**GOSPODARSKA ŠKOLA, ČAKOVEC**

**CURRICULUM AND TRAINING PROGRAM**

**FOR**

**FORKLIFT OPERATORS**

**Čakovec, January 2020.**

1. **GENERAL INFORMATION ABOUT THE PROGRAM**

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| --- | --- |
| NAME OF THE PROGRAM | **TRAINING PROGRAM FOR FORKLIFT OPERATORS** |
| EDUCATIONAL SECTOR | **Traffic and logistics** |
| LEVEL OF COMPLEXITY | **Level 2** |
| DURATION OF THE PROGRAM | **130 lessons** |
| JUSTIFICATION OF PROGRAM ADOPTION | **Unemployment, which is one of the most significant problems in Croatia and Međimurje, is the result of disbalance between real labour market needs and the work force that comes to the labour market after they have completed their education. Moreover, a significant part of inhabitants have no life competence (they haven't finished primary school or have 8 years of primary school education) and they are never included in the programs of adult education and lifelong learning. The consequences of this situation are visible in the economy and in the social sphere.**  **The data shows that the most sought after occupations are in the sector of trade (salesperson) and driver. Through the training program for forklift operators, the candidates for these jobs gain additional competences that allow them to get a better job. For unqualified people the training program for forklift operators can enable employment for a position that does not necessarily require highschool degree, but it does ask for specific knowledge and skills. For example, in the sector of trade, storage and logistics – warehouse worker trained for forklift operating.** |
| ENROLLMENT CONDITIONS | **Training program for forklift operators can be enrolled by participants who:**   * **Have completed their primary school education** * **Are over 18** * **Have medical certificate on medical capacity for forklift operator** * **Driving license of the appropriate category** |
| WORK ENVIRONMENT AND WORK CONDITIONS | **Forklift operator can work in shifts or occasionally at night or overtime. In most cases they work indoors under artificial light, and work outdoors is possible in all weather conditions. They can work in shifts, occasionally at night or overtime. Working environment can be noisy and dusty. During work, forklift operator can be exposed to dangerous cargo and mechanical injuries, dangerous cargo manipulation and dangerous forklift operation.** |

1. **COMPETENCE THAT A PARTICIPANT WILL GAIN UPON COMPLETION OF THE PROGRAM**
2. Differentiate the main parts, devices and forklift attachments and their functions
3. Prepare the forklift, devices and attachments for work
4. Choose the forks and gripping devices according to shape and weight of the cargo.
5. Handling the forklift, devices and attachments in a professional and safe way
6. Prepare the forklift for transport in specialized vehicles
7. Apply basic measures for maintenance and care and store it according to the rules for safe handling
8. Apply occupational safety and helath measures, fire protection, environment protection and first aid
9. Use the necessary protective equipment.
10. **PROGRAM DURATION AND REALIZATION**

Training program in duration of 130 lessons will be realized through regular and consultative instructional teaching. Theoretical part of the training in duration of 30 lessons will be realized in specialized classrooms of Gospodarska škola (equipped with modern teaching aids and equipment, where regular lessons in vocational subjects of the sector Traffic and logistics take place) Practical part of the program in duration of 100 lessons will be conducted under surveillance of the mentor in a suitably equipped school's logistic centre (which includes practical driving range, access roads, storage space with shelves, pallets, cold-store and an office)or in partner organizations (which also meet all quality standards) and which have signed a cooperation agreement with our school.

Consultative instructional teaching: the number of consultations is equal to 2/3 lessons out of total number of planned theoretical lessons for each unit. Group consultation in duration of 21 lessons will be conducted with the whole educational group and are compulsory for all participants. Individual consultations in duration of 9 lessons will be conducted through e-mail, telephone or direct contact, according to the needs of participants.

Practical lessons will be conducted in accordance with the planned number of lessons. Participants' work during practical lessons will be monitored by their mentors. Participants keep diaries of practical lessons.

1. **Training program**

**Regular classes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Rb.** | **Unit** | **Number of lessons** | | **Total** |
| **T** | **PL** |
| **1.** | **Construction of the forklift and its attachments** | **9** | **/** | **9** |
| **2.** | **Handling the forklift** | **13** | **/** | **13** |
| **3.** | **Occupational safety and health, fire protection and first aid** | **8** | **/** | **8** |
| **4.** | **Practical lessons** | **/** | **100** | **100** |
| **TOTAL** | | **30** | **100** | **130** |

**Consultative-instructional classes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Rb.** | **Unit** | **Number of lessons** | | | **Total** |
| **T** | | **PL** |
| **SK** | **IK** |
| **1.** | **Construction of the forklift and its attachments** | **6** | **3** | **/** | **9** |
| **2.** | **Handling the forklift** | **9** | **4** | **/** | **13** |
| **3.** | **Occupational safety and health, fire protection and first aid** | **6** | **2** | **/** | **8** |
| **4.** | **Practical lessons** | **/** | **/** | **100** | **100** |
| **TOTAL** | | **21** | **9** | **100** | **130** |

**SK – group consultation**

**IK – individual consultation**

**T – theoretical lessons**

**PN – practical lessons**

* 1. **Curriculum**

**4.2.1. UNIT: Construction of the forklift (theoretical lessons: 9 lessons)**

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| --- | --- | --- | --- |
| **TOPIC** | **CONTENT** | **LEARNING OUTCOMES** | **NUMBER OF LESSONS** |
| **Forklift basics** | Purpose of the forklifts  Types of forklifts:   * Forklifts with large load capacity and load reach * Forklifts for handling containers and pallets   Classification of the forklifts based on:   * power type * load capacity * possition of forks * according to the gripping elements * according to the location of use * forklift performance | * explain the purpose of the forklifts * describe the types of the forklifts * explain the classification of forklifts based on the power type, load capacity, position of the forks, gripping elements and location of use * explain the work performance of a forklift | **T2** |
| **Forklift and attachment construction** | The main parts of the forklift   * chassis * drive engine * drive transmission * pogonski most * wheels   Forklift attachments:   * paper roll clamps * fork rotators * carton clamps * side shift fork positioner * bale clamp * rotating bulk basket * hook bracket * brick grab * fork positioners | * list the main parts of a forklift and attachments * explain the purpose of the main forklift parts * list the attachments of a forklift * explain the purpose of attachments | **T4** |
| **Safety and signaling devices of a forklift** | Steering and breaking devices  Stabilizers  Load lifting and lowering device  Device for automatic stopping of cargo at a certain height  Overload fuse  Hydraulic safety valve  Sound signals  Light signals  Stability conditions of a forklift for operation in different working conditions  Choosing devices and gripping elements to manipulate special cargo categories | * list safety devices of a forklift * describe safety devices of a forklift * list signaling devices of a forklift * give an example of the usage of signaling devices of a forklift | **T2** |
| **Technical data about a forklift** | Manufacturer's technical data  Forklift depreciation  Insurance and registration  Technical inspection of a forklift and devices | * provide technical data on the truck * explain depreciation of a forklift * explain insurance and registration * interpret the technical inspection of forklift and devices | **T1** |
| **Teaching methods:**   * oral presentation * conversation | | | |

**4.2.2. UNIT: Forklift handling (theoretical lessons: 13 lessons)**

|  |  |  |  |
| --- | --- | --- | --- |
| **TOPIC** | **CONTENT** | **LEARNING OUTCOMES** | **NUMBER OF LESSONS** |
| **Preparing a forklift for work** | Instructions on operating a forklift  Rules and instructions on how to handle the forklift safely  Visibility of the work area and work inspection  Starting the forklift drive  Warming the engine to operating temperature  Preparing a forklift for work at low temperatures and in winter conditions | * explain the instructions on operating a forklift * list the rules and instructions on handling a forklift safely * describe visibility of the work area and work inspection * explain how to start the forklift drive * explain the importance of warming the engine to operating temperature * interpret the process of preparing a forklift for work at low temperatures and in winter conditions | **T2** |
| **Forklift handling** | Loading and unloading of cargo  Pallet and container handling  Carrying loads over short distances  Lifting, lowering and tilting a telescopic yoke with a cargo  Stabilization of a forklift and cargo  Gear and direction change  Stopping and parking a forklift  Activating a hand break  Securing the wheels from self-starting  Signaling when working with a forklift | * explain ways of loading and unloading of cargo * interpret the ways of pallet and container handling * give example of carrying loads over short distances * describe a method of lifting, lowering and tilting a telescopic yoke with a cargo * explain how to stabilize a forklift and cargo * explain the process of gear and direction change * explain how to activate a hand break * interpret the process of stopping and parking a forklift * explain how to secure the wheels from self-starting * give example of using signalization when working with a forklift | **T7** |
| **Forklift maintenance and service** | Cleaning and washing a forklift  Forklift lubrication  Preventive and service forklift maintenance  Detection and reporting of faults on the forklift, devices and attachments  Storage of the forklift, devices and attachemnts  Forklift, devices and attachments garage | * describe the process of cleaning and washing a forklift * describe the process of forklift lubrication * explain preventive and service forklift maintenance * Interpret the detection and reporting of faults on the forklift, devices and attachments * describe storage of the forklift, devices and attachments * explain forklift, devices and attachments garage | **T2** |
| **Work, service and technical forklift documentation** | Forklift documentation  Keeping forklift documentation:   * on the correctness of forklifts, devices and equipment * on performed services and inspections * on performed services and inspections | * name the forklift documentation * describe work, service and technical forklift documentation * name a way of keeping work, service and technical forklift documentation | **T2** |
| **Teaching methods:**   * oral presentation * conversation * discussion | | | |

**4.2.3. Unit: Safety at work, fire protection and the first aid (theoretical lessons: 8 lessons)**

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| **TOPIC** | **CONTENT** | **LEARNING OUTCOMES** | **NUMBER OF LESSONS** |
| **Introduction to safety at work** | The concept of safety at work  The goal and the purpose of safety at work  Legal regulations on safety at work | * define safety at work * namet he goal and the purpose of safety at work * list the basic regulations in the area of safety at work | **T1** |
| **Sources of danger and safety measures at work when handling the forklift** | Basic sources of danger  (danger of overturning, getting stuck, malfunction, electric current, noise and vibration)  Measures of protection and safety procedures  Occupational safety obligations for the forklift operator  Occupational hazards and safety measures when handling machines, tools and devices  Safe operation of the forklift | * list the basic sources of danger * explain safety measures and procedures * describe occupational safety obligations for the forklift operator * describe occupational hazards and safety measures when handling machines, tools and devices * name basic rules for operating hydraulic crane | **T3** |
| **Personal protective equipment** | Significance and role of personal protective equipment  Protective equipment for: head, hands and feet  Protective equipment for the body | * interpret the significance and role of protective equipment * list the types of protective equipment for the head, hands and feet * list protective equipment for the body | **T1** |
| **Fire and fire protection** | Fire  Possible causes of fire  Fire protection  Fire extinguishing agents and equipment: fire extinguishers, hydrants  Other means of extinguishing fire | * define fire * name the causes of fire * list fire prevention measures * describe how to use the fire extinguishing agents and equipment * list other methods of extinguishing fire | **T 1** |
| **First aid** | The most common accidents at work (fall, fracture, bleeding)  Methods of first aid:   * artificial respiration * heart massage * bleeding * bone fracture * splinter/dust in the eye * burn * frostbite   Content of the cabinet and the first aid kit | * list the most common types of accidents at work * describe the ways of providing first aid * list the content of the cabinet and of the first aid kit | **T2** |
| **Teaching methods:**   * oral presentation * conversation | | | |

**4.2.4. UNIT: Practical lessons (practical lessons: 100 lessons)**

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| --- | --- | --- | --- |
| **TOPIC** | **CONTENT** | **LEARNING OUTCOMES** | **NUMBER OF LESSONS** |
| **Preparing the workplace** | Preparing the workplace  Means of protection at work  Regulations on the safety of machinery and work in special working conditions  Practical lessons diary | * prepare the workplace according to the working conditions * apply means of protection at work * apply regulations on safety of machinery and work in special working conditions * keep the diary of practical lessons | **PN 8** |
| **Preparing the forklift for operation** | Inspection of the forklift before start of work  Rules and instructions for operating the forklift safely  Choosing the forks and gripping devices  Load diagram  Preparing forklift for work at low temperatures and in winter conditions | * inspect the forklift before start of work * apply the rules and instructions for operating the forklift safely * choose the forks and gripping devices * apply the rules of load diagram * prepare forklift for work at low temperatures and in winter conditions | **PN 8** |
| **Operating forklift** | Setting up attachments and gripping devices  Starting the forklift  Operating the forklift and load stabilization  Turning the rubber wheels  Forklift maneuver space  Gripping, transfering and disposing the load  Pallet and container handling  Stopping and parking the forklift  Securing the forklift from self-starting  Forklift signalization  Forklift inspection after operation  Forklift failures | * set up attachments and gripping devices * start the forklift * operate the forklift and stabilize the load * turn the rubber wheels * operate the forklift respecting the maneuver space * do the gripping, transfering and disposing of the load * handle the pallets and containers * stop and park the forklift * secure the forklift from self-starting * use signalization while operating the forklift * inspect the forklift after operation * report forklift failures | **PN 70** |
| **Forklift maintenance and service** | Forklift inspection after operation  Daily cleaining maintenance of the forklift  Reporting faults, worn out and damaged forklift parts  Forklift storage and garage | * inspect the forklift after operation * perform daily cleaning maintenance of the forklift * report faults and damaged forklift parts * prepare the forklift for storage and garage | **PN8** |
| **Working, technical and service documentation** | Technical documentation  Producer's manual  Work documentation  Maintenance documentation | * use technical documentation of the forklift * apply instructions from the producer * fill in the work documentation of the forklift * fill in the maintenance documentation of the forklift | **PN6** |
| **Teaching methods:**   * oral presentation * demonstration * practical work | | | |

**5. THE FINAL EXAMINATION OF GAINED KNOWLEDGE AND SKILLS**

The final examination of the forklift handling programme consists of written/oral exam in accordance with the planned learning outcomes which are necessary for proper forklift handling and of practical exam.

The written exam takes place in the institution and contains objective tasks which are in accordance with the learning outcomes stated in the plan and programme.

Practical part of the exam consists of the following activities: preparing the forklift for work, handling forklift in different working conditions, monitoring forklift work, maintenance,garaging and storage of the forklift, applying measures of safety at work and first aid.

The record of the final exam will be made by the three member committee.

After the participant has passed the final exam, they get a licence to operate a forklift.