PS5), they compensate for *psychology* studies in core subjects.

5.2.7 Entrepreneurship, 4 credits

Objectives

The student

- ◆ develops a business idea or commodifies his/her own know-how into business operations;
- ◆ assesses the development needs based on changes in the operating environment, customers' needs, competition, the working environment and his/her own expertise;
- ◆ follows the principles of profitable business operations in his/her business operations and also takes into account the cost structure of the operations and the impact of his/her own work input on profitability.

Assessment

The table comprises the targets of assessment and the assessment criteria for three levels of competence. In upper secondary vocational education and training, the targets of assessment also constitute the core contents of the qualification module.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA		
	Satisfactory 1	Good 2	Excellent 3
	The student		
Developing a business idea or commodifying one's own skills	develops a business idea as a member of a group or commodifies his/her own expertise with guidance	develops a business idea as a member of a group or commodifies his/her own expertise	develops a business idea independently or commodifies his/her own expertise, making use of the expertise in the working community
	defines procedures, key services or products related to his/her business operations with guidance	finds out about operational or business ideas related to his/her business operations and key services and products, working in a group	finds out about the operational or business ideas of different companies or organisations and key services and products related to business activities
	acquires information on product or service development needs under supervision, based on changes in the operating environment, customer needs, competition or company expertise, for example	acquires information on product or service development needs based on changes in the operating environment, customer needs, competition or company expertise, for example, working in a group	independently acquires information on product or service development needs based on changes in the operating environment, customer needs, competition or company expertise, for example
	surveys different alternative solutions under supervision	surveys different alternative solutions	surveys different alternative solutions independently
	compares different options under supervision	compares options and sets quality and cost objectives for his/her work that take sustainable development into account	compares options and sets quality and cost objectives for his/her work that take sustainable development into account
		presents the alternatives to an expert, the foreman or clients, for example	presents the alternatives he/she considers the best to an expert, the foreman or clients, for example, and negotiates them
Planning business activities	chooses the option to be carried out under supervision and draws up an operational plan for it that contains the key information on implementation	chooses the option that is to be carried out in co-operation and draws up an operational plan for it that contains the key information on implementation	chooses or agrees on the viable option and draws up an operational plan for it that contains the key information on implementation
	discusses the plan and makes the agreed changes	presents the plan and changes it based on feedback received	presents the plan and develops it based on feedback received

Executing development projects or business activities	executes his/her operational plan under supervision	executes his/her operational plan	independently executes his/her operational plan
	uses usual working methods, tools and materials required for the operational plan with guidance, making use of information technology	uses usual working methods, tools and materials required for the operational plan, making use of information technology	uses working methods, tools and materials required for the operational plan in interaction with his/her working community, making use of information technology
	works with experts at different stages of the activities with guidance	works with experts at different stages of the activities	uses expert networks at different stages of the activities
Assessment of the execution of one's own activities, projects or business operations	works in the enterprise observing safety instructions and agreed principles of sustainable development	works in the enterprise observing safety instructions and agreed principles of sustainable development	works in the enterprise observing safety instructions and especially the principles of quality and sustainable development
	assesses the progress of his/her own activities and business operations with guidance	assesses the progress of his/her own activities and business operations	assesses the progress of his/her own activities and business operations against the objectives set
Presenting a development project or business operations	makes the agreed changes	agrees on possible changes	makes justified suggestions for change or improvement and agrees on their execution
	presents the execution phase and its results with guidance	presents the execution phase and its results	presents his/her whole development project or business operations and its results in a way that fits the nature of the project
Effectiveness and overall profitability of activities	works or runs his/her business operations effectively with guidance	works or runs his/her business operations effectively	works, acts in a working community or runs his/her business operations effectively
	calculates the share of the costs accumulated by his/her own work input.	calculates the costs of the operations and the share accumulated by his/her own work input.	works cost-efficiently while considering time and other available resources and also calculates the costs of operations and the share accumulated by his/her own work input.

Key competences for lifelong learning: 1. Learning and problem-solving, 2. Interaction and co-operation, 5. Initiative and entrepreneurship, 6. Sustainable development, 10. Technology and information technology.

The National Core Curriculum for General Upper Secondary Education does not include a course that would compensate for *entrepreneurship* studies in upper secondary vocational education.



6

FREE CHOICE MODULES IN CURRICULUM-BASED VOCATIONAL EDUCATION AND TRAINING, 10 CREDITS

A student is to include 10 credits of free-choice modules into his/her studies, the objectives and assessment of which are to be included in the student's individual study plan.

Free-choice modules can be vocational studies in one's own or other vocational fields, or core subjects, general upper secondary studies or studies preparing for the matriculation examination or further studies, work experience or guided interests, which support the general and vocational objectives of education and training and the growth of the student's personality.

7

STUDENT ASSESSMENT IN CURRICULUM-BASED UPPER SECONDARY VOCATIONAL EDUCATION AND TRAINING

7.1 TASKS AND OBJECTIVES OF ASSESSMENT

In addition to the provisions of the Act amending the Vocational Education and Training Act (601/2005, section 25), assessment is used to guide, motivate and encourage a student to reach the objectives and support him/her to develop a positive self-image and grow as a professional.

In addition to guiding and supporting, student assessment is to produce information on the student's competence for the student himself/herself, the teacher and the employer as well as for the purpose of applying for further studies.

7.2 INFORMING ABOUT ASSESSMENT

Implementation of student assessment forms a process where the education provider must include a plan on how to assess the various qualification modules in its curriculum. It includes a plan on implementation and assessment of vocational skills demonstrations approved by the local board for vocational skills demonstrations (Act 601/2005, section 25 a).

Before studies begin, the students and all those taking part in the assessment process must be informed of the assessment principles and how they are to be applied (Decree 603/2005, section 3). The matters to be informed are at least the tasks and objectives of assessment, validation and recognition of prior learning, assessment of learning and competence including on-the-job learning and vocational skills demonstrations, targets and criteria of assessment, deciding on grades, reassessment process and improving the grades, rectification of assessment and receiving a qualification certificate.

7.3

VALIDATION AND RECOGNITION OF A STUDENT'S PRIOR LEARNING

The education provider is to inform the student of the kinds of material and documents that must be presented for validation and recognition of prior learning and when the student must apply for validation and recognition of prior learning (Decree 603/2005, section 3).

Validation of prior learning

In addition to the provisions of the Government Decree on amending the Vocational Education and Training Decree (603/ 2005, section 10 (1)), a student's competence must be assessed as early as at the beginning of studies. The student's competence and its level must be investigated in order to identify his/her strengths and recognise prior learning. Validation of prior learning forms the basis when setting his/her personal objectives, but also for determining the amount of guidance and support needed.

Validation of prior learning calls for an assessment discussion in which the student and teacher or teachers participate. To promote validation of prior learning, different facilitating assessment methods must be developed.

Recognition of prior learning

In addition to the provisions of the Act amending the Vocational Education and Training Act and the Government Decree amending the Vocational Education and Training Decree (Act 601/2005, section 30, Decree 603/ 2005, section 12 a), recognition of prior learning is to prevent overlapping studies and shorten the study time.

If the validation process shows that the objectives set for the module in question, or part thereof, have been reached, such prior learning is recognised. Recognition of prior learning is recorded in the student's individual study plan. More detailed information on individual study plans can be found in Section 8.1.

Recognition of prior learning is part of student assessment and it is subject to the same statutes as other forms of assessment (Act 601/2005, sections 25, 25 a and 25 c). Studies in the qualification to be completed can be substituted or accredited by recognition of prior learning. The modules substituted by the recognition of prior learning are marked on the qualification certificate (Chapter 7.9). The teacher or teachers in charge of the studies in question decide on recognition of prior learning. No general time limit can be set before which the acquired competence could

not be recognised, but the validity of competence can be checked. If necessary, the student must demonstrate the correspondence of his/her competence with the skills requirements and objectives of the qualification concerned.

The studies assessed on another qualification certificate or general upper secondary school certificate compensate for corresponding core subjects as well as free-choice modules and the optional modules included in vocational modules, a total of 40 credits at most. Recognition of individual general upper secondary school courses as part of core subjects is specified in Chapter 5.

If there is no grade for the competence that covers a complete module and has been achieved through earlier studies or in another way, such competence must be demonstrated to receive a grade for the qualification certificate. Vocational skills demonstrations are used to show evidence of competence in vocational qualification modules. In terms of further and specialist vocational qualifications, the 'pass' grade awarded by the Qualification Committee is marked on the qualification certificate for the recognised module.

The grades of qualification modules which are substituted through recognition can be raised during training. After completion of training, such improvement of grades is done as a private student.

Conversion of grades

The provisions of the Decree amending the Vocational Education and Training Decree (488/2008, section 10) apply to the grade scale. A student is assessed based on the assessment practices prevailing at the institution, where he/she currently pursues his/her studies. If the grade scales differ from one institution to another, the institution performing the recognition must convert the grades and determine their correspondence in the student's favour. The grades are to be converted as follows:

GRADE SCALE		
1–3	1–5	5–10
excellent 3	excellent 5	excellent 10
		very good 9
good 2	good 4	good 8
	good 3	satisfactory 7
satisfactory 1	satisfactory 2	fair 6
	satisfactory 1	pass 5

Student assessment is criteria-based, which is to say that a student's learning and competence is always compared with either the skills requirements of vocational qualification modules or the objectives of core subjects as well as the assessment criteria based on them.

A student has the right to learn before the competence described in the skills requirements and the learning objectives are assessed to obtain a grade on the qualification certificate.

Assessment of learning

The objective of assessment of learning is that the student is aware of what he/she knows and what there is still to learn. When performing assessment of learning, the teacher and workplace instructor must use methods that motivate and activate the student. They are used to support and motivate the student to reach the skills requirements or objectives as well as to develop his/her self-assessment skills. The student assesses his/her learning based on the skills requirements, objectives and assessment criteria of the module.

Learning is assessed during the whole training period or duration of studies by giving the student oral or written feedback on the progress of learning. Numerical assessment is not needed when assessing learning. Feedback is used to support and guide the student to achieve the best possible performance by bringing out the student's strengths. Assessment of learning is used as a basis to make the necessary changes in the student's tuition and learning support. The changes are recorded in the individual study plan.

Assessment of competence

The student receives the grades shown on the qualification certificate based on assessment of competence using the assessment scale prescribed in the effective Vocational Education and Training Decree.

When competence is being assessed, the assessment methods are chosen so that they measure reaching the skills requirements and objectives set, suit the study methods used and support the student's learning process. The student must have an opportunity to show his/her competence in various ways and also assess his/her competence himself/herself.

Skills in vocational modules are assessed using vocational skills demonstrations and other ways of assessing competence. A vocational skills demonstration is used to assess the competence determined in vocational skills requirements as widely as possible but at least what is specified in the Qualification Requirements. If necessary, other forms of competence assessment supplement the competence necessitated by skills requirements. The education provider decides on the other methods to assess competence in its assessment implementation plans.

Vocational skills demonstrations

In addition to the provisions of the Act amending the Vocational Education and Training Act (601/2005, sections 25, 25 a and 25 b) and the Government Decree amending the Vocational Education and Training Decree (603/2005, section 5) on vocational skills demonstrations, the local board for vocational skills demonstrations, assessment and assessors, the quality of skills demonstration venues and occupational safety, the skills demonstrations are planned, implemented and assessed in co-operation between the institution and the workplace based on the qualification requirements.

In a vocational skills demonstration, the skills requirements of vocational qualification modules are demonstrated as stated in Chapter 4. A skills demonstration is given in all the vocational qualification modules, optional modules included, if they are vocational modules. Skills demonstrations are not arranged in core subjects and free-choice modules. However, the education provider can decide that a skills demonstration is arranged in free-choice modules if they are vocational modules.

Vocational skills demonstrations are graded for all the vocational modules. A skills demonstration can be given for one or more modules at a time. If competence in more than one module is assessed in one and the same skills demonstration, a separate grade must be given for each module as per the targets of assessment set. If a skills demonstration for a qualification module is given in more than one parts, a grade is given for each part as per the targets of assessment, but an overall grade is not formed until all parts have been completed.

Vocational skills demonstrations are placed along with the duration of the studies. A student must have an opportunity to acquire the competence to be assessed in a skills demonstration before the demonstration is arranged and improve his/her performance based on the feedback received on the demonstrations. The principles of co-ordinating on-the-job learning and skills demonstrations are listed in the skills demonstration implementation and assessment plan, which the local board for vocational skills demonstrations approves.

A student is also allowed to give skills demonstrations abroad, which must be agreed on in advance.

The education provider ensures that students receive sufficient support and guidance to give skills demonstrations. Support and guidance are given before and during skills demonstrations, as well as afterwards in the form of formative feedback.

Targets and criteria of assessment

The targets of assessment (what is assessed) and assessment criteria (level of competence) are stated in the Qualification Requirements module by module for levels Satisfactory 1, Good 2 and Excellent 3. Assessment focuses on:

- ◆ mastering work processes;
- ◆ mastering working methods, equipment and material;
- ◆ fundamental knowledge; and
- ◆ key competences for lifelong learning.

Key competences for lifelong learning are learning and problem-solving, interaction and co-operation, vocational ethics, health, safety and ability to function, initiative and entrepreneurship, sustainable development, aesthetics, communication and media skills, mathematics and natural sciences, technology and information technology, active citizenship and different cultures. In the targets of assessment for key competences for lifelong learning, the following four key competences are assessed: learning and problem-solving, interaction and co-operation, vocational ethics together with health, safety and ability to function. Other key competences are assessed in connection with work processes, working methods, equipment and material or fundamental knowledge.

The education provider draws up the assessment criteria based on the general assessment criteria given in Section 9.3 for the optional modules for which they have not been defined in the Qualification Requirements.

7.5 DECIDING ON THE GRADE

In addition to the provisions of the Act amending the Vocational Education and Training Act (601/2005, section 25 b) and the Government Decrees amending the Vocational Education and Training Decree (Decree 603/2005, section 11, Decree 488/2008, sections 10 and 13), grades must be given for all modules in compliance with the Qualification Requirements, including the other optional modules

and modules providing advanced vocational competence included in the vocational studies (90 credits).

The grade to be awarded for a module is decided based on assessment of competence. If several teachers have been involved in assessing the competence, a decision is taken during an assessment discussion. A grade for a vocational skills demonstration is mainly decided by teachers and workplace representatives together according to the decision taken by the local board for vocational skills demonstrations. The grounds for assessment must always be recorded.

7.6 STORING ASSESSMENT MATERIAL

In addition to the provisions of the Government Decree amending the Vocational Education and Training Decree (603/2005, section 11 a) on storing assessment material, the grade given on a vocational skills demonstration is stored as per the targets of assessment. If the skills demonstration taken by a student only covers part of the module, the material on which the assessment of each part is based must be stored so that it is possible to decide on a skills demonstration grade for the whole module.

7.7 REASSESSMENT AND IMPROVING THE GRADE

The provisions of the Government Decree amending the Vocational Education and Training Decree (603/2005, section 12) apply to reassessment and improving of grades.

7.8 RECTIFICATION OF ASSESSMENT

The provisions of the Act amending the Vocational Education and Training Act (601/2005, section 25 c) apply to rectification of assessment.

7.9 CERTIFICATES

Qualification certificates

A qualification certificate is an official document, the contents of which must conform to the Qualification Requirements. The provisions of the Government Decree amending the Vocational Education and Training Decree (488/2008, section 13) apply to awarding a qualification certificate. A qualification certificate must be awarded on the same basis in apprenticeship training arranged as upper secondary vocational education and training.

A qualification certificate is a document that comprises an upper secondary vocational certificate and a skills demonstration certificate. An upper secondary vocational certificate contains grades for all the modules the qualification comprises. In the upper secondary vocational certificate, the Driver Certificate of Professional Competence (Driver CPC) certifying the initial qualification in the transport sector is marked as: *See skills demonstration certificate*. Only free-choice modules can be left without a grade if the student so chooses. For the upper secondary vocational certificate, the module grades are based on assessment of the skills demonstrations and other competence. Skills demonstrations must be passed in order for a grade to be given to the module on the upper secondary vocational certificate.

Separate grades are given for the core subjects determined by the Government. Competence provided by core subjects included in vocational modules is assessed as part of the skills requirements for the vocational modules.

The final project is assessed as part of the modules in which it is included. Its scope and name are marked on the upper secondary vocational certificate, but no separate grade is given. In terms of on-the-job learning, the upper secondary vocational certificate indicates its extent but no separate grade is given, because the competence acquired during on-the-job learning is assessed through skills demonstrations.

Studies compensating for a module or competence acquired in some other way are marked on the student's upper secondary vocational certificate with their grades. If the grade scales differ, the conversion table given in Section 7.3 is used. For a module recognised from a further or specialist vocational qualification, the grade to be marked on the certificate is 'pass' and a footnote is used to show that it was completed as a competence-based qualification, for which the Qualification Committee concerned has awarded a certificate.

Skills demonstrations covering a whole module given previously are marked with their grades and short descriptions on the skills demonstration certificate. The

certificate is also to provide the name of the institution that performed the assessment.

If recognition of prior learning is done for studies in a qualification that has not included skills demonstrations, the skills demonstration certificate is to bear the name and scope of the module together with a footnote to state that prior learning has been recognised from a qualification that has not included skills demonstrations. When prior learning is recognised from further or specialist vocational qualifications, the skills demonstration certificate is to bear the name and scope of the qualification together with a footnote to state that prior learning has been recognised from further or specialist vocational qualification X, for which the Qualification Committee in question has awarded a certificate.

When vocational modules (90 credits) include core subjects or general upper secondary studies in compliance with Government Decision 216/2001, the skills demonstration certificate is to bear the following footnote: 'The student has included x credits of core subjects, which are not assessed with skills demonstrations.'

The qualification certificate must indicate that it consists of the upper secondary vocational certificate and skills demonstration certificate. The qualification certificate must also bear the name of the education provider or the institution awarding the certificate or both. An upper secondary vocational certificate is signed by the education provider and a skills demonstration certificate by the chairman of the local board for vocational skills demonstrations (Decree 488/2008).

An upper secondary vocational certificate is to provide the following information:

- ◆ student's name and personal identity code;
- ◆ name of the qualification and its scope 120 credits/3 years;
- ◆ name of the study programme;
- ◆ qualification title according to the Ministry of Education Decree;
- ◆ completed modules grouped into vocational modules (90 credits), core subjects (20 credits) and free-choice modules (10 credits), their scopes and grades;
- ◆ name and scope of the final project;
- ◆ scope of on-the-job learning;
- ◆ date and signatures;
- ◆ stamp of the education provider or school.

A **skills demonstration certificate** is to provide the following information:

- ◆ student's name and personal identity code;
- ◆ name of the qualification and its scope 120 credits/3 years;
- ◆ name of the study programme;
- ◆ qualification title;
- ◆ skills demonstrations completed by module (name and scope of module, short description of skills demonstration completed, name of skills demonstration venue, grade for skills demonstration or, for special needs students, a short description of student's vocational competence and skills shown in the skills demonstration);
- ◆ date and signature (chairman of the local board for vocational skills demonstrations);
- ◆ stamp of the education provider or school.

A **qualification certificate** is also to provide the following information:

- ◆ contact information for the education provider or institution awarding the certificate;
- ◆ name of the education provider or institution if not already mentioned;
- ◆ authorisation to provide education granted by the Ministry of Education;
- ◆ legislation on which the education and training is based;
- ◆ indication of the fact that the education and training has been arranged in accordance with the Qualification Requirements adopted by the Finnish National Board of Education (date and register number of Regulation);
- ◆ indication of the fact that the qualification is approved by the Ministry of Education (date and number of the Government Decree in force at the beginning of the period of education and training);
- ◆ prerequisites for admission and national level of qualification;
- ◆ eligibility for further studies that the qualification provides;
- ◆ definition of the scope of the qualification, academic year and credit;
- ◆ grade scale;
- ◆ special provisions related to practising the occupation.

Certificate for completed education and training

The provisions of the Government Decree amending the Vocational Education and Training Decree (488/2008, section 13) apply to the contents of a certificate for completed education and training.

Certificate of completed studies, qualification modules or skills demonstrations

In addition to the provisions of the Government Decree amending the Vocational Education and Training Decree (488/2008, section 13) on awarding certificates, a student is awarded a certificate of completed modules and studies, skills demonstrations and prior learning. In addition to the grades achieved, the certificate must also list participation in modules for which the student has not yet been given a grade as well as information on what the student must complete in order to receive a qualification certificate.

When a student enters working life after completing one or more modules, the certificate is to include a supplement describing the vocational competence achieved by completing the module(s) in question.

Certificate of resignation

The provisions of the Government Decree amending the Vocational Education and Training Decree (488/2008, section 13) apply to the contents of a certificate of resignation.

Certificate supplement for international use

The provisions of the Government Decree amending the Vocational Education and Training Decree (488/2008, section 13) apply to issuing a certificate supplement for international use.

The Driver Certificate of Professional Competence (Driver CPC) certifying the initial qualification in the transport sector

The instructions given in Ministry of Education letter No. 146/530/2007 of 12 June 2007 apply to the Driver CPC certifying the initial qualification in the transport sector.

7.10 ASSESSMENT IN SPECIAL EDUCATION

The same principles are to be applied when assessing special needs students as for other students. If a student does not reach the objectives set for the Satisfactory 1 level in the Qualification Requirements in a specific module, the training can be adjusted. When the skills requirements or objectives of a qualification have been adjusted based on the Vocational Education and Training Act (630/1998, sections 20 and 21(2) and (3)), this must be indicated on the certificate. A student must receive a qualification certificate even if qualification objectives have been adjusted.

A footnote must be added to the upper secondary vocational certificate as well as the skills demonstration certificate of adjusted skills requirements or objectives. Assessment must be implemented in proportion to the adjusted skills requirements or objectives, which means that assessment criteria must be drawn up for them. The education provider draws up adjusted skills requirements or objectives for the module based on the Government Decree amending the Vocational Education and Training Decree (811/1998, section 8). The grade scale must be the same as the one in general use. According to section 10 of the Government Decree amending the Vocational Education and Training Decree (603/2005), when education and training is arranged as special education, skills demonstrations can also be assessed verbally. A student must know that education and training completed in accordance with adjusted skills requirements or objectives may affect application for further studies and success in them.

If a student's competence level falls considerably short of the skills requirements and objectives set, a certificate of completed studies must be awarded instead of a qualification certificate. An appendix must be issued stating what the student knows best.

7.11 ASSESSING IMMIGRANT STUDENTS AND THOSE REPRESENTING DIFFERENT LANGUAGES AND CULTURES

The competence of immigrant students and those representing different languages and cultures is to be assessed in the same way as that of other students. Competence is to be assessed by using methods which allow competence to be assessed despite possible deficiencies in language skills.

Before taking a vocational skills demonstration, a student whose mother tongue is other than the vocational institution's language of instruction must have such language skills that he/she understands the instructions and orders related to the work to be completed as the skills demonstration. The student's need for support must be identified and support activities must be planned accordingly in

co-operation between the vocational institution, workplace representatives and the student. If necessary, those arranging and assessing a skills demonstration must receive instruction on how cultural factors affect communication between individuals. People arranging and assessing the skills demonstration must also be instructed to speak clearly when giving instructions.

Assessing mother tongue

If Finnish or Swedish is not the student's mother tongue, his/her Finnish or Swedish skills must be assessed according to the objectives of Finnish or Swedish as a second language, also in cases where he/she has not received separate instruction in Finnish or Swedish as a second language. If both the teacher and the student consider the student's Finnish or Swedish skills to be equivalent to the level required for Finnish or Swedish, mother tongue, competence must be assessed against the objectives of Finnish or Swedish, mother tongue. An upper secondary vocational certificate must indicate the objectives on which the assessment of competence is based, however, on the scale from 1 to 3. The student's individual study plan, including assessment, can include both mother tongue studies above (see Section 8.4).

The Finnish or Swedish skills of a student who uses sign language are assessed based on the objectives set for Finnish or Swedish for sign language users.

Assessing the second national language

If a student has not studied Swedish or Finnish as a second national language, the upper secondary vocational certificate must indicate what he/she has studied instead. Teaching arrangements that affect assessment are determined in Section 8.4.

OTHER PROVISIONS IN CURRICULUM-BASED VOCATIONAL EDUCATION AND TRAINING

8.1 GUIDANCE AND COUNSELLING AND INDIVIDUAL STUDY PLAN

Objectives for guidance and counselling

The objective of guidance and counselling is for the student to receive enough information on his/her education and training before it starts and during it. The student is to know the modules included in the qualification, the studies and the options available. A further objective is for the student to know how to act in the school community, to develop his/her learning and interaction skills and self-knowledge as well as to assess his/her own activities and outputs. He/she is able to plan his/her studies, draw up an individual study plan together with the teacher and assume responsibility for the studies. He/she knows how to follow the accumulation of credits and search for help to plan his/her studies.

The student is able to make choices and decisions concerning his/her studies and life career. He/she recognises possible problems related to his/her studies and life circumstances and knows where to find support. He/she knows how to use the student social services offered by society as well as other guidance, counselling and information services. Achievement of the objectives is supported by the education provider's obligation to inform the parents or other guardians of a minor student about vocational education and training and the progress of the student's studies.

Student's right to guidance and counselling

The qualification comprises a minimum of 1.5 credits of guidance counselling (Government Decision 213/1999). Guidance and counselling activities are to support the student comprehensively in the different phases of the studies. Every student has the right to receive personal and other guidance and counselling. The student has the right to receive the support services he/she may need in studies or changing life circumstances.

Arranging guidance and counselling

The objective of guidance and counselling is to promote educational, ethnic and gender equality. Objectives also include increasing students' well-being, preventing drop-outs, promoting employment and supporting application for further studies. Education providers must pay special attention to guidance and counselling for those students who have studying or learning difficulties (such as dyslexia), frequent absenteeism or life management difficulties.

As part of its curriculum, the education provider is to draw up a guidance and counselling plan, which determines the tasks and division of work for those involved in the guidance and counselling process. The plan serves as a development tool for the whole vocational institution. It states how and what kind of support a student receives from those involved in guidance and counselling. The plan presents how co-operation with different education providers has been arranged to allow the student to choose modules and studies from different study programmes and qualifications and to plan completion of more than one qualification. It also determines other co-operation with outside specialists and the student's parents or other guardians. The guidance and counselling plan includes a student welfare plan.

All the teachers at the institution and other people responsible for guidance and counselling take part in the guidance and counselling process. The guidance counsellor has the main responsibility for arranging guidance and counselling as well as for planning and implementing the counselling process as a whole. A teacher's task is to guide and motivate the student to complete the qualification and plan the studies. The teacher's task is also to help the student find his/her strengths and develop his/her learning skills.

Guidance and counselling is arranged as educational, personal and group counselling and other guidance. A student receives counselling to support his/her studies and to make choices so that he/she is able to plan the contents and structure of his/her studies in accordance with his/her resources. Guidance and counselling promotes students' community spirit throughout the studies. The students' studies and well-being are monitored and supported in co-operation with their parents or guardians.

The education provider is to provide comprehensive school pupils, their parents or guardians, guidance counsellors and teachers with information on vocational education and training and how to apply. The education provider is to direct information and counselling measures especially to those young people who have not managed to secure a training place after completing basic education and to their parents or guardians.

The education provider is to develop its career and recruitment services in co-operation with business life and employment services as well as to promote and support students' employment and access to further studies.

Individual study plan

An individual study plan supports a student's career planning and develops his/her skills in self-assessment. It is based on the student planning his/her own studies, individual choices, progressing in studies and assessing learning. A student receives help drawing up an individual study plan and monitoring its implementation. It is a plan the student is committed and motivated to implement throughout the period of education and training.

An individual study plan is drawn up through negotiation by the student, teacher or teachers and guidance counsellor when needed. The plan determines the learning objectives, completing the studies, methods used and timing together with assessment of the studies. When drawing up the plan, different learning styles are considered. Possible factors that prevent learning are recognised and the student's self-direction and vocational growth are supported.

Implementation of an individual study plan and the progress of studies are monitored and, if necessary, the student is given remedial teaching. The student and teachers assess the possible barriers to implementing the individual study plan. The student is guided to make decisions concerning his/her learning as well as to redefine and change the plan as studies advance if necessary.

An individual study plan comprises the student's individual choices, advancing in studies, assessment of learning, validation and recognition of prior learning, on-the-job learning places and times together with skills demonstrations.

8.2 ON-THE-JOB LEARNING AND OCCUPATIONAL SAFETY

In addition to the provisions of the Vocational Education and Training Decree (Decree 811/1998, sections 3 and 5, as amended by Government Decree 603/2005), the following is to be considered in on-the-job learning:

On-the-job learning is part of vocational education and training. It is a method of arranging vocational training in which qualification objectives are learnt at a workplace. On-the-job learning is objective-oriented, supervised and assessed training that takes place in a genuine working environment. On-the-job learning periods must be sufficiently long and versatile from the point of view of mastering the oc-

cupation. Only in exceptional cases can a student complete on-the-job learning at a vocational institution in a practice enterprise or with similar arrangements.

Co-operation between workplaces and the education provider ensures that on-the-job learning and other training is relevant to the world of work, of a high quality standard and up-to-date. The education provider is responsible for ensuring that all the partners in the area have the same view on arranging on-the-job learning. The education provider must ensure that the student receives sufficient supervision and instruction during on-the-job learning and that the teacher and other staff members have the resources to co-operate with the world of work. The education provider and teachers must co-operate with the world of work and business to assure the quality of on-the-job learning so that the student achieves the vocational skills requirements specified in the Qualification Requirements.

The education provider is responsible for implementation of on-the-job learning. Implementation includes planning, student supervision and assessment. The education provider is also responsible for the teachers' working life competence and training as well as for training workplace instructors. At the workplace, special attention is paid to supervising the student and giving feedback.

Usually the student does not sign a contract of employment with the employer for an on-the-job learning period and he/she is not paid wages or a salary. During an on-the-job learning period, a student is entitled to receive student financial aid and student social benefits in accordance with separate instructions. When on-the-job learning is arranged abroad, local regulations are also taken into consideration.

In addition to the provisions of the Vocational Education and Training Act (630/1998, sections 19 and 28) and the occupational safety regulations in force, the following is to be considered in terms of occupational safety:

The agreement on training and skills demonstrations to be arranged at the workplace in connection with practical work assignments is to include responsibilities related to safety, injuries and damages and insurance policies. Before starting the work, the employer and education provider work together to ensure that the student has the resources to do the work in question safely and without risking his/her health and by following the instructions given.

The provisions concerning the employer apply to the education provider in accordance with the Occupational Safety and Health Act (738/2002, section 4(1)) when the work takes place at the institution or otherwise in the way determined by the education provider.

Student assessment during on-the-job learning periods is described in Chapter 7.

For equality in education to come true, each student must have equal opportunities to pursue vocational studies, find employment after education and training and assume the role of an independent citizen in society regardless of their different learning capabilities.

The vocational education and training of a special needs student must, in view of the equality principle, be primarily arranged at ordinary vocational institutions in the same study groups as other students. Education and training can also be provided partly or completely in special groups. Vocational special education institutions primarily provide education and training for severely disabled students as well as preparatory and rehabilitative instruction and guidance. They also need to offer expert help to other educational institutions. Vocational special education can also be provided as apprenticeship training.

Students who are in need of special teaching arrangements or student social services due to disability, illness, delayed development, emotional disorder or some other reason must receive special education. It ensures learning that is based on individual resources, self-development and growth as a person. If necessary, other support services and rehabilitation are added to special education in co-operation with rehabilitation service providers.

The education provider determines the principles of special education: objectives, implementation, teaching methods, support and special services, expert services, partners and responsibilities. The institution must reserve sufficient resources for special education. Promoting special needs students' learning is everyone's task at the institution.

Needs for special education must be determined individually for each student on the basis of section 20 of the Vocational Education and Training Act and the Qualification Requirements. Achievement of the objectives must be supported with the help of an individually designed and guided learning process and different support activities.

Individual educational plan (IEP)

A written individual educational plan (IEP) must always be drawn up for a student in need of special education (Act 630/1998, section 20). The plan is to include (Decree 811/1998, section 8):

- ◆ the qualification to be completed;
- ◆ the Qualification Requirements used in teaching;
- ◆ the scope of the qualification;
- ◆ the individual curriculum drawn up for the student;
- ◆ special teaching and student social services that the student receives;
- ◆ other personal services and support activities; and
- ◆ criteria for special education.

An IEP is to be drawn up together with the student and, when necessary, his/her parents or other guardians, representatives of his/her previous school as well as teachers and student service specialists.

If vocational skills requirements have been adjusted, the individual study plan is to include an individual curriculum, which determines the student's learning objectives. They are based on the requirements of the qualification for which the student is studying. Vocational special education must be planned so that the student reaches, as extensively as possible, the same competence as in other vocational education and training. The objectives can be adjusted according to the student's resources either so that all the learning objectives are adjusted or by only adjusting the objectives of one or more modules. Teaching must focus on supporting the student's strengths so that he/she is ensured good opportunities to find employment. Special attention must be paid to achieving working confidence during on-the-job learning periods. The student must be informed of how he/she can get the special services required after completion of studies.

The student's progress must be monitored during training and the personal objectives and support activities must be changed as needed. Provisions on assessing special needs students are to be found in Section 7.10.

8.4 TEACHING IMMIGRANTS AND REPRESENTATIVES OF DIFFERENT LANGUAGE AND CULTURAL GROUPS

Overview

The skills requirements for immigrant students and students belonging to other language and cultural groups, such as Saami, Romany and sign language students, are mostly the same as for other students. The requirements for the upper secondary vocational qualification concerned are applied to teaching.

Students whose mother tongue is other than the language of instruction at the institution must receive support particularly with their language studies and through special teaching arrangements. If necessary, the students' backgrounds, such as mother tongue, culture and the language skills developing during the period of education and training, must be taken into account in teaching. Teaching arrangements are made to support students' own linguistic identity alongside the majority language and culture. The education provider's curriculum is to comprise implementation of teaching arrangements for immigrant students and those representing other language and cultural groups.

Immigrants

In this context, immigrants are taken to mean students who have moved to Finland or who were born in Finland but have an immigrant background. If necessary, the reason for immigration, time spent in the country and developing Finnish skills are taken into consideration in teaching. The studies support the student's growth into an active and balanced member of both his/her own language and cultural community and Finnish society.

Saami speakers

Saami language teaching started in basic education is continued, when possible, in vocational education and training. Saami language teaching can be provided in Northern Saami, Inari Saami and Skolt Saami. Saami can be studied as a mother tongue even if education would not otherwise be provided in Saami.

Romanies

Teaching Romanies is carried out taking the position of Finnish Romanies as an ethnic and cultural minority into account. Romany culture is considered in teaching arrangements. Romany language instruction is arranged, as far as possible, in co-operation with other education providers.

Sign language users

The requirements for the upper secondary vocational qualification are applied to sign language culture and communication in sign language students' teaching and learning. Finnish or Swedish is used as the reading and writing language alongside sign language. Sign language teaching is planned so that it is possible for the student to use an interpreter. The opportunities of sign language users and hearing-impaired students to communicate naturally are to be taken into consideration in learning environments.

Language teaching arrangements

The following teaching arrangements conforming to Government Decision 213/1999 can be applied to language studies (mother tongue, second national language, foreign language) of immigrant students, Saami and Romany speakers and sign language users, if their mother tongue is other than Finnish or Swedish.

Mother tongue

If the student's mother tongue is other than Finnish or Swedish, the education provider can divide the compulsory modules in mother tongue and second national language differently from the provisions of section 12(2) of the Vocational Education and Training Act.

The credits reserved for mother tongue and second national language (4 + 1 = 5 credits) can be combined and divided flexibly into the student's possible own mother tongue studies, Finnish or Swedish as a second language studies and second national language studies. Finnish or Swedish as a second language means a language that has been learnt after the mother tongue in a Finnish- or Swedish-language environment. A separate Finnish or Swedish for sign language users module (Chapter 5) has been drawn up for sign language students.

Students can either study Finnish or Swedish:

- 1) in accordance with the objectives of Finnish or Swedish as a second language (Chapter 5); or
- 2) in accordance with the objectives of mother tongue, Finnish or Swedish (Chapter 5), if the student's Finnish or Swedish skills are assessed to be at the same level as native speakers.

A student whose Finnish or Swedish skills are not at mother tongue level in all areas of language skills studies according to the objectives and contents of Finnish or Swedish as a second language. His/her Finnish- or Swedish-language skills are assessed according to these objectives whether or not the education provider has offered teaching in Finnish or Swedish as a second language. The education provider can offer and the student's study plan may include both of the above-mentioned studies. A student can change in the middle of his/her Finnish or Swedish as a second language studies over to studying Finnish or Swedish according to the objectives of mother tongue, Finnish or Swedish.

A student must be offered his/her mother tongue studies when possible. As a mother tongue, a student can also choose to study Romany, sign language or some other mother tongue (Act 630/1998, section 12(3)). The objectives of immigrant students' own mother tongue studies are given in Chapter 5. A student can study his/her own mother tongue in accordance with the objectives of either mother tongue, own mother tongue for foreign language users (4 credits) or foreign language (2 credits), or as free-choice studies.

If a student studies his/her mother tongue according to the objectives of Own mother tongue for foreign language users, his/her studies are to include Finnish or Swedish language studies.

Second national language

Instruction in students' second national language (Swedish or Finnish) is arranged in accordance with the objectives of the second national language taking into consideration the level of the students' language skills.

Foreign students can also replace second national language studies with their own mother tongue or Finnish or Swedish language studies (5 credits), Chapter 5. If necessary, the teaching can be arranged as basics in second national language depending on the needs of the student and the field.

Foreign language

A student's studies must also include foreign language studies. The foreign language of a student whose mother tongue is other than Finnish or Swedish can also be his/her own mother tongue.

8.5 APPRENTICESHIP TRAINING

Apprenticeship training is governed by the provisions of the Vocational Education and Training (630/1998, sections 8 and 17), the Vocational Education and Training Decree (811/1998, sections 6 and 7) and the Act on the Financing of the Provision of Education and Culture (635/1998).

The valid Qualification Requirements (the National Core Curriculum and the Qualification Requirements of the Competence-based Qualification) are applied to apprenticeship training arranged as curriculum-based vocational education and training.

The education provider issues a qualification certificate in accordance with the Qualification Requirements for a qualification taken in upper secondary vocational education and training in accordance with the provisions of Section 7.9.

8.6 CO-OPERATION BETWEEN HOME AND SCHOOL

In addition to the provisions of the Vocational Education and Training Act (630/1998, sections 5 and 14), the following is to be observed when arranging co-operation between home and school:

In education and training offered to young people, the education provider and the educational institution must take the initiative and maintain co-operation with students' parents or guardians. Co-operation between home and school is arranged so that it enhances students' independence and responsibility, advances studies and offers support in matters related to students' health, safety and well-being. The individual needs of special needs students and students with different language and cultural backgrounds are to be taken into consideration in the co-operation.

The education provider and the parents or guardians must co-operate in guidance and counselling both during and at the end of studies. Counselling must support the students' transition to working life or further studies and enhance their life management skills.

The part of the curriculum dealing with co-operation between home and school is to be drawn up in co-operation with the authorities in charge of implementation of health care and social services in the location municipality of the educational institution.

8.7 STUDENT WELFARE SERVICES

In addition to the provisions of the Vocational Education and Training Act (630/1998, sections 14, 28 and 37 a) on implementation of student welfare services and a student's right to a safe learning environment, the following is to be observed:

The objective of student welfare services is to create a safe and healthy learning environment and promote the community spirit, well-being and pleasantness of the educational institution. The objective is to support students and maintain the school community's ability to function in situations threatening physical and psychological safety and security. Student welfare services are to promote early identification of learning difficulties and other problems and prevent school drop-outs. In the case of minor students, the education provider must co-operate with their parents or guardians. The education provider is to ensure achievement of the objectives of student welfare services by including in its curriculum operating instructions which promote students' health and safety together with prevention and early identification of different problems. The education provider is to issue instructions on attending to such activities of the educational institution as students' participation in education and training, monitoring the progress of studies and staying at the school dormitory. Preventive instructions are to be issued on smoking, use of substances, school bullying and causing a disturbance. The education provider must have a crisis plan and instructions in place in cases of disturbing behaviour, violence, injuries, accidents and deaths. The education provider must monitor the outcome of student welfare services and take necessary action. Students are to be encouraged to take part in and contribute to promoting well-being in their own school community. All those working with students in the school community are responsible for student welfare services. The duties of multidisciplinary student welfare staff include co-ordinating and developing student welfare services.

The part of the curriculum dealing with student welfare services is to be drawn up in co-operation with the authorities and other parties attending to implementation of health care and social services in the municipality or municipalities within which the institution operates. The education provider must take the provisions of the Primary Health Care Act and the Child Welfare Act into account when drawing up its curriculum in co-operation with municipal health care and social services. At

the same time, arrangements must be made to ensure social inclusion and expert services in student welfare and psychosocial support. Student feedback is to be used for developing services.

During vocational education and training, a student must be informed about implementation of guidance and counselling and welfare services, the services available from different administrative sectors, local support networks and qualification-specific health requirements. In addition to the student, the parents or other guardians of minor students must also be informed about matters related to occupational safety and labour protection during on-the-job learning.

The education provider must ensure that the students know the school rules that are in force at the institution. The student's own responsibility for compliance with the school rules and other instructions must be emphasised.

9.1 DESCRIPTION AND BASIC VALUES OF THE WOOD PROCESSING FIELD

Mechanical upgrading of wood has been carried out in Finland for as long as the country has been populated. Initially, housing and the majority of daily utility items were made of wood. Centuries ago, household use of wood was accompanied by livelihood and industry based on the utilisation of wood. This had a considerable impact on development of economic life in Finland. Our current well-being and economy are still largely based on the mechanical wood industry created in Finland nearly two hundred years ago. This industry can still provide plenty of jobs, well-being and quality of life for us, as long as the competence and business operations based on wood regain the status they deserve as a livelihood which uses the country's own, renewable natural resources.

Wood is a continuously renewable natural resource. Growing trees also absorb and bind carbon very well and thus reduce greenhouse gas emissions. Forests are the most prominent feature of the landscape almost throughout Finland. Availability of wood has been taken for granted in Finland and the true significance of wood in our culture has not always been considered. The properties and characteristics of wood must always be taken into consideration when handling wood items in both manufacture and during the lifecycle of the actual product. Due to the structure and growth process of a tree, a wood item is always a unique product. Wood is a genuinely natural product, and therefore people find its characteristics, mostly its warmth and appearance, appealing. When wood is handled properly and used in a correct way in structures, it is durable and weather-resistant.

The knowledge of the characteristics of the wood material, even at the tree species level, forms the foundation of vocational skills in wood processing. It is also important to master the properties and use of supplementary materials and supplies. Identifying the needs of the end user and acting accordingly are important aspects of vocational skills. Being quality-conscious and working accordingly in all work stages is important.

The attitude to be aspired to is one of producing an end result which best meets overall needs. When working in a team, one must take responsibility for both one's

own contribution within a team and the entire team's operations which are visible to others. One must understand the basics of profitable business operations and know that in the long-run, only a profitable enterprise secures jobs. In a technical sense, one must master the manufacturing process as a whole and the interdependencies between its different areas. One must also have the readiness to work independently in the field in other assignments as well as those within one's own vocation.

The threshold to start a business in the joinery industry is low, since it does not necessarily require large investments, as long as one has a feasible business idea.

9.2 QUALIFICATION-SPECIFIC HEALTH REQUIREMENTS IN UPPER SECONDARY VOCATIONAL EDUCATION AND TRAINING

The criteria for admission of students into education and training leading to an upper secondary vocational qualification have been laid down in section 27 of the Vocational Education and Training Act. A person whose illness or disability is likely to prevent him/her from participating in education and training cannot be admitted as a student. Student admission into vocational education and training can only be limited when the illness, objectively assessed, prevents studies or would endanger the safety of the student or others. The practical problems that an illness or disability cause to studies must primarily be solved using teaching arrangements and student welfare services.

An applicant is to provide the education provider with such information on his/her health status as required by the admissions process.

The education provider must also make sure that the health status of any person admitted is such that he/she can also cope with on-the-job learning in a way that working in the tasks in the field and achieving vocational skills requirements of the qualification presuppose.

From the point of view of a student's legal protection, it is justified that he/she is not admitted to a study programme involving work assignments that his/her health would not allow. Student admissions must be made with due consideration given to the various tasks related to the occupations and work. It is possible that there are modules of a qualification that presuppose different health requirements and thus allow a student to make individual decisions on how to complete the qualification.

For student admission to have the best possible results from the student's point of view, the education provider must inform applicants of the requirements of the upper secondary vocational qualification and the vocational field as well as of possible health risks in the Guide for Applicants and during the student admission pro-

cess. In most cases, an applicant's own description of his/her current health status or treatment of any possible illness is enough in an admission situation.

If legislation on or special features of the vocational field or qualification in question require a person admitted to the institution to present a doctor's certificate to reflect his/her health, it is enough that the certificate states that the student is suitable for the field. Student admission is conditional until such a doctor's certificate has been presented.

A student's illness or disability must not stop his/her studies or lead to a rash decision to change occupation or field of education. The practical problems that an illness or disability causes in education and training must primarily be solved using individual teaching arrangements and individualisation that meet the student's needs. Guidance and counselling, student support, instruction on the use of ergonomic working methods and aids facilitate completion of the programme. When a student becomes ill or disabled, co-operation between student welfare and student health services is absolutely necessary.

In all situations where personal data specified as being sensitive in the Personal Data Act is dealt with and stored, such as information concerning a student's health status, the education provider must observe due caution and good information processing practice as required in the statutes.

All students attending education and training in the wood processing field must be in good enough physical condition to cope with the stress of the work. They must not have any congenital or acquired disease that would endanger their own health or safety, or that of others working nearby. A person's suitability to work in various work assignments may need to be assessed based on the symptoms and weakening of functions in, among others, the following conditions:

- ◆ symptomatic epilepsy, other severe neurological illnesses affecting one's balance or muscle co-ordination;
- ◆ musculoskeletal diseases, structural defects or injuries;
- ◆ asthma, respiratory tract symptoms;
- ◆ severe rashes.

9.3 VOCATIONAL SKILLS REQUIREMENTS, TARGETS OF ASSESSMENT AND GENERAL ASSESSMENT CRITERIA

Determining the vocational skills requirements as well as the targets of assessment and general assessment criteria are to help education providers when drawing up curricula for modules that are not determined in the Qualification Requirements.

Vocational modules are formed according to and named after work assignments. Vocational skills requirements are described as concrete work outputs. Assessment criteria are determined for three levels: Satisfactory 1, Good 2 and Excellent 3.

The following criteria are meant as guidelines so that they are applied according to the objectives of core subjects and the skills requirements set for vocational modules. The criteria proposed are always portrayed against the requirements of the qualification module in question, which is to say that the work described in the criteria always means work contained in the module concerned.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA ON A GENERAL LEVEL		
	Satisfactory 1	Good 2	Excellent 3
Mastering work processes	The student		
Planning one's own work, self-assessment of performance and development of one's activities	plans his/her work but needs supervision in new situations or when the working environment changes	plans his/her own work	independently plans work assignments and tasks he/she is responsible for
	assesses the success of his/her work	assesses the success of his/her performance while working and proactively copes with new and changing situations	assesses the success of his/her performance, justifies the assessment and assesses and develops his/her working methods and environment

Independence and responsibility in performance of the work assignment as a whole	performs in familiar work assignments	considers the work assignment while working (such as where to start, where to finish and what tools and equipment to use, etc.)	considers the work assignment as a whole in the working environment and his/her own work as part of it
	works so that the outcome can be accepted as fulfilling the work plan and quality objectives	works so that the outcome includes some of the special requirements of the work assignment	works according to the special requirements of the workplace so that the outcome is in accordance with the objectives set
	needs occasional supervision to advance in work phases	advances fluently from one work phase to another	advances systematically and fluently in his/her work, adjusting it to other activities in the working environment
	follows working instructions, working hours and agreements and negotiates discrepancies.	completes given assignments independently and takes care of his/her assignments from start to finish and assumes responsibility for his/her own part of the work.	spontaneously completes duties other than those assigned in his/her area of responsibility.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA ON A GENERAL LEVEL		
	Satisfactory 1	Good 2	Excellent 3
2. Mastering working methods, equipment and material	The student		
Choice and use of working methods, equipment and materials that suit the assignment and working environment	uses the most common working methods, equipment and materials related to his/her work in repeating work situations, but needs some supervision (procedures, equipment and materials are defined by qualification module).	uses working methods, equipment and materials related to his/her work independently in work situations.	chooses the most suitable working methods, equipment and materials and uses them skilfully in various work situations.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA ON A GENERAL LEVEL		
3. Fundamental knowledge	Satisfactory 1	Good 2	Excellent 3
	The student		
Possession and application of the knowledge needed at work	uses the knowledge that is the basis for the most common procedures, equipment and materials needed in repeating work situations (i.e. the procedures, equipment and materials that have been defined in Point 2), but needs supervision in acquiring and applying information.	independently searches for and uses information needed at work.	independently searches for and uses information in his/her work in various situations and justifies the work-related decisions on the basis of the information gathered.

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA ON A GENERAL LEVEL		
4. Key competences for lifelong learning: a) The four key competences to be assessed in their own group in Point 4	Satisfactory 1	Good 2	Excellent 3
	The student		
Learning and problem-solving	searches for information with guidance	searches for information according to instructions	independently searches for information
Own competence as an employee and work development, problem-solving as well as making choices	plans his/her work but needs supervision in new situations or when the working environment changes	plans his/her work and assesses its success while working	independently plans the assignments he/she is responsible for and assesses his/her competence and the success of the work and also justifies the assessment and decisions
			assesses and develops his/her working methods and working environment
	assesses the success of his/her work	accepts feedback and acts accordingly	develops his/her actions on the basis of feedback
	cope with familiar situations but needs supervision and support in situations involving changes and choices	cope proactively with situations involving changes and choices	acts independently in different situations in a way that suits the situations and finds alternative procedures to his/her actions

Interaction and co-operation Actions in interactive situations and co-operative abilities	follows instructions provided on interactive situations in his/her own learning and working environment	considers the situation in his/her learning and working community in different interactive situations	expresses himself/herself clearly and brings forth different viewpoints constructively
	completes the work assignments he/she is responsible for but needs supervision from time to time	completes the work assignments he/she is responsible for spontaneously	acts responsibly, co-operatively and equally with different people as a member of a working community and group
	works in a familiar working community and group and asks for help from the others when needed	works with different people in a working community and group	supports and helps others and also takes into account the next working phase and employees in his/her work
Vocational ethics Activities based on vocational ethics, professional value basis and the agreements made	complies with the codes of ethics and timetables provided	complies with the codes of ethics, agreements, statutes and timetables provided	acts according to the values in the work community, codes of ethics, agreements and statutes in variable situations and also keeps to timetables
Health, safety and ability to function Actions that maintain health and safe operations and maintain the ability to function	complies with the safety instructions provided and does not endanger himself/herself or others	complies with the working community's instructions and takes into account the safety of the members of the working community and working environment	complies with the working community's instructions and takes into account the safety of the members of the working community and working environment
	ensures safety in accordance with instructions	ensures safety	ensures safety and reports on the dangers and risks that he/she observes
	uses protective equipment, tools and working methods safely according to instructions	uses protective equipment, tools and working methods safely	uses protective equipment, tools and working methods safely
	works ergonomically in most situations.	works ergonomically.	uses safe, variable working methods, which do not cause excessive workload while taking ergonomics into account.
Included in the objectives and assessment criteria of the core subjects (physical education, 1 credit, and health education, 1 credit). Respective skills requirements and assessment criteria for health, safety and ability to function are drawn up for every vocational qualification if needed.			

TARGETS OF ASSESSMENT	ASSESSMENT CRITERIA ON A GENERAL LEVEL		
	Satisfactory 1	Good 2	Excellent 3
4. b) Rest of the key competences for lifelong learning	The student		
Initiative and entrepreneurship Target-oriented, economic and productive operations and self-management	Included in the objectives and assessment criteria of the core subjects (social, business and labour-market subjects, 1 credit) and also in the skills requirements and assessment criteria of the entrepreneurship module (5 credits) that is included in the skills requirements of the vocational modules. In addition, when necessary, skills requirements and assessment criteria for the vocational modules of each qualification have been drawn up in compliance with the requirements of each field.		
Sustainable development Observing technological, economic, social and cultural principles	works and acts taking sustainable development into account under supervision	works and acts taking sustainable development into account	works and acts independently taking sustainable development into account and takes up development needs
Aesthetics Taking aesthetics into account while working	works according to the aesthetic principles, pleasantness of the working environment and other factors that affect the appearance of the end result under supervision.	works according to the aesthetic principles, pleasantness of the working environment and other factors that affect the appearance of the end result.	makes versatile use of aesthetic principles in the field – works to promote the pleasantness of the working environment and other factors that affect the appearance of the end result.
Communication and media skills Objective recognition, observation and interpretation of media products and use of media and information technology	Included in the objectives and assessment criteria of the core subjects (mother tongue, 4 credits). In addition, when necessary, skills requirements and assessment criteria for communication and media skills have been drawn up in compliance with the requirements of each vocational field.		
Mathematics and natural sciences Numeracy required at work and knowledge of the laws of physics needed	Included in the objectives and assessment criteria of the core subjects (mathematics, 3 credits, physics and chemistry, 2 credits). In addition, skills requirements and assessment criteria for mathematics and natural sciences have been drawn up in compliance with the requirements of each vocational field.		

<p>Technology and information technology</p> <p>Use of technology and information technology in the occupational</p>	<p>uses common technical and information technology systems that are needed in his/her occupation, in repeated work situations, but sometimes needs supervision</p>	<p>uses common technical and information technology systems that are needed in repeated work situations</p>	<p>makes diverse use of common technical and information technology systems that are needed in work situations</p>
<p>field and taking into account the benefits, limitations and risks of technology</p>	<p>chooses the machinery and equipment needed under supervision and recognises the risks.</p>	<p>chooses the machinery and equipment needed and recognises the risks involved in their use.</p>	<p>chooses the machinery and equipment needed independently and recognises the limitations and risks involved in their use.</p>
<p>Information technology is included in the objectives and assessment criteria of core subjects (social, business and labour-market subjects, 1 credit). In addition, skills requirements and assessment criteria for technology and information technology in compliance with the requirements of each vocational field have been drawn up.</p>			
<p>Active citizenship and different cultures</p> <p>Participating in community activities and decision-making with people from different backgrounds and observing the rights and obligations concerning employees and citizens and compliance with equality and non-discrimination legislation</p>	<p>Included in the objectives and assessment criteria of the core subjects (social, business and labour-market subjects, 1 credit, and mother tongue, 4 credits). In addition, when necessary, the skills requirements and assessment criteria for this key skill have been drawn up considering the skills requirements of each qualification.</p>		

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