

FRAME N E H R P L A N

for the training occupation

Warehouse logistics specialist

(Resolution of the Conference of Ministers of Education and Cultural Affairs of
25.03.2004)

Part I: Preliminary remarks

This framework curriculum for vocational instruction at vocational schools has been adopted by the Standing Conference of the Ministers and Senators of Education and Cultural Affairs of the Länder (KMK).

The framework curriculum is coordinated with the corresponding federal training regulations (issued by the Federal Ministry of Economics and Labour or the otherwise competent ministry in agreement with the Federal Ministry of Education and Research). The coordination procedure is governed by the "Joint Results Protocol of 30.05.1972". The framework curriculum is basically based on the lower secondary school leaving certificate and specifies minimum requirements.

In the case of assigned occupations, the framework curriculum is divided into basic training covering a broad range of occupational fields and specialised training building on this.

On the basis of the training regulations and the framework curriculum, which regulate the objectives and contents of vocational training, the final qualification in a recognised training occupation and - in conjunction with instruction in other subjects - the vocational school leaving certificate are imparted. This creates the essential prerequisites for qualified employment as well as for entry into school-based and vocational further and advanced training courses.

The framework curriculum does not contain any methodological specifications for teaching. Independent and responsible thinking and acting as the overarching goal of education is preferably taught in those forms of teaching in which it is part of the overall methodological concept. In principle, any methodical approach can contribute to the achievement of this goal; methods that directly promote the competence to act are particularly suitable and should therefore be taken into account appropriately in the lesson design.

The Länder adopt the framework curriculum directly or implement it in their own curricula. In the second case, they ensure that the result of the subject and time coordination with the respective training regulation taken into account in the framework curriculum is maintained.

Part II: Educational mission of the vocational school

The vocational school and the training companies fulfil a joint educational mandate in dual vocational training.

The vocational school is an independent place of learning. It works as an equal partner with the other parties involved in vocational education and training. It has the task of imparting vocational and general learning content to the pupils with particular regard to the requirements of vocational training.

The vocational school aims to provide basic and specialised vocational education and to extend the general education acquired beforehand. In this way, it aims to enable students to fulfil their tasks in the workplace and to help shape the world of work and society in a socially and ecologically responsible manner. It follows the regulations of the school laws of the Länder applicable to this type of school. In particular, the vocationally related teaching is also oriented towards the vocational regulations issued for each individual state-recognised training occupation on a uniform federal basis:

- Framework curriculum of the Standing Conference of the Ministers and Senators of Education and Cultural Affairs of the Länder (KMK)
- Federal training regulations for in-company training.

According to the framework agreement on the vocational school (KMK resolution of 15.03.1991), the aim of the vocational school is,

- "to provide a vocational skill that combines professional competence with general skills of a human and social nature;
- develop professional flexibility to cope with the changing demands in the world of work and society, also with regard to the growing together of Europe;
- to awaken the willingness to engage in professional development and further education;
- to promote the ability and willingness to act responsibly in shaping individual lives and in public life".

To achieve these goals, the vocational school must

- orientate teaching to a pedagogy that is specific to their tasks and that emphasises manual orientation;
- impart cross-occupational and cross-field qualifications, taking into account necessary occupational specialisation;
- ensure a differentiated and flexible educational offer in order to meet different abilities and talents as well as the respective requirements of the world of work and society;
- provide comprehensive support and assistance to disabled and disadvantaged people within the scope of their possibilities;

- point out the environmental hazards and risks of accidents associated with the exercise of the profession and private life, and point out ways of avoiding or reducing them.

In addition, the vocational school shall, in general lessons and as far as it is possible within the framework of vocationally related lessons, address core problems of our time, such as

- Work and unemployment,
- peaceful coexistence of people, peoples and cultures in a world that preserves cultural identity,
- Conservation of the natural basis of life and
- guaranteeing human rights.

The listed goals are directed towards the development of action competence. This is understood here as the readiness and ability of the individual to behave appropriately, thoughtfully and in an individually and socially responsible manner in social, professional and private situations.

Action competence unfolds in the dimensions of professional competence, personal competence and social competence.

Professional competence refers to the willingness and ability to solve tasks and problems in a goal-oriented, appropriate, methodical and independent manner on the basis of professional knowledge and skills and to assess the result.

Personal competence refers to the willingness and ability of an individual personality to clarify, think through and assess development opportunities, requirements and restrictions in family, work and public life, to develop one's own talents and to make and develop life plans. It includes personal qualities such as independence, critical faculties, self-confidence, reliability, sense of responsibility and duty. It also includes, in particular, the development of well thought-out values and self-determined commitment to values.

Social competence refers to the willingness and ability to live and shape social relationships, to grasp and understand attentions and tensions, and to engage and communicate with others rationally and responsibly. This includes in particular the development of social responsibility and solidarity.

Methodological and learning competence grow out of a balanced development of these three dimensions.

Competence refers to learning success in relation to the individual learner and his or her ability to act on his or her own responsibility in private, occupational and social situations. In contrast, qualification is understood as the learning success in relation to usability, i.e. from the point of view of demand in private, professional and societal situations (cf. German Education Council, Recommendations of the Education Commission for the Reorganisation of Secondary Level II).

Part III: Didactic Principles

The objective of vocational education and training requires that teaching be geared to a pedagogy tailored to the tasks of the vocational school, which emphasises action orientation and enables young people to independently plan, carry out and assess work tasks within the framework of their occupational activity.

Learning in the vocational school basically takes place in relation to concrete vocational action as well as in diverse mental operations, including mental comprehension of the actions of others. This learning is above all linked to the reflection on the execution of actions (the action plan, the process, the results). With this grateful penetration of vocational work, the prerequisites are created for learning in and from work. This means for the framework curriculum that the description of the objectives and the selection of the contents are occupation-related.

On the basis of learning theory and didactic findings, the following points of orientation are mentioned in a pragmatic approach for the design of action-oriented lessons:

- Didactic reference points are situations that are significant for professional practice (learning for action).
- The starting point of learning is action, if possible carried out by oneself or mentally reproduced (learning by doing).
- Actions must be planned, carried out, checked, corrected if necessary and finally assessed by the learners as independently as possible.
- Actions should promote a holistic grasp of professional reality, e.g. include technical, safety, economic, legal, ecological, social aspects.
- Actions need to be integrated into learners' experiences and reflected upon in relation to their social impact.
- Actions should also include social processes, e.g. the declaration of interests or conflict management.

Action-oriented teaching is a didactic concept that interlinks subject and action system structures. It can be realised through different teaching methods.

The teaching offered by the vocational school is aimed at young people and adults who differ in terms of previous education, cultural background and experience from the training companies. Vocational schools can only fulfil their educational mandate if they take these differences into account and support pupils - including disadvantaged or particularly disabled pupils - according to their individual potential.

Part IV: Job-related preliminary remarks

This framework curriculum for vocational training as a warehouse logistics specialist is coordinated with the Ordinance on Vocational Training in the Warehouse Sector in the Training Occupations of Warehouse Specialist and Warehouse Logistics Specialist of 26.07.2004 (BGBl p. 1887).

The framework curriculum for the training occupation warehouse management specialist (KMK resolution of 18.07.1991) is repealed by the present framework curriculum.

The essential subject matter of the vocational school for the examination area of economics and social studies is taught on the basis of the "Elemente für den Unterricht der Berufsschule im Bereich Wirtschafts- und Sozialkunde gewerblich-technischer Ausbildungsberufe" (Elements for the Teaching of Economics and Social Studies in Industrial-Technical Training Occupations at Vocational School) (resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of 18 May 1984).

The objectives of the learning fields 1 to 4 of the present framework curriculum essentially correspond to the objectives of the learning fields 1 to 4 of the framework curriculum for the training occupation warehouse specialist.

The learning fields and the associated formulation of objectives are based on exemplary fields of activity. The objectives and contents of the learning fields of the framework plan are to be implemented in such a way that they lead to professional competence. The objectives describe the state at the end of the learning process. The listed contents are to be understood as the minimum scope for achieving the formulated objectives. The acquisition of the competences required within the scope of the educational mandate is to be ensured through the processing of action-oriented tasks in all years of training. The use of current media, modern office communication and job-related software for information procurement and information processing is to be taught in an integrative manner. A total of at least 80 teaching hours is included in the framework curriculum for this purpose. Mathematical contents are assigned to the learning fields and are to be applied integratively throughout.

The foreign language objectives and contents are integrated into the learning fields with 40 hours.

Warehouse logistics specialists are employed in both the operative and the dispositive areas of warehouses in industry, trade, commerce, forwarding or other logistics service providers. Occupational safety and environmental protection are of particular importance for warehouse logistics specialists; therefore, an awareness of the problem must be developed throughout the vocational training. In particular

- To observe the principles and measures of accident prevention and occupational health and safety, to avoid damage to health and to prevent occupational diseases,
- to take into account the necessities and possibilities of a humane and ergonomic work and workplace design,
- occupationally related environmental impacts and measures to avoid or reduce them,
- carry out recycling or proper disposal of waste materials,
- To take into account principles and measures for the rational use of resources used in the work.

Part V: Learning fields

Overview of the learning fields for the training occupation warehouse logistics specialist				
Learning fields		Time guidelines in hours		
No.		Year 1	Year 2	Year 3
1	Accept and control goods	80		
2	Store goods	100		
3	Edit goods	60		
4	Transporting goods on the farm	40		
5	Picking goods		80	
6	Pack goods		80	
7	Plan tours		40	
8	Goods loaded		80	
9	Send goods			80
10	Optimise logistical processes			80
11	Procure goods			40
12	Determine and evaluate key figures			80
	Total (840 hours in total)	280	280	280

Learning field 1:

**Accepting and checking goods 1.Training year
Time guide value: 80 hours**

Target setting:

The pupils get an overview of the storage and transport areas and classify their own work areas in the operational process.

The pupils know the work processes in goods receipt. They carry out corresponding document checks, check the incoming packages and assess the result. They document proper receipt. In the event of performance problems, they deal with the carrier in a responsible and targeted manner and initiate appropriate measures. They distinguish between transport damage and damage to property. They organise the unloading process in accordance with commercial and contractual regulations. They plan the necessary space for the incoming goods. In doing so, the pupils observe safety-relevant requirements. They ensure that the packaging they receive is handled in an environmentally friendly manner.

The pupils check the goods quantitatively and qualitatively. They use suitable documents, testing equipment and aids and observe both legal and operational requirements. They initiate appropriate measures in the event of violations. They document the result of the goods inspection in compliance with the principles of proper stock accounting.

The pupils use current technologies to optimise work processes. They understand the control of goods as an essential part of quality management and develop their own ideas to increase effectiveness.

Contents:

Accompanying documents

Damage assessment

Reporting Complaint

deadlines Separation

Storage obligation

Responsibility when unloading the transport vehicle Personal protective equipment

Observance of safety labels Exchange of reusable packaging Material defects

Warranty periods

Default of the debtor

Bar codes

Field of study 2: Storing goods1

**. Training year
Time benchmark: 100 hours**

Target setting:

The pupils assess storage according to their tasks. They distinguish between types of storage according to the type of company storing the goods, the location, the construction and the owner of the storage facility. They weigh up the advantages and disadvantages of these types of storage with regard to the goods to be stored. They evaluate static and dynamic storage with regard to costs, speed, personnel requirements and susceptibility to faults. They plan adequate storage zones and storage facilities and carry out the necessary calculations.

The pupils inform themselves about the type, nature, volume and weight of the goods to be stored and prepare them for storage. On the basis of the storage regulations, they select a suitable storage location according to technical, economic and safety-relevant aspects and store the goods in compliance with the storage principles. They document the storage process. Pupils handle hazardous substances responsibly and identify duties and rights of persons involved according to legal requirements.

They secure goods from loss by using preventive measures of theft and fire protection and react appropriately to the situation.

Contents:

Legal requirements for workplaces, emission and immission

Regulations for storage facilities

Rights and obligations of the warehouse keeper

Loading area, footprint, storage area, paths, goods handling area Shelf load, bay load, stacking pressure, area and space utilisation Shelf types, floor storage

Completion, pre-packaging, price labelling Volume calculation

Route optimisation

Perishable goods, refrigerated goods, stackability, prohibitions on mixed storage Warehouse management programmes

Hazardous substance labelling, obligation to instruct Operating instructions

Legal requirements for occupational health and safety, equipment safety

Fire alarm systems, hand-held fire extinguishers, sprinkler systems, CO2 systems

Field of study 3:Processing goods1

**. Training year
Time reference value: 60 hours**

Target setting:

The pupils carry out goods handling measures during storage, select the necessary work equipment and use it appropriately. In doing so, they apply legal requirements for occupational safety and accident prevention. They store packaging or dispose of it in an environmentally friendly way.

The pupils recognise the necessity of checking and caring for stored goods. They identify physical and climatic influences, evaluate them in relation to the condition maintenance of the goods and plan specific measures.

The pupils carry out inventory work and document the result. They distinguish between warehouse key figures and calculate them.

Contents:

Legal requirements for occupational health and safety, workplaces, equipment safety and waste disposal.

Clamping, lifting and strapping
equipment Visual inspection, best-before
date

Counting, measuring and weighing equipment,
scanners Humidity, temperature, UV radiation

Inventory types

Reorder level, minimum stock level, maximum stock level, average stock level, turnover
frequency, storage duration, storage range

Storage costs

Field of study 4:

**Transporting goods in the
company**

1. Year of training

Time allowed: 40 hours

Target setting:

The pupils know the importance of the internal material flow for the operational processes and the necessity of the associated information flow. They select the appropriate means and aids of conveyance depending on the type and quantity of goods, the route, the existing storage facilities, as well as the frequency and speed of the transport. They use the means and aids of conveyance in accordance with the regulations, in an environmentally friendly and cost-saving manner. In doing so, they pay attention to the dangers that can occur when handling them. In the event of an accident, the pupils act appropriately and initiate initial measures.

Contents:

Continuous conveyors
Discontinuous
conveyors Overhead
conveyor systems
Overhead conveyor systems
Hoists Storage and retrieval
machines Manual transport
Operating instructions
Accident report

Field of study 5:Picking goods2

**. Training year
Time reference value: 80 hours**

Target setting:

The pupils pick in a targeted and responsible manner, taking into account safety-relevant specifications. They prepare the flow of materials and information, taking into account the respective storage and picking systems. The pupils pick according to different methods. They evaluate the picking performance, taking into account its influencing factors, and suggest ways to optimise it, taking into account operational objectives, especially customer orientation.

Contents:

Receipts, work equipment, conveyors
Shelving systems
Dynamic and static picking systems paperless picking
Manual, mechanical and automatic picking Order- and
series-oriented picking methods One- and two-
dimensional locomotion
Centralised, decentralised delivery and pick-pack
procedures Manual and automatic control Picking times

Field of study 6:Packing goods2

. Training year
Time reference value: 80 hours

Target setting:

The pupils pack goods. They evaluate the product-specific requirements for packaging, taking into account contractual, national and international regulations. They select the various packaging materials and aids according to their properties and possible uses, taking into account the type of goods and transport, transport route, environmental compatibility and economic efficiency. The pupils calculate the packaging costs. When packing the goods, they observe the occupational safety regulations, paying particular attention to the dangers of handling hazardous substances.

The pupils select the appropriate machines and tools and use them appropriately. They responsibly carry out the labelling and marking of the packaging in accordance with legal requirements.

They assemble the goods into loading units.

Contents:

Packaging terms Functions of

packaging Stresses on packaging

Volume and mass

Legal and contractual regulations for the disposal of bulky goods

Field of study 7:Planning tours2	. Training year Time reference value: 40 hours
Target setting: The pupils explore transport routes between important economic centres in Germany, Europe and the world. They draw up a route plan taking into account economic, infrastructural, scheduling and environmental aspects.	
Contents: Road and rail Waterways Airways Location advantages	

Field of study 8: Loading goods2

**. Training year
Time reference value: 80 hours**

Target setting:

The pupils load goods. They plan the loading work processes taking into account current information and communication technologies. They prepare the loading of goods in a cost- and customer-oriented manner, taking into account legal regulations and contractual requirements. They take over the goods to be shipped and calculate the freight weight and the freight volume. They also check the usability of the means of transport and transport equipment.

The pupils provide the suitable means of conveyance, conveying aids and loading aids and use them according to the situation. They load, stow and secure the goods in a way that is safe for transport, depending on the type of shipment and the destination, and discuss this with the carrier.

They manage conflict situations that arise in a competent, cost-oriented and responsible manner and observe contractual, national and international regulations.

Pupils plan the sequence of a dangerous goods transport, identify their resulting duties and carry out control, loading, securing, labelling and documentation measures.

Pupils reflect on the consequences of incorrect loading on society, the environment and the economy.

Contents:

Loading list, stowage plan, loading plan Payload, loading height, centre of gravity pallet, pallet cage, container

Cleanliness, damage, odourlessness Sealing

Loading systems, loading ramps, loading bridges

Area, volume calculation, weights, forces

Securing techniques

Fuse

Field of study 9:Dispatching goods3

**. Training year
Time reference value: 80 hours**

Target setting:

The pupils ship goods. To do this, they gain an overview of the different ways of shipping goods and the modes of transport to be used for this. They assess the advantages and disadvantages of the means of transport. They determine the costs of shipping from the specifications of different modes of transport.

The pupils familiarise themselves with the rights and duties of the carrier and the forwarder. They process shipping documents for various carriers, observe foreign trade regulations and use their subject-specific foreign language skills.

Contents:

combined transports

Delivery note, consignment note, bill of lading, air waybill freight tables

Single Administrative Document, export restrictions, export bans

Learning field 10:	Optimise logistical processes 3. Training year Time guide value: 80 hours
Target setting: The pupils follow the path of a good from the source of raw materials through all stages of the value chain to the user and derive the tasks and objectives of logistics from this. They understand logistics as the sum of all planning, implementing and controlling measures to ensure an optimal flow of information, materials and values from the procurement to the sales market and show how logistics works in all areas of the company. The pupils classify warehouse logistics as a sub-process in the overall logistics process and recognise the close networking between procurement and warehouse logistics. They consider the demand for operational production factors as a prerequisite for the production of goods and services. They check the quantitative and qualitative stock levels and inform the purchasing department, which uses this data to plan orders. They use various methods to determine requirements. They prepare an ABC analysis according to the value of the goods and use the result as an aid in procurement planning. They assess the disadvantages of orders that are too large, too small, too early and too late and make suggestions for optimising the interfaces in the logistics process.	
Contents: Total Quality Management (TQM) Continuous Improvement Process (CIP) Needs, wants Economic principle Combination of production factors Inventory types Programme- and consumption-controlled determination of demand Own production, external procurement Ordering procedure Just in Time	

Learning field 11:Procure goods3

**. Training year
Time reference value: 40 hours**

Target setting:

The pupils explore sources of supply and differentiate the markets according to the number of market participants. On the basis of the information obtained and taking into account the legal framework conditions, they prepare enquiries, draw up a comparison of the offers received and place an order with a suitable supplier. From this process flow they deduce that the flow of information precedes the flow of material and that the quality of the information determines the reliability of the flow of material in a target-oriented manner.

The pupils arrange payment for the goods delivered.

Contents:

Reference calculation

Dimensions, weights, currencies

INCOTERMS (ex works, fob, cif, ddp)

Purchase contract

cashless payment transactions

Field of study 12:

**Determine and evaluate
key figures
3. Training year
Time allowed: 80 hours**

Target setting:

The pupils calculate warehouse ratios and use them as a control instrument for economic warehousing. They interpret their deviations from comparison periods.

The pupils understand accounting as a source of stock ratios and as an instrument for documenting and controlling business activities. They derive its necessity from the information interest of various addressees. They carry out a stocktaking, draw up an inventory and investigate target/actual deviations.

The pupils determine the changes in stock on the basis of vouchers. They record these inventory changes in the corresponding accounts and close them. They carry out a simple year-end closing.

Contents:

Delivery note, invoice

Balance sheet Changes
in value

Inventory account, cost of goods, sales revenue