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Database of qualifications and learning outcomes in Poland, Germany, Portugal for electrician and car mechanic profession

Prepared by:

Wyższa Szkoła Ekonomiczno-Społeczna in Ostrołęka (Polska)
Instytut Technologii i Eksploatacji. Państwowy Instytut Badawczy in Radom (Polska)
Agencja Rozwoju Regionalnego Spółka z o.o. in Ostrołęka (Polska)
Handwerkskammer Erfurt (Niemcy)
Associação Intercultural Amigos da Mobilidade (Portugalia)

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Chapter 1

Database of qualifications and learning outcomes in Poland for the profession of electricians and car mechanics

1.1. Formal path of achieving a qualification in a electrician and car mechanic profession

In Poland, qualification in the profession are obtainable:

- In the school system,
- Through training in crafts,
- In the form of continuing education.

The path of achieving a qualification in an electrician and mechanic profession through the school system.

The basic path of achieving qualification is a school path in which students achieved new levels of education, exams are confirmed by professional competence, that means:

- the stage of general education, nowadays it includes primary school (class I – VI) and high school (grades VII - IX),
- stage of vocational education includes vocational school (class X – XII).

The stages of general education ends with an examination in so called gymnasium (high school – grades VII – IX). Each high school student is obliged to proceed to secondary school exam. Secondary School exams end with receiving the certificate of the detailed results of the exams with a score of percentage covering part of the humanities and mathematics and natural part of knowledge. *(http://www.cke.edu.pl).*

Graduates of secondary schools who have chosen vocational training in electrician or mechanic profession are involved in the recruitment to vocational schools by submitting the documents in the selected vocational school. Standard documents folding in selected vocational school are (*MEN Regulation on conditions and procedures of admission of students to public schools and the transition from one type of school to another. Dz. U. 2004. No. 26, pos. 232*):

- application – questionnaire candidate generated by the system KSENON,
- certificate of secondary education,
- certificate of the detailed results in the secondary school exam,
- medical certificate pointed that there is no absence of contraindications for training in your chosen profession,
- other documents specified by the school.

Base on the criteria set point by each vocational schools are created lists with ranking students who applied to this school as well as lists of students with the highest number of points are qualified for vocational training according to the number of places in a given school year.

Student , who attended to an electrician or car mechanic profession classes, should be there for 3 years. Preparing graduate is held by specific Curriculum (for the profession electrician 741103 on the structure of the present, for the profession of car mechanic 723103 on the structure of the present). This program was developed as a basis for teaching profession by the National Centre for Supporting Vocational and Continuing Education. This program includes the aims and objectives of education, information about the profession electrician, aims for vocational education electrician, professional connections with other professions, specific learning objectives, curriculum of learning, the curriculum for each subject. Based on General Educational Curriculum, each vocational school creates their own school curriculum. An example of teaching plans presented in the following tables.

Table 1. Example of a school curriculum for the profession of electrician

No.	Compulsory educational activities	The total number of hours. during teaching
Obligatory subjects		
1.	Polish language	160
2.	Foreign Language	130
3.	History	64
4.	Civics	32
5.	Fundamentals of entrepreneurship	64
6.	Geography	32
7.	Biology	32
8.	Chemistry	32
9.	Physics	32
10.	Math	130
11.	Information technology	32
12.	Physical education	290
13.	Education for safety	32
14.	Classes with teacher	96
Total hours		**1158**
Items in vocational education theoretical		
1.	Electrical engineering and electronics	192
2.	Electrical machinery and equipment	192
3.	Electrical Installations	160
4.	Economic activity in the electrical industry	32
5.	Language in the electrical industry	64
Total hours		**640**
Items in practical vocational training		
1.	Measurements of electrical and electronic equipment	224

2.	The test equipment and electrical equipment	416
3.	Electrical installations – practical classes	330
Total hours		**970**

Source: own study based on http : //www.koweziu.edu.pl/plany_nauczania/pliki/741103_P_ZSZ.pdf

Table 2. Example of a school curriculum for the profession of car mechanic

No.	Compulsory educational activities	The total number of hours. during teaching
Obligatory subjects		
1.	Polish language	160
2.	Foreign language	130
3.	History	64
4.	Civics	32
5.	Fundamentals of entrepreneurship	64
6.	Geography	32
7.	Biology	32
8.	Chemistry	32
9.	Phisics	32
10.	Math	130
11.	Information technology	32
12.	Phisical education	290
13.	Education for safety	32
14.	Classes with teacher	96
Total hours		**1158**
Items in vocational education theoretical		
1.	Machine construction basics	96
2.	Traffic regulations in the field of cat. B	32
3.	Technology repair of motor vehicles	352
4.	Technology repair of electric and electronic systems of motor vehicles	96
5.	Economic activity in the automotive industry	32
6.	Foreign language in the automotive industry	32
Total hours		**640**
Items in practical vocational training		
1.	Diagnosis and repair of motor vehicles	810
2.	Preparation techniques	160
Total hours		**970**

Source: own study based on http : //www.koweziu.edu.pl/plany_nauczania/pliki/723103_P_ZSZ.pdf

Qualification in an electrician profession is achieved by:

- passing exam in skills E.7 Installation and maintenance of machinery and electrical equipment confirmed by the District Examination Committee,
- passing exam in skills E.8 Installation and maintenance of electrical installations certified by the District Examination Committee,
- Completion of basic vocational school.

Documents confirmed qualification in the electrician profession are: graduation certificate of vocational school and a diploma confirming qualified skills as an electrician.

Qualification in the profession of car mechanic is achieved by:

- passing exam in skills M.18 Diagnosis and repair of components and assemblies of motor vehicles confirmed by the District Examination Committee,
- completion of basic vocational school.

Documents confirmed qualification in the car mechanic profession is a certificate of vocational school and a diploma confirming qualifications in the car mechanic profession.

The path of achieving a qualification in an electrician and car mechanic profession by training qualities.

Qualification in the electrician and car mechanic profession in this form includes vocational training for young workers. Vocational training can be done by:

1) training for a particular job.

   Training for a particular job is to prepare a young person to work as a semi-skilled worker and can be related with work, are not required to complete an working training. Training for a particular job can last from 3 to 6 months. After completing the apprenticeship employee receives a certificate of appropriate vocational specific work.

2) Apprenticeship.

   Apprenticeship is to prepare a young person to work as a skilled worker or journeyman and includes apprenticeship organized with the employer and theoretical training. Apprenticeship lasts up to 36 months, but not less than 33 months.

   To prepare a vocational training as an apprenticeship, the employer sign a contract, with juvenile employment, for vocational training. The agreement should contain a description of the parties, the form of further training and theoretical training, the date of the planned completion of education. To conclude and resolve the juvenile employment contracts for vocational training should be governed by an employment contract for an indefinite period.

   The employer who hire young people to vocational training directed them to the theoretical training: school principal, in the center of vocational training or organizes theoretical training on their own. In the case of organizing theoretical training for young people, on their own, employer is obliged to implement the core curriculum of compulsory vocational theoretical.

   Weekly working time for juvenile during the period of the school day may not exceed 12 hours. On participation in school activities, working time of an adolescent, shall not

exceed 2 hours. While the working time for young person during school holidays shall not exceed 7 hours a day and 35 hours a week *(http://www.infor.pl/prawo/praca/umowa-o-prace/89167,Co-nalezy-wiedziec-o-pracy-mlodocianych.html).*

Apprenticeship ends with an examination. Adolescents, who decided on further training in:

- vocational schools, where the exam consists of vocational training, which rules are set in the regulations on examinations of vocational education and vocational training,
- in other forms than school exam, the exam on the skilled worker, is based on terms prescribed by issues about professional and general education of adults,
- other forms than school and working with employers consist journeyman exam before the Examining Chamber of Crafts.
- After completing the course and passing the examination, the employee receives the title of skilled worker or journeyman.

(Council of Ministers of 28 May 1996 on vocational training of young people and their remuneration (Dz. U. No. 60, item. 278, as amended).

The path of achieving a qualification in an electrician and car mechanic profession through lifelong learning

Qualification for an electrician and car mechanic profession in this form includes: a qualifying vocational course in qualifications complies with profession.

Qualifying vocational course, is a course run by the curriculum ,taking into account the curriculum of vocational education in the field of single qualification (K). The minimum training number of hours on this course is the minimum number of hours that is signed in the core curriculum of vocational education for the qualification. A graduate of the course receive a certificate of completing the qualifying vocational course. Completion of this course allows you to join the qualification exam in the profession, in terms of the qualifications undertaken by the regional commissions examination.

The person who completes a qualifying vocational course and pass the exam confirming qualifications in the profession in terms of the qualifications, receive a certificate confirming their profession. Getting all qualifications, needed to get a profession, with the confirmation of the appropriate level of education, will mean gaining the full occupation and technician diploma in the certain profession.

(Developed on the basis of information from the https://www.apedukacja.pl/kwalifikacyjne-kursy-zawodowe,785.html)

1.2. Description of procedures related to the examinations confirming attainment of professional qualifications for professions of electrician and motor vehicle mechanic

Professional qualifications may be attained by passing an examination confirming qualifications for a profession conducted by the Regional Examinations Boards (for school occupations) or by passing a journeyman exam organized by chambers of crafts of the Polish Craft Association (*Związek Rzemiosła Polskiego – ZRP*) (for craft occupations).

Examination confirming professional qualifications, *also called professional examination*, is a form of assessing the level of mastery of the examinee's knowledge and skills in particular qualification separated in a profession, specified in the core curriculum of vocational education. Professional examination is an external exam, which allows for comparable and objective assessment of the examinee's level of performance through the use of uniform requirements, assessment criteria and rules for conducting of examination, developed by external institutions, operating independently of the education system.

Role of the external institutions are performed by: Central Examinations Board (CKE) and eight Regional Examinations Boards (OKE) appointed by the Minister of National Education in 1999. OKE prepare, organize and conduct external professional examinations. Examinations are assessed by external examiners.

Professional examination is conducted throughout the school year on the date determined by the Director of OKE in consultation with the Director of CKE. The date of the professional examination is announced by the Director of OKE at the website of the regional board, not later that 5 months before the date of the professional examination. Director of OKE establishes the schedule of practical part of the professional examinations and submits it to the managers of examination centers.

The examination covers the subject matter of qualification, i.e. the number of examinations in particular profession shall depend on the number of qualifications separated in the core curriculum of vocational education.

Number of qualifications in a profession = number of examinations confirming professional qualifications

The examination confirming professional qualifications may be taken by:

- graduates of basic vocational schools, technical schools, supplementary secondary technical schools and postsecondary schools,

- persons with school certificates obtained abroad and recognized as equivalent to certificates of completion of the relevant Polish upper-secondary schools or post-primary schools,
- persons who completed a vocational qualifying course.

The professional examination is also conducted as extramural examination for persons who:

- graduated from junior high school or 8-year primary school and
- for at least two years, have educated or worked in a profession in which separated was particular qualification in accordance with the vocational education qualifications framework.

In case of professions of electrician and motor vehicle mechanic, one may take an examination confirming professional qualifications in an external mode (in accordance with *the Regulation of the Minister of Education dated January 11, 2012 on extramural examinations*, Journal of Laws of 2012, item 188).

In order to take an examination confirming professional qualifications, one should submit a written declaration or a request.

Declaration of accession to the examination confirming professional qualifications is submitted by:

- a student or a course participant
- a graduate
- a person who is a graduate having the school certificate obtained abroad,
- a person who participates in or completed a qualification course.

Specific requirements and rules for submission of declarations are specified in *the Regulation of the Minister of National Education dated February 24, 2012 amending the Regulation on the conditions and manner of assessing, classifying and promoting students and course participants as well as conducting tests and examinations in public schools* (Journal of Laws of 2012, item 262).

Students (course participants) who submitted declaration of accession to the examination shall be informed by the school headmaster (chairman of the examination board or the head of the examination center) about the date and place of particular part of the examination and the required documents, materials and accessories to be taken to particular part of the examination not later than one month before the date of each part of the examination.

Graduates and persons who completed a vocational qualifying course as well as persons having school certificates obtained abroad who submitted a declaration of accession to the

examination to OKE shall be informed by the Director of OKE on the date and place of particular part of the examination and the required documents, materials and accessories to be taken to the examination not later than one month before the date of each part of the examination.

Application for admission to extramural professional examination is submitted by persons who take the professional examination in an external mode. Detailed requirements and principles of submitting an application are specified in the *Regulation of the Minister of Education dated January 11, 2012 on extramural examinations* (Journal of Laws of 2012, item 188).

Persons who submitted a declaration to OKE on accession to the extramural professional examination shall be informed by the Director of OKE on the date and place of this part of the examination and the required documents, materials and accessories to be taken to the examination not later than two months before the date of each part of the examination.

It is possible to adapt the examination to individual education needs and psycho-physical capabilities of the examinee. Detailed information on adaption of the conditions of conduct of the professional examination shall be published at website of the Central Examinations Board in the statement of the Director of CKE. If the person wishing to access the examination is entitled to adaptation, he/she shall attach the relevant documents to the submitted declaration or request.

Detailed information and explanations on the examination confirming professional qualifications shall be provided by the school headmaster and the Director of OKE.

Professional examination consists of two parts: written and practical part. The rules for appointment, composition and duties of examining boards and boards supervising written and practical parts of the examination are specified in the *Regulation of the Minister of National Education dated February 24, 2012 amending the Regulation on the conditions and manner of assessing, classifying and promoting students and course participants as well as conducting tests and examinations in public schools* (Journal of Laws of 2012, item 262).

A student (course participant) takes the written part of the professional examination at school he/she goes to, and a graduate - at school he/she graduated from. A student (course participant) takes the practical part of the professional examination at school he/she goes to or at the employer’s at whom he/she completes the vocational training practice, and a graduate at school he/she graduated from or at the employer's at whom he/she completed the vocational training practice. Other persons shall take the professional examination at school, institution or employer as indicated by the Director of OKE. A student, course participant, graduate may

also be directed by the Director of OKE to other school, continuing education unit, practical education unit or employer in order to take an examination, but only in justified cases.

A written part is conducted in a form of a written test with the use of:

- electronic system for conducting professional examination, after authorization by the institution conducting the examination or
- examination papers and answer cards.

A written part for professions of electrician and motor vehicle mechanic takes 60 minutes and is conducted in the form of a test consisting of 40 multiple-choice questions containing four answers to choose from, of which only one answer is correct (source: *guidebooks on examination confirming professional qualifications in professions of electrician and motor vehicle mechanic*).

During a written part of the professional examination, each examinee works at:

- an individual electronically assisted examination post - in case the written part of the professional examination is conducted using an electronic system of conducting professional examination.
- a separate desk - in case the written part of the professional examination is conducted using examination papers and answer cards, called individual examination posts. The distance between the individual examination posts should provide for independent work of examinees.

Result of a written part of the professional examination shall be determined by OKE based on:

1) answers saved and archived in an electronic system for conducting professional examination - in case the written part of the professional examination is conducted using an electronic system for conducting professional examination;
2) electronic reading of answer card - in case the written part of the professional examination is conducted using examination papers and answer cards.

For organization and course of the written part of the professional examination in particular school, institution or at particular employer responsible shall be chairman of the examination board, i.e. respectively, the school headmaster, the director of the institution, the employer, or the employee authorized by him/her. The chairman of the examination board and his/her deputy should receive a training within organization of the written part of the professional examination organized by OKE.

Winners and finalists of tournaments or thematic contests related to the selected area of vocational education are exempt from the written part of the professional examination on the basis of a statement confirming the title of respectively the winner or the finalist. The statement shall be submitted to the chairman of the examination board. Exemption of the winner or the finalist of the tournament or thematic contest from the written part of the professional examination is equivalent to obtaining the highest grade, i.e. 100%, on the written part of the professional examination. The list of the tournaments or thematic contests is made public by the Director of CKE.

Practical part is conducted in a form of practical test and consists in the examinee's performing the examination task included in the examination paper at the examination post. The post should be prepared taking into account the conditions of training in particular profession specified in the core curriculum of vocational education, appropriate to the qualifications separated in this profession, for which this examination is conducted.

Duration of the practical part of the examination confirming qualifications for a profession of motor vehicle mechanic is 120 minutes, whereas for two qualifications in a profession of electrician, it is 180 minutes for each qualification (source: *guidebooks on examination confirming professional qualifications in professions of electrician and motor vehicle mechanic*).

Practical part of the professional examination is observed and assessed by the examiners, present in the room, who are entered in the register of examiners for conducting examinations confirming qualifications for a profession. A teacher employed in a school or institution in which the practical part of the professional examination is conducted cannot be the examiner.

Result of the practical part of the professional examination shall be determined based on the electronic reading of the assessment card completed by the examiner.

The examinee passed the professional examination if he/she obtained:

1) in a written part – at least 50% of possible points (i.e. the examinee solved correctly minimum 20 tasks in a written test) and
2) in a practical part – at least 75% of possible points.

Should the examinee be of the opinion that, during the examination, violated were regulations concerning its conduct, he/she may submit a written objection to the Director of OKE. The chairman of the examination board or of the board supervising the practical part of the examination may cancel the relevant part of the examination. Director of OKE in consultation with the Director of CKE may cancel the examination of the examinee or examinees and order its re-conduct.

Detailed rules for submitting objections to the course of the examination, cancellation of examination or a part thereof are specified in the *Regulation of the Minister of National Education dated February 24, 2012 amending the Regulation on the conditions and manner of assessing, classifying and promoting students and course participants as well as conducting tests and examinations in public schools* (Journal of Laws of 2012, item 262).

Results of the professional examination are handed over by OKE to the school headmaster, director of the institution, employer, depending on where the students (course participants) or graduates took the written part of the professional examination or to the person authorized by the school headmaster, director of the institution, employer. Date of delivering results of the professional examination, handing certificates and diplomas shall be announced by the Director of OKE at the website of OKE no later than on the day of the written part of the professional examination.

Certificates and diplomas are handed to the examinees by the school headmaster, director of the institution, employer or a person authorized by him/her.

Examinees who completed a vocational qualifying course, took an examination in an external mode or have school certificates obtained abroad, receive certificates and diplomas in the proper OKE.

Persons who did not pass one or both parts of the examination, did not take the examination on a specified date or interrupted the examination may retake the examination or failed part, except that:

- students (course participants) take the examination on the next dates during training and twice after finishing education on principles specified for the graduates; accession to the examination for the third or next time after finishing education takes place on principles specified for the extramural examination,
- persons who started taking the professional examination after finishing education (graduates) or after completing the qualification course as well as persons who took the examination based on the school certificates obtained abroad, in case of failing the examination or a part thereof twice, will take the professional examination or its part on principles specified for the extramural examination.

After three years from the date the examinee took the written part of the examination or failed the examination or could not have taken the written part of the examination for the first time, he/she shall take the examination in the full scope.

Detailed rules for re-taking of the examination are specified in the *Regulation of the Minister of National Education dated February 24, 2012 amending the Regulation on the conditions*

and manner of assessing, classifying and promoting students and course participants as well as conducting tests and examinations in public schools (Journal of 2012 item 262).

Qualification examination for the title of journeyman called a *journeyman exam* is a form of assessing the level of knowledge and skills within a scope of particular craft profession, contained in the standards of requirements being the basis for conducting examinations confirming professional qualifications. Standards of examination requirements were developed by the Polish Craft Association based on the core curriculum of vocational education. Journeyman exams are conducted for over 100 professions, including professions of electrician and motor vehicle mechanic.

A journeyman exam may be accessed by both an adult and a student - young employee who meets one of the following conditions:

- he/she completed an apprenticeship at a craftsman's and theoretical supplementary training in school or outside the school;
- he/she has a certificate of completion of education in junior high school or in 8-year primary school and acquired professional skills in a profession in which he/she takes the examination, outside the school;
- he/she has a certificate of completion of education in junior high school or in 8-year primary school and at least two- or three-year seniority in the profession for which he/she takes the examination - according to the duration of education in particular profession as provided for in the classification of professions of vocational education specified in separate regulations;
- he/she has a certificate of completion of education in junior high school or in 8-year primary school and at least two- or three-year seniority in the profession for which he/she takes the examination - according to the duration of education in particular profession as provided for by the Polish Craft Association if the profession is not included in the classification of professions of vocational education;
- he/she has a certificate of completion of education in upper-secondary school or in previous post-primary school which provides vocational trainings in the major associated with the profession for which he/she takes the examination;
- he/she has vocational title in the profession included in the profession for which he/she takes the examination and after gaining the vocational title, at least half-year seniority in the profession for which he/she takes the examination.

A person applying for admission to the examination shall submit:

- application for admission,
- documents confirming vocational training practice,
- documents confirming theoretical vocational training,
- one photograph,
- proof of payment of the examination fee, the amount of which shall be determined by the chamber of crafts (in accordance with art.3 sec. 3h item 4 of the act on crafts).

Detailed requirements for people accessing the journeyman exam, condition for appointing the examination boards, the manner of conducting the journeyman exam and others is specified in the Regulation of the Minister of National Education dated September 14, 2012 *on journeyman exam, master craftsman's exam and verification exam conducted by examination boards of chambers of crafts* (Journal of Laws of 2012, item 1117).

The journeyman exam shall be conducted in two stages: theoretical and practical. Order of stages of the exam shall be determined by the chairman of the examination board in consultation with the chamber of crafts.

Practical stage consists in the candidate's individual performing of examination tasks checking practical skills. Duration of practical stage cannot be shorter than 120 minutes and longer than 24 hours, within a total of three days.

Theoretical stage consists in answering questions compiled in two parts; written and oral, to check the theoretical knowledge: Duration of the written part cannot be shorter than 45 minutes and longer than 210 minutes, duration of the oral theoretical stage cannot be longer than 30 minutes (source: *standard of examination requirements for the profession of electrician and standard of examination requirements for the profession of motor vehicle mechanic)*

Examination tasks for practical stage of the exam, questions for the written and oral part of the theoretical stage of the exam as well as sets of these questions shall be prepared by the members of the examination board in consultation with the chairman of the examination board, taking into account the standards of examination requirements for the profession.

Date and place of the practical stage and particular parts of the theoretical stage of the exam shall be determined by the chairman of the examination board in consultation with the chamber of crafts. Examinees shall be informed about the date and place of the theoretical and practical stage at least 14 days before the determined date of the exam.

Examination board of the chamber of crafts shall be appointed by the competent statutory body of the chamber of crafts for a five-year term. The seat of the board shall be the seat of the chamber of crafts. Polish Craft Association informs about the appointment of the board. The board shall consist of: the chairman of the board, the deputy chairman of the board, members of the board, secretaries of the board. Number of people in the board shall depend on the number of people accessing the journeyman exam.

The board conducts exams in the examination teams appointed by the chairman of the board in consultation with the chamber of crafts. Examination board conducting the journeyman exam consists of at least four people, i.e. the chairman of the board or his/her deputy – as the chairman of the examination team; at least two members of the board – as members of the examination team and the secretary of the board - as the secretary of the examination team.

Detailed criteria for assessment of practical and theoretical stage of the exam shall be developed by the board. The chairman of the board presents the detailed criteria of assessment to the chamber of crafts for approval. Grades shall be determined by the examination board according to the following scale from 2 to 6, wherein 2 – Is fail, and 6 – excellent).

Grades for practical stage shall be determined based on the grades received for each examination task. Grade of the theoretical stage of the exam shall be determined based on the grades given for the written and oral part, where assessed is every subject in every part. Final grade from the examination shall be determined based on the grades received at both stages of the exam.

The examinee passed the exam if he/she received at least satisfactory grades at the practical and theoretical stage of the exam.

Fail at at least one examination task at the practical stage of the exam decides about the fail at this stage.

The examinee who received a fail at examination task or tasks at practical stage of the exam, may take the resit exam covering this task or tasks, also the examinee who received a fail at subject or subjects of the written or oral part of the theoretical stage of the exam may take the resit exam covering this subject or subjects (after termination of two years from the first exam these persons shall take the exam in the full scope).

Resit exam shall be conducted by the examination board within the date and place determined by the chairman of the examination board in consultation with the chamber of crafts.

At the request of the examinee, the resit exam may cover the whole stage or respectively written or oral part of the theoretical stage.

The chairman of the examination board shall inform the examinees about the results of the practical and theoretical stage of the exam, announce the final results of the exam and inform the examinees about the right to file a complaint concerning the accuracy of the exam.

The examinee may file a complaint concerning the accuracy of the exam to the chamber of crafts within three days from the date of finishing of exam. The chamber of crafts shall examine the complaint within seven days of its receipt. Should the complaint be rejected, the examinee may request consideration of a complaint by the Polish Craft Association, within seven days from the receipt of a response from the chamber of crafts. The Polish Craft Association shall examine the complaint within fourteen days of its receipt.

A person who, for justified reasons, did not take the exam or a stage or a part of this exam or who interrupted the exam, has the right to take the exam or respectively its stage or part on the following dates of the exam within two years from the date of the first exam. After this time period, the exam shall be taken in a full scope.

The secretary of the examination board shall develop an individual exam protocol for each examinee and enclose the examinee's examination paper to it. The secretary, based on individual examination protocols, shall develop the summary report on the exam and enclose a letter on impartiality of the members of the examination board to it.

Information concerning persons who passed the journeyman exam and the passed journeyman exam shall be entered in the mortgage register of the journeyman exams.

As a result of the passed journeyman exam, the chamber of crafts shall issue and give the journeyman certificate which is a formal confirmation of professional qualifications obtained within different paths of education and during the work.

1.3. Obtained qualifications and learning outcomes certified by the exam qualification

A division of occupations into qualifications makes the education system more flexible, allows the learner to supplement qualifications according to labor market needs, their own needs and ambitions. Common qualifications are common at the level of basic vocational school.

For **electrician professional** are distinguished the following qualifications: E.7. Installation and maintenance of machinery and electrical equipment and E.8. Installation and maintenance of electrical installations.

For **car mechanic professional** are distinguished the following qualifications: M.18. Diagnosis and repair of components and assemblies of motor vehicles

Learning outcomes common to all professions

(BHP) Health and Safety Occupation Rules

Pupil:

1) distinguishes concepts related with health and safety occupation rules , fire protection, environmental protection and ergonomics;
2) distinguishes tasks and powers of institutions and services operating in the field of labor protection and environmental protection in Poland;
3) defines the rights and responsibilities of the employee and the employer's in area of safety and health working conditions;
4) predicts threat to human health and life, property and the environment associated with the performance of professional tasks;
5) identifies the threats associated with the presents of harmful factors in the work place;
6) determines the effects of harmful factors on the human body;
7) organizes the workplace according to applicable ergonomics rules , health and safety regulations , fire protection and environmental protection;
8) exerts the individual and collective protection issues during performing professional tasks;
9) fallows the principles of safety and health at work and apply the rules of law related with fire and environmental protection;
10) provides first aid to the injured in accidents at work , as well as in emergency health and life threats.

(PDG). Making and business activities

Pupil:

1) uses concepts from the area of a functioning market economy;
2) exerts the labor law , law regulations related with using protection of personal data in the area of tax law and copyright law;
3) exerts the law relating with running a business ;
4) distinguishes enterprises and institutions occurring in the industry and the connections between them;
5) analyze the activities carried out by companies in the industry;
6) initiating common ventures with different companies in the same industry;
7) prepare the documentation necessary for starting and running a business;
8) 8) conducts correspondence related with business conducting;
9) operates office devices and uses computer programs to support economic activity;
10) planning and taking the marketing activities of the business;
11) optimizes the costs and revenues of the business.

(JOZ). Foreign language professionally oriented

Pupil:

1) uses the resource of language (vocabulary, grammar, spelling and phonetic), enabling implementation of professional tasks;
2) interpret statements regarding the performance of typical professional activities slowly and clearly articulated in standard dialect;
3) analyze and interpret short texts written on performing common professional activities;
4) formulate a brief and understandable expression and written texts for communicating in the workplace;
5) using foreign sources of information.

(KPS). Personal and social competence

Pupil:

1) respects the principles of culture and ethics;
2) is creative and consistent in the implementation of tasks;
3) provides for the consequences of actions taken;
4) is opened to change;
5) is able to cope with stress;
6) updates the knowledge and improves professional skills;
7) respects professional confidentiality;

8) can be held responsible for their actions;
9) is able to negotiate the terms of agreements;
10) works as a part of team.

Learning results in the electrician profession (*developed on the basis of the Curriculum for electrician by profession, 741,103 of the structure of this type of school: basic vocational school, type of program: linear, KOWEZiU, Warsaw 2012*)

I. Educational effects common to all occupations and learning outcomes the same to professions within the area of electro-electronic constituting the foundation fortraining in a profession or group of professions

PKZ (Ea) skills which are foundation for education in the professions: telecommunications equipment fitter, mechatronics fitter, electonic fitter, electromechanical of vehicles, electrical engineer, electrician, telecommunications technician, technician ICT, technician, avionics, mechatronics technician , electrical technician , techniques, electronics and medical informatics, car mechanic, electrical power engineering techniques of rail transport, motorcycle mechanic, refrigeration and air conditioning techniques, techniques of lifting equipment

Pupil:

- uses the concepts in the field of electrical engineering and electronics;
- describes the phenomena associated with DC and AC;
- interprets the physical quantities associated with AC;
- sets of the characteristics of sine waves of the type $y = A \sin(\omega t + \varphi)$;
- exerts the law to the electrical calculation and estimation of the size of electrical circuits and electronic circuits;
- recognizes the parts and electrical systems and electronics;
- draws schematic diagrams and installation electrical and electronic systems;
- distinguishes between parameters of components and electrical and electronic systems;
- uses a technical drawing of the mounting and installation work;
- selects tools and measuring instruments and performs work in the field of the mechanical components and electrical and electronic equipment;
- performs work in the field of manual processing;
- describes the functions of components and electrical and electronic systems on the basis of technical documentation;

- takes the connection components and electrical and electronic systems on the basis of circuit diagrams and assembly;
- selects the methods and instruments for measuring parameters of electronic circuits and electronic equipment;
- takes measurements of electrical components, electrical and electronic systems;
- presents the results of measurements and calculations in the form of tables and graphs;
- uses the technical documentation, catalogs and manuals, and adheres to the standards in this regard;
- uses computer programs supporting the execution of tasks.

II. Learning outcomes proper to qualifications distinguished in the profession electrician

E.7. Installation and maintenance of machinery and electrical equipment

1. Installation of machinery and electrical equipment

Pupil:

1) classifies machines and electrical equipment according to specific criteria;
2) defines the technical parameters of machinery and electrical equipment;
3) distinguishes parameters of the elements and components of machinery and electrical equipment;
4) recognizes the machinery and electrical equipment and their components;
5) distinguishes structural materials used in machines and electrical equipment;
6) recognizes the power supplies, control and protection of machinery and electrical equipment and components;
7) recognizes the wires and cables;
8) determines the destiny of machinery and electrical equipment;
9) defines the functions of the parts and components used in machinery and electrical equipment;
10) reads and prepares drawings and diagrams of machinery and electrical equipment;
11) selects tools for installation of machinery and electrical equipment;
12) delivers mechanical assembly of electrical and electronic components;
13) mounted power supplies, control, regulation and protection of machinery and electrical equipment on the basis of the documentation;
14) checks the conformity of the work with documentation;
15) takes measurements of machinery and electrical equipment parameters.

2. Maintenance of machinery and electrical equipment

Pupil:

1) recognizes the parts of machinery and electrical equipment;
2) locates the typical damage of machinery and electrical equipment;
3) respect the principles of maintenance of machinery and electrical equipment;
4) planned sequence of actions during removal and installation of machinery and electrical equipment;
5) takes measurements of voltage, winding resistance and insulation resistance;
6) performs replacement of worn or damaged parts and components of machinery and electrical equipment;
7) delivers the replacement of defective parts of control systems and protection of machinery and electrical equipment;
8) checks the correctness of the installation in control systems and protection of machinery and electrical equipment on the basis of the documentation;
9) carry out inspection and maintenance of electrical machinery and equipment;
10) checks the operation of machines and electrical equipment after assembly and maintenance.

E.8. Installation and maintenance of electrical installations

1. Electrical installations

Pupil:

1) distinguishes between the wires used in electrical installations;
2) recognizes the equipment installation;
3) recognizes light sources and luminaires;
4) defines the technical specifications of electrical installations and equipment installation;
5) respect the rules for the operation of electrical installations in residential and industrial areas;
6) prepares assembly diagram of the installation;
7) traces the routing of the wires and position of equipment installation on the basis of the scheme;
8) selects the tools to perform various types of electrical installations;
9) takes the connection between the electrical components of the circuit diagram and assembly;
10) checks the conformity of electric installation diagram;

11) takes measurements of parameters of installation and protection in accordance with the instructions;
12) checks the operation of the electrical system made after installation.

2. Maintenance of electrical installations

Pupil:

1) respect the principles and defines the scope of maintenance of electrical installations;
2) recognizes typical damage to electrical installations;
3) selects parts electrical components on the basis of catalog data;
4) selects tools for assembly and disassembly of electrical components;
5) selects meters for measuring electrical parameters;
6) verifies the continuity of the phase conductors and protective;
7) takes measurements of parameters of electrical installations;
8) takes replacement on damaged cables and components of electrical installations;
9) checks the operation of fire protection;
10) performs maintenance of electrical installations according to the documentation.

The effects of training in the profession of car mechanic *(developed on the basis of the Curriculum for the profession of car mechanic, 723,103 of the structure of this type of school: basic vocational school, type of program: linear, KOWEZiU, Warsaw 2012)*

I. Common aims in teaching process between occupations which are the foundation of education in a profession or group of professions

PKZ (Ea) skills which are foundation for education in the professions: telecommunications equipment fitter, mechatronics fitter-electronics, electromechanical motor vehicles, electrical engineer, electrician, telecommunications technician, technician ICT, technician, avionics technician mechatronics, electrical technician , techniques, electronics and medical informatics, car mechanic, technician automotive technician automatic rail traffic control, electrical power engineering techniques rail transport, motorcycle mechanic, refrigeration and air conditioning techniques, techniques of lifting equipment

Pupil:

1) uses the basic issues in the field of electrical engineering and electronics;
2) describes the phenomena associated with DC and AC;
3) interprets the physical quantities associated with AC;
4) sets of the characteristics of sine waves of the type $y = A \sin(\omega t + \varphi)$;

5) applies the law to the electrical calculation and estimation of the size of electrical circuits and electronic circuits;
6) recognizes the parts and electrical systems and electronics;
7) draws schematic diagrams and installation electrical and electronic systems;
8) distinguishes parameters of components and electrical and electronic systems;
9) uses a technical drawing of the mounting and installation work;
10) selects tools and measuring instruments and performs work in the field of the mechanical components and electronic equipment;
11) performs work in the field of manual processing;
12) describes the functions of components and electrical and electronic systems on the basis of technical documentation;
13) takes the connection components and electrical and electronic based on circuit diagrams and assembly;
14) selects the methods and instruments for measuring parameters of electronic circuits and electronic equipment;
15) takes measurements of electrical components, electrical and electronic systems;
16) presents the results of measurements and calculations in the form of tables and graphs;
17) uses the technical documentation, catalogs and manuals, and adheres to the standards in this regard;
18) uses computer programs supporting the execution of tasks.

PKZ (Ma) skills which are foundation for vocational education: mechanic-operator vehicles and agricultural machinery, watchmaker, optician mechanic, mechanic precision mechanic industrial automation and precision equipment, mechanic-fitter machinery and equipment, car mechanic, operator of machine tools locksmith, blacksmith, fitter hulls, car tinsmith, tinsmith, painter, techniques, optician, mechanic engineering, mechanic ship, techniques shipbuilding techniques vehicles, techniques of agricultural mechanization, mechanic, fitter mechatronics, electrical engineer vehicle technician mechatronics technician of road transport, techniques, energetics, modeler foundry techniques , drilling technician underground mining techniques borehole mining, techniques, surface mining, techniques, processing of solid minerals, techniques caster, techniques metallurgist operator foundry machines and equipment, the operator of machines and equipment metallurgical operator of machines and equipment for processing plastic, the operator of machines and equipment for plastics processing,

goldsmith-jeweler, motorcycle mechanic, refrigeration and air conditioning techniques, techniques of lifting equipment

Pupil:

1) respects the principles of drawing a technical drawing machine;
2) draws sketches of machine parts;
3) prepares technical drawings using computer technology;
4) distinguishes parts of machinery and equipment;
5) distinguishes types of connections;
6) respects the principles of tolerance and fits;
7) distinguishes construction materials and supplies;
8) distinguishes means of internal transport;
9) selects the modes of transport and storage of materials;
10) recognizes the types of corrosion and determine the methods of protection against corrosion;
11) distinguishes the techniques and methods of producing machine parts and equipment;
12) distinguishes machines, devices and tools for hand and machine;
13) distinguishes measuring instruments used during manual processing and machine;
14) takes measurements Workshop;
15) distinguishes the methods of quality control of work performed;
16) defines the structure and respects the principles of operation of machinery and equipment;
17) uses the technical documentation of machines and equipment and complies with the standards for technical drawing, machine parts, construction materials and consumables;
18) uses computer programs supporting the execution of tasks.

PKZ (M.g) skills constitute the foundation of education in the professions: car mechanic, automotive technician, automotive electrical engineer, mechanic-operator vehicles and agricultural machinery, agricultural mechanization techniques

Pupil:

1) performs operations control and maintenance of vehicles;
2) applies the provisions of the law on road traffic and vehicle drivers;
3) respects the principles of driving;

4) performs activities related to the conduct and operation of the motor vehicle to the extent necessary to obtain a driving license category B.

II. Learning outcomes relevant to qualifications in car mechanic profession

M.18. Diagnosing and repairing of components and assemblies of motor vehicles

1. Diagnose components and assemblies of motor vehicles

Pupil:

1) adopts a motor vehicle diagnostic and prepares documentation of acceptance;
2) prepares a motor vehicle diagnostics;
3) characterizes the construction of motor vehicles and explains the principles of components and assembly of these vehicles;
4) defines the components and assemblies of a motor vehicle;
5) uses the tools and measuring instruments to perform diagnostics of vehicles;
6) selects the method and the extent of diagnostic components and assemblies of motor vehicles;
7) uses computer programs for the diagnosis of motor vehicles;
8) takes measurements and diagnostic tests vehicles and interpret their results;
9) evaluates the technical condition of vehicles.

2. Repair teams and components of motor vehicles

Pupil:

1) locates the damaged assemblies and components of vehicles on the basis of measurements and results of diagnostic tests;
2) assesses the cost of repairs of motor vehicles;
3) selects the method and determines the scope of the repairing a motor vehicle;
4) takes disassembly of assemblies and sub-assemblies of vehicles;
5) carries out the verification of assemblies and sub-assemblies of vehicles;
6) selects the assemblies or subassemblies of motor vehicles or their substitutes to replace;
7) replaces defective assemblies and components of vehicles using the equipment and workshop tools;
8) performs assembly of subassemblies and assemblies of motor vehicles;
9) performs maintenance assemblies and sub-assemblies of vehicles;
10) explains the rules for the operation of motor vehicles and selects consumables;
11) carry out trials after repairing of motor vehicles;
12) assess the quality of repairing and determines its cost.

1.4. Description of formal documents and their content confirming the attained qualifications issued in connection with the passed exam

Person who passed the examination confirming the qualification/s in a profession, shall receive a certificate or diploma confirming the professional qualifications.

A certificate shall be received by a person who passed the professional examination within the scope of one qualification.

Regulation of the Minister of National Education dated February 24, 2012 amending the Regulation on the conditions and manner of assessing, classifying and promoting students and course participants as well as conducting tests and examinations in public schools (Journal of Laws dated March 12, 2012, item 262

A diploma shall be received by a person who passed the professional examination within the scope of all qualifications required for particular profession and who has a level of education required for particular profession.

In the profession of **Electrician** separated are two qualifications (table 3), which may be attained by educating at 3-year basic vocational school or during vocational qualifying courses**.**

Table 3. Qualifications separated for the profession of electrician

Number of qualification (order) in profession	Symbol of qualification from core curriculum	Name of qualification
K1	E.7	*Installation and maintenance of electrical machines and equipment*
K2	E.8	*Installation and maintenance of electrical systems*

Source: Own study based on the regulation of the Minister of National Education dated December 23, 2011 on classification of professions of vocational education (Journal of Laws of 2012, item 7, as amended)

In the profession of **Motor vehicle mechanic** separated is one qualification (table 4), which may be obtained by educating at 3-year basic vocational school or during vocational qualifying courses.

Table 4. Qualification separated for the profession of motor vehicle mechanic

Number of qualification (order) in profession	Symbol of qualification from core curriculum	Name of qualification
K1	M.18.	Diagnostics and repair of sub-assemblies and assemblies of motor vehicles

Source: Own study based on the regulation of the Minister of National Education dated December 23, 2011 on classification of professions of vocational education (Journal of Laws of 2012, item 7, as amended)

Certificate confirming professional qualifications

Certificate confirming professional qualifications shall be received by a person who passed the examination confirming professional qualifications (a person received at least 50% of points at a written part and at least 75% of points at a practical part).

On the certificate confirming professional qualification entered is: name (names) and surname, date and place of birth, PESEL number of the person who passed the examination confirming professional qualifications, name of the qualification in accordance with the vocational education qualifications framework and marking of the qualification in accordance with the core curriculum of vocational education, name and digital symbol of the profession or professions in which separated was particular qualification in accordance with the vocational education qualifications framework, results of the examination confirming the professional qualifications from written and practical part, town/city and date of issuing the certificate as well as the number of the certificate (*Notice of the Minister of National Education dated October 31, 2013 on the announcement of the uniform text of the Regulation of the Minister of National Education on certificates, state diplomas and other school forms (Journal of Laws dated July 3, 2014, item 893)* Sample certificate confirming professional qualification is presented in Appendix No. 1.

Diploma confirming professional qualifications

A person may receive a diploma confirming professional qualifications if he/she has:
1) certificates confirming all qualifications separated in particular profession, in accordance with the vocational education qualifications framework and
2) a certificate of completion of education in upper-secondary school or in previous post-primary school or a statement of passing extramural examinations within the terms specified in the core curriculum of general education for basic vocational school.

Diploma confirming professional qualifications in a profession taught at the technician level, in which separated was, in accordance with the vocational education qualifications framework, at least one qualification in common with the profession taught at the level of basic vocational school, may also be received by:
1) a person who has jointly:
   a) a diploma confirming professional qualifications, in a profession taught at the level of basic vocational school, issued after passing the examination confirming professional

qualifications the scope of which covers the qualification or qualifications separated in a profession taught at the level of technician common with the profession taught at the level of basic vocational school,

b) a certificate or certificates confirming qualifications separated only in the profession taught at the level of technician,

c) a certificate of completion of education in upper-secondary school or in previous post-primary school providing secondary education;

2) a person who completed a theoretical supplementary training of young people in basic vocational school and has a journeyman certificate in profession taught at the level of basic vocational school, issued after passing the journeyman exam the scope of which covers the qualification or qualifications separated in the profession taught at the level of technician, common with the profession taught at the level of basic vocational school, conducted in accordance with the *Regulation of the Minister of National Education dated September 14, 2012 on journeyman exam, master craftsman's exam and verification exam conducted by examination boards of chambers of crafts (Journal of Laws, item 1117),* and meets the conditions in accordance with item1b and 1 c

3) a person who has a certificate of obtainment of the vocational title in the profession taught at the level of basic vocational school issued after passing the qualifying examination conducted by the state examination board appointed by the school superintendent, the scope of which covers qualification or qualifications separated in a profession taught at the level of technician, common with the profession taught at the level of the basic vocational school and meets the conditions in compliance with item 1b and 1c.

On the diploma (depending on the met conditions, item 1, 2, 3) entered are, among others: name (names) and surname, date and place of birth, PESEL number of the person who receives the diploma ((or entered is series and number of passport or other document confirming identity), name of the profession in which qualifications have been confirmed as well as name of the qualification in accordance with the vocational education qualifications framework, and in case of professions in which, in accordance with the vocational education qualifications framework, separated is more than one qualification - names of all qualifications separated in this profession (confirmed by a certificate or certificates), results of the examination or examinations confirming professional qualifications, separately from the written and oral part, annotation on possessing a journeyman diploma or certificate or a certificate of obtainment of the vocational title, town/city and date of issuance of the diploma as well as the diploma's number.

Issuance of the diploma

Graduates of school conducting vocational training, who in particular school year received a certificate of completion of this school and a certificate confirming the last qualification separated in a profession which is taught by this school, are issued the diploma based on the list of graduates in particular school year, provided by the school headmaster to the regional board, containing: names and surnames of graduates as well as their PESEL numbers, along with the information on possessed certificates confirming professional qualifications obtained during education in a school

The aforementioned list shall be provided to the regional board by the school headmaster within 7 days from the date of finishing a one year teaching and educational class.

A diploma shall be issued to persons who completed the vocational qualification course, have school certificates obtained abroad recognized as equivalent to certificates of completion of the relevant Polish upper-secondary schools or post-primary schools, took professional examination in qualifications in an external mode, at the request of the persons meeting the above conditions, submitted to the director of the regional board that issued the certificate confirming the last qualification separated in the particular profession. Required documents shall be enclosed to the request.

Diploma supplement

At the request of a person holding a diploma, the regional board which issued the diploma, shall issue the diploma supplement developed respectively on the basis of the description of qualifications or description of the profession, as indicated in the core curriculum of teaching in particular profession, or on the basis of description of training in particular profession specified in the core curriculum of vocational education.

The request shall include name and surname, address and PESEL number of the person possessing the diploma, and in case there is no PESEL number – series and number of passport or other document confirming identity.

At the diploma supplement entered is the diploma's number, name (names) and surname of the diploma's holder, name of the diploma, and in case the supplement is issued in a foreign language - also the translated name of the diploma, profile of skills and competences, professions available for the diploma's holder, basis of the diploma's issuance as well as, e.g. (depending on the conditions met): description of officially recognized manners of obtainment of the diploma (in which included is information on the possible

manners of attainment of the professional qualifications, share of theoretical and practical training for particular profession in percentages and information on duration of training leading to the obtainment of diploma) or the course of training finished with obtainment of the diploma (in which included is information on vocational training completed by the graduate, share of theoretical and practical training for particular profession in percentages as well as the total duration of training finished with obtainment of diploma).

At a supplement, in a place designed for entering information on the national information point, entered is website address of the institution designated by the Minister of Education and Training functioning as the National Europass Centre.

The term of issuing a certificate/ diploma confirming professional qualifications

The regional board shall determine the date of issuance of certificates confirming professional qualifications and diplomas - as a date of passing of examination confirming professional qualifications.

School headmaster, the director of the institution, the employee or a person authorized by him/her hands over to examinees the certificates and diplomas confirming professional qualifications. Persons who submitted an application along with the required documents to the regional examinations board shall receive the diplomas confirming professional qualifications there.

Manner of filling the documents confirming professional qualifications

The manner of filling the documents confirming professional qualifications, issuance of duplicates and other specific requirements, e.g. loss of original diploma or a statement, corrections in the content of certificates confirming professional qualifications, diplomas, supplements, change of name (names) or surname, are specified in the *Notice of the Minister of National Education dated October 31, 2013 on announcement of the uniform text of the Regulation of the Minister of National Education on certificates, state diplomas and other school forms (Journal of Laws dated July 3, 2014, item 893*

Certificates, diplomas, supplements and statements are in A4 format. Diplomas/ certificates confirming professional qualifications are printed on a paper printed with light brown guilloche printing.

Diploma supplement is printed on white paper, on both sides. On the first page of the supplement, in the upper left corner printed is logo of Europass, and in the upper right corner - the state flag and the words “Republic of Poland”.

Legalization of certificates/ diplomas

Legalization of certificates for international legal exchange, issued by schools shall be made by the school superintendent having jurisdiction over the seat of the school. Legalization of certificates confirming professional qualification(s) issued by the regional boards as well as of certificates issued by schools, complexes of schools and school consultation points at diplomatic representations, consular offices and military representations of the Republic of Poland for international legal exchange, shall be made by the Minister of Education and Training.

Legalization shall be made by placing the following listed things on the certificate, diploma:

1) clause "Stated authenticity of the certificate (diploma, statement, index)";
2) signature of the person authorized for legalization of the certificate, diploma, statement or index as well as name stamp; imprint of the seal should be clear;
3) official seal of the body,
4) name of town/city in which located is seat of the legalizing body,
5) date of legalization.

Register of certificates and diplomas

The regional board conducts, among others, nominative registry of issued certificates/ diplomas confirming professional qualifications. Registry contains: name (names) and surname, date of birth and PESEL number of the person who received the document, number of the issued document, and in the case of a certificate and diploma confirming professional qualifications handed over to school, continuing education unit, practical education unit or employer - name and address respectively of school or unit to which handed was the document, or name and address of the employer to which handed was the document.

Confirming qualifications in craft professions

The journeyman exam is a form of assessing the level of knowledge and skills within a scope of profession corresponding to particular type of craft (*Regulation of the Minister of National Education dated September 14, 2012 on journeyman exam, master craftsman's exam and verification exam conducted by examination boards of chambers of crafts (Journal of Laws dated October 10, 2012, item 1117); Act dated March 22, 1989 on craft (Journal of Laws of 2002 No. 112, item 979, as amended),* including the profession of electrician and motor vehicle mechanic), specified in:

1) classification of professions and specialties for the needs of the labor market;
2) classification of professions of vocational education

The person who passed the journeyman exam shall receive the **journeyman certificate** (sample journeyman certificate is included in Appendix No. 6) issued by the chamber of crafts.

The journeyman certificate is printed on white paper covered by decorative mesh - green guilloche (underprint). The first page of the journeyman certificate is decorated with guilloche with the letters RP and craft logo, the second page is decorated with guilloche without these letters and without the craft logo. The journeyman certificate has A4 format (210 x 297 mm). The journeyman certificate is stamped in places indicated in the print samples with official stamp of the chamber of crafts at which the board was appointed, and in the places designed for photograph – with the official stamp with a diameter of 20 mm.

In the journeyman certificate, in place designed for number, entered is ordinal number under which the person who passed the examination is entered in the relevant mortgage register (information on persons who passed the exam shall be entered in the mortgage register of journeyman exams). The detailed content of the mortgage register of journeyman exams regulates the aforementioned Regulation of the Ministry of Education of 2012. The journeyman certificate shall be signed by the president of the chamber of crafts and the chairman of the board.

At the request of the person who obtained the journeyman certificate, the chamber of crafts shall issue a **supplement to the journeyman certificate (Europass)** developed based on the description of the graduate qualifications or description of the profession specified in the core curriculum of teaching in particular profession, description of education in particular profession specified in the core curriculum of vocational education or based on the standard of examination requirements developed by the Polish Craft Association.

In supplement entered is number of the journeyman certificate, name (names) and surname of the holder of the journeyman certificate, name of the journeyman certificate and in case the supplement is issued in a foreign language - also the translated name of the journeyman certificate, profile of skills and competences, professions available for the holder of the journeyman certificate, basis of the journeyman certificate's issuance, as well as description of the course of education finished with obtainment of the journeyman certificate. In supplement, in a place designed for description of the course of the education finished with obtainment of the journeyman certificate, provided is information on vocational training completed by the holder of the journeyman certificate being basis for the admission to the journeyman exam. In a place designed for entering information on the national information

point, entered is website address of the institution designated by the Minister of Education and Training functioning as the National Europass Center.

Information on the procedure of issuing a duplicate of the journeyman certificate is regulated by the aforementioned regulation of the Ministry of Education of 2012.

Legalization of journeyman certificates for international legal exchange, shall be made by the Polish Craft Association. Legalization shall be made by placing the following clause on the journeyman certificate: "Stated authenticity of the journeyman certificate no. ..... issued on ..... by ....." along with the provision of full name and seat of the chamber of crafts; signature of the person authorized for legalization of the journeyman certificate as well as the name stamp, official stamp of the Polish Craft Association; name of town/city in which located is seat of the Polish Craft Association; date of legalization.

Recognition of professional qualifications obtained abroad

The authorities competent to certify professional qualifications in Poland are:

- Polish Craft Associations in case of certification of journeyman and master craftsman's exams;
- Regional education authorities in case of certification of the external professional examinations;

Recognition of education obtained abroad takes place based on the following law regulations:

- *International agreements concluded by the Republic of Poland, on the basis of which the parties mutually recognize the documents concerning education Art. 93 of the Act dated September 7, 1991 on the education system (Journal of Laws of 2015, item 2156, as amended)*
- *Regulation of the Minister of National Education dated March 25, 2015 on the procedure for the recognition of certificate or other document or confirmation of education or rights to continue studies obtained in a foreign education system (Journal of Laws, item 447).*

In Poland, the information center operating within the Department of International Affairs and Education Recognition of the Ministry of Science and Higher Education in Warsaw provides information on whether a particular profession in countries of EU, EEA and Swiss Confederation is a regulated profession, a sector profession or a profession belonging to the so-called general system and, if necessary, directs the citizen to the appropriate authority competent in matters of recognition of qualifications in the profession. This center also informs about the procedure of recognition of qualifications and valid law regulations.

1.5. The system of examination, evaluation and qualification passing rate in the electrician and car mechanic profession for example Vocational School No. 1 in Ostroleka

In the Complex of Vocational School No. 1 named Joseph Psarski in Ostroleka:

1. The examination proved the formal qualifications in the profession, is carried out:
   - the area of specific qualifications separated among qualification in a profession or in occupations according to the classification of vocational education
   - base on the requirements specified in the core curriculum of vocational education.
2. The examination, proved formal qualifications in the profession , is carried out for:
   - vocational schools students and technicians,
   - pupils and other post-secondary schools,
   - graduates of vocational schools, technicians and post-secondary schools,
   - adults who have completed practical job training for working adults, or training for adults professions , if the apprenticeship program covers requirements of the core curriculum in professions reported by the Prefect of the Regional Examination Board.
3. The Director of the Central Examination Commission not later than 20th August, each year publishes in the Public Information Bulletin on the website of the Central Examination Commission communication on the timetable for carrying out the qualification in the profession , in the next school year, specifying the date of conducting the written part of the exams and the date of beginning and ending the exams in the next exam sessions.
4. The Director of the Regional Examination Commission no later than five months before the date of beginning the exams which confirm the qualification in the profession , at a given session, announces the date of the exam on the Commission's website District.
5. The Director of the Regional Examination Commission settles the detailed schedule for conducting the practical part of the exam and submit it to the chairman of the examination teams, no later than 2 months before the start of this part of the exam and announce it on the website of the Regional Examination Board.
6. Examination of formal qualifications in the profession is carried out at the School of Professional No. 1 in Ostroleka in 2016. In three exam sessions, for example: January – February, May – July, August – October, according to the Communication Director of the Central. Examination Committee of 27 April 2015, on the terms test, secondary school

exam, matriculation examination, the examination confirming vocational qualifications and qualification exams in the profession in 2016.

The structure of the qualification examination in the profession:

- written part is based on solving the written part of the test (40 multiple-choice task – WW) can be carried out with the use of examination papers and answer cards, electronic system for conducting the exam, duration: 60 minutes. *
- practical part consists in carrying out a task or tasks of the examination, the result of which is a choice, service or documentation, time: not less than 120 minutes and no longer than 240 minutes for the models listed below. *

**According to Article 44, as amended. 3 of the Education Act - Duration of the written part and the practical part of the qualification examination in the profession in terms of the qualification has been defined as a Quick exam in a given profession.*

In order to easily identify the forms of planning and organizing individual sessions examination, the following designations:

- **Model "d"** – Task examination, which one of the end result is the documentation examinee perform in the exam room, without specialized equipment,
- **Model "dk"** – Job examination, which one of the end result is the documentation of the examinee perform using hardware,
- **Model "in"** – Task examination, which one of the end result is a choice or service examinee perform of the examination for posts equipped with specialized equipment and tools.
- **Model "wk"** – Task examination, as a end result is a choice or service examinee, perform the examination for posts equipped with computer equipment.

In the school year 2015/2016 for the electrician and car mechanic professional, effective form of "in". The duration of the practical part of the car mechanic professional lasts 120 minutes, and for the electrician profession, is 180 minutes for each qualification.

For the preparing and conducting the qualification exams in the certain profession at the School of Professional No. 1 in Ostrołęka corresponds **the chairman of the examination staff** (ESA), which is the headmaster.

a. The written part of the exam training:
   - student enters the school he attends,
   - graduate joins exams in school, which was graduated,
   - a person who has completed a qualifying vocational course joins in a place where the course took place and was designated by the entity,
   - an adult who has completed apprenticeship or training adults for work,
   - adult and the person admitted to extramural professional examination , takes exams in a place designated by the director of the regional examination commission, which is informed no later than one month before the exam date.

b. The practical part of the vocational examination:
   - student joins the school, which attends, or in an institution, which takes apprenticeship, or the employer where apprenticeship was held,
   - graduate writes at school which was graduated , or at the facility, which was held apprenticeship, or the employer where apprenticeship was held,
   - a person who has completed a qualifying vocational course joins the entity conducting the course or in a place designated by the entity,
   - an adult, who has completed adults training for work and a person admitted to extramural professional examination proceeds in a place pointed by the director of the regional examination commission, which is informed no later than 2 months before the date of the exam.

c. In appropriate cases, the written and practical exam can be held in another place pointed by the director of the regional examination commission, the examinee is informed no later than one month before the date of the exam.

d. The chairman of the examination staff develops an internal schedule for the written and practical part of the exam and passes the information contained in the schedule of the regional examination commission in the manner and within the period set by the regional commission.

The Headmaster of the school or institution, where, for the first time the professional exam must be conducted ,up to 30th September of the school year, which is to be carried exam:

- school or institution must be reported to the director of the regional examination commission competent for the seat of the school in the manner, determined by the

regional commission, in the notification should be indicated the number of schools in the Register of Schools and Educational Institutions,

- puts the authorization of the school or institution to carry out the practical part of the exam training in skills, in which the test will be carried out,
- request authorization of the school or carries out the written part of an electronic system – if the school or facility is scheduled the exam in electronic form.

The employer, who is to be the first time conducted professional exam, up to 30th September of the school year in which the exam is to be carried out:

- reports place to carry out professional exam to the director of the regional examination commission competent for the place of the exam, as determined by the regional commission,
- submits an application for authorization to carry out the practical part of the professional exam in the specific competence in which this exam will be carried out,
- submits an application for authorization of the employer to carry out the written part of in the electronic system to carry out the examination – if the employer has planned exam in electronic form.

Candidates, who intend to take part in the exam that improves their qualification in the profession, as a written **declaration of accession exam**.

The Declaration includes:

- personal data: name (s) and the name of the examinee, social security number, and in the absence - social security number - the series and number of passport or other identity document, date and place of birth and contact details, in particular, mailing address, email address or phone number;
- the name and symbol of the digital profession and the name of qualification, according to the classification of occupations for vocational education in the field, which the examinee intends to take the exam training, as well as the determination of such qualifications, based on the core curriculum of vocational education;
- information, the examinee who joins the professional examination;
- information to which part of the professional examination examinee intends to proceed again – in the case of re-joining the professional examination by the examinee.

The Declaration includes a statement of the candidate's consent to the processing of personal data referred to in Article. 23 paragraph. 1 point 1 of the Act of August 29, 1997. On personal data protection (Dz. U. of 2014. Pos. 1182 and 1662).

A student makes a declaration to the Director of the school she attended.

Graduate makes a declaration to the Director of the school, which he graduated. In the case of closing or school transformation , a graduate submit a declaration to the Director of the regional examination commission competent for the place of residence of the graduate. To the declaration student accompanied school leaving certificate.

A person who has completed a qualifying vocational course, immediately after its completion makes a declaration right after the leading authorities that keeping a qualifying vocational course with a certificate of completion of this course.

The results of the qualification exam are confirmed by the Director of the examination commission based on the number of points obtained by the examinee:

1) in the written part: after reading the answers recorded and archived in an electronic system to carry out the qualification examination in the profession – in case where part of a written exam confirming qualifications in the profession is carried out using an electronic system conducting this examination, after reading the electronic answers card - in case where the written part confirms the qualification in the profession , with the use of examination papers and answer cards;
2) practical part - the electronic reading assessment card.

The results of the qualification examination in the profession are presented as a percentage.

The winner as well as a finalist of the tournament or Olympics associated with the selected object or field of knowledge, mentioned in the list set out by the Minister in charge of education and published in the Bulletin of Public Information are free from the written part of the qualification examination in the profession.

This exemption is based on a certificate stating the title of appropriately the winner or finalist. The certificate must be submitted to the chairman of the examination team, which informs the director of the regional examination commission that student or graduate gain the title of the winner or finalist.

Exemption is equal with gaining 100 % from the written part of the qualification exam.

The results of the exams qualification in the certain profession are final and there is no complaint to the administrative court.

The diploma confirming **vocational qualifications** is issued to those who pass the examinations confirming all qualifications distinguished in the profession, and will be suitable for the profession level of general education.

Student (listener):

- who did not take the qualification exam in the particular profession or the relevant part of the examination within the prescribed period,
- whose written part as well as the practical part of the qualification exam in the particular profession has been canceled,
- who has not received the required number of points needed to pass the exam for the qualification ,has **the right to join to another** qualification exams in the next terms during the course of learning.

A graduate or a person who has completed KKZ, taking the extramural professional exam and an adult who has completed vocational training of adults:

- if the person did not join the qualification exam in the profession or the relevant part of the exam within the outlined period,
- if the written part and the practical part of the qualification exam in the certain profession has been canceled,
- if the student do not obtain the required by the exam , number of points for this part of the exam,

they have the right to retake the exam in the following terms of its conducted.

If a graduate or a person who has completed KKZ, takes an exam or a part of it for the third or more times, she/ he passes this exam or part of it base on rules for the extramural exam. There is a fact that these candidates does not apply to a list of professions that are not expected to carry out extramural professional examinations.

After 5 years from the date on which the examinee for the first time:

- proceeded to the qualification exam in profession and did not get required number of points to pass it

- take the exam to confirm the qualification in the profession, but the written or practical part of the exam was cancelled,
- did not take the written part or practical part of the qualification exam in the profession within the outlined period,

examinee can take the qualification exam in the profession.

In the Vocational School Complex No. 1 in Ostrołęka is conducted a systematic analysis of exams results of the profession. Analysis of these examinations are documented in meetings of the Council of Education and protocols staff teams . Students Vocational School No. 1 in the Team Vocational School No. 1 in Ostrołęka professions: electrician and car mechanic (unofficial results based on the electronic test) proof poor passing rate of the written part and a very good pass rate the practical part of the qualification exam in the profession (Table 5). Full information about the results of professional examinations are used to draw conclusions for further work, leading to the improvement of the educational process. Here are some of them:

- enrichment of extracurricular activities to prepare students for the exams of professional qualifications,
- to motivate students towards the need for having a certificate of professional competence and certificates of vocational qualifications,
- parents education and work with them to improve the level of motivation among students,
- conducting and analysing test exams of qualifications, which will determine the level of preparedness of students.

Table 5. The results of the qualification examination in the Profession electrician and mechanic Motor Vehicles in the Basic Vocational School Complex No. 1 Vocational School No. 1 for them. Joseph Psarski in Ostroleka (May – July 2015)

No.	Direction / qualification	The number of students taking the written exam	Students who pass the written part (A form of electronic and traditional)		The number of students taking the practical test	Students who pass the practical part		Students who have received a certificate
			number	%		number	%	number
1.	Car mechanic M.18	21	7	33,3	20	20	100	7
2.	Electrician (data will be made public at the end of March 2016)							
	E.7	-	-	-	-	-	-	-
	E.8	-	-	-	-	-	-	-

Source: Regional Examination Board in Warsaw - the results of the qualification examination in the profession of 28.08.2015 r

1.6. Summary

The dynamic development of the vehicle industry makes an increasing the demand for people with the right skills. The progress of technology and technique affect on changes in the way education and gaining knowledge as well as skills for people involved in the automotive industry. Today, is not enough to use knowledge which was taught many years ago. A car mechanic is a person who holds knowledge from the construction, maintenance and repairing of vehicles, but also keep updating their knowledge and gain new skills. The outgoing growth in the number of vehicles on the road, forces the economy to increase the number of specialists who are performing their duties honestly, professionally for services in the automotive industry.

The electrician profession implies a great responsibility, because the activities carried out by him ensure the safety of people using the energy networks or machinery, and electrical equipment. Electrician is ready to perform, diagnose the state, making repairs electrical machines and electric units. Electrician finds employment: in power plants, mines, steel mills, on the other hand, companies repairing electrical equipment in commercial companies involved in the sale of electrical equipment in companies designing and assembling alarm systems, running his own business and economic service (for example : repairing household appliances services electrical installation).

From 1 September 2012 starts the process of implementing changes in vocational and continuing education. Their goal is to increase the efficiency and effectiveness of vocational training so as to suit the needs of the changing labor market and the needs of the modern knowledge-based economy. High-quality vocational education is one of the priority tasks of the educational policy of the state.

Modern vocational school or institution is faced with the uneasy task as a result of changes in the system of secondary schools, the new classification of occupations for vocational education, the new core curriculum for general education, as well as the new core curriculum of vocational education, which gives wide opportunities for adults vocational education interested in obtaining additional qualifications or changes profession.

The labor market needs a high-class specialists, therefore a training must be adjusted to needs of employers. This applies particularly to apprenticeship. Turning employers in the education process . What is more it raise the professional level of the teaching profession, and allows entrepreneurs access to well-qualified young staff.

Classification of occupations for vocational education has been aligned with International Standard Classification of Occupations to the names of professions and their symbols digital. It is the primary source of information during planning vocational training. Classification of occupations for vocational education determines the qualifications extracted and called for specific professions at the vocational school, technical school and post-secondary education. Qualifications in occupations are distinguished within individual professions are described in the core curriculum of vocational education as a set of expected learning outcomes: knowledge, skills and competences personal and social, allowing independent performance of professional tasks. In addition to traditional vocational education, training in skills can be carried out on qualifying vocational courses, which enables pupils to take the exam the qualification in the profession in terms of the qualification. The new classification of occupations for vocational education includes 200 occupations in which 252 distinguished qualifications.

In the school year 2012/2013 the external examination system was introduced to modernize an examination of the qualifications in the profession, also called professional examination. It is adapted to separate qualifications in various professions included in the new classification of vocational education and training in the new core curriculum for vocational education. The classification of occupations distinguished one, two or three qualifications, depending on the specific professional tasks relevant to the profession. This means that the person taking it will engage in the many tests as there are separate qualifications in the profession. The achievement of the expected learning outcomes in terms of the qualification will be confirmed by a certificate issued , by the district examination committee, after passing by the student (learner) exam confirming this qualification.

1.7. References

1) Act of 7 September 1991. Education System (Dz. U. of 2004. No. 256, item. 2572, as amended. D.)
2) The Law on the craft of 22 March 1989. (Dz. U. of 2002. No. 112, item. 979, as amended. D.)
3) The law on employment promotion and labor market institutions of 20 April 2004. (Dz. U. No. 99, item. 1001, as amended. D.)
4) Regulation of the Minister of National Education of 23 December 2011. On the classification of vocational education training (Dz. U. of 2012. Pos. 7)
5) Regulation of the Minister of National Education of 7 February 2012. On the core curriculum of vocational education (Dz. U. of 2012. Pos. 184)
6) Regulation of the Minister of Labour and Social Policy of 27 April 2010. on the classification of professions and specialties for the needs of the labor market and its scope (Dz. U. No. 82, item. 537, as amended).
7) Regulation of the Minister of National Education of 24 February 2012. Amending Regulation on the conditions and manner of assessing, classifying and promoting pupils and students and conducting tests and examinations in public schools (Dz. U. of 2012. Pos. 262)
8) Regulation of the Minister of National Education of 14 September 2012. On apprentice examination, master's examination and an examination carried out by the examination committees of Chambers of Trade (Dz. U. 2012. Pos. 1117)
9) The Minister of National Education of 11 January 2012. On the external examinations (Dz. U. of 2012. Pos. 188)
10) Regulation of the Minister of National Education of 11 January 2012. On lifelong learning in school forms (Dz. U. of 2012. Pos. 186, as amended. D.)
11) Ordinance of the Ministry of August 9, 2012. In the framework of the training program candidates for examiners, the records of the examiners and the input mode and canceling of examiners from the records (Journal of Laws of 2012., Pos. 945)
12) Ordinance of the Ministry of 27 April 2015. On detailed conditions and manner of conducting the qualification examination in the profession (Dz. U. of 2015. Pos. 673)
13) Regulation of the Minister of National Education of 25 March 2015. On the procedure for the recognition of certificates or other documents or proof of education or permission to continue studies obtained in a foreign education system (Dz. U. pos. 447)

14) Regulation of the Ministry on the conditions and procedures of admission of students to public schools and the transition from one type of school to another (Dz. U. 2004. No. 26, pos. 232)
15) The Council of Ministers of 28 May 1996 on vocational training of young people and their remuneration (Dz. U. No. 60, item. 278, as amended
16) Decree of the Minister of National Education of 31 October 2013. On the uniform text of the Regulation of the Minister of National Education on certificates, diplomas and other public school documents (Dz. U. of 3 July 2014., Pos. 893)
17) International agreements concluded by the Republic of Polish, on the basis of which the parties mutually recognize the documents of education Art. 93 of the Law of 7 September 1991 on the education system (Dz. U. of 2015. Item. 2156, as amended.)
18) Examination of formal qualifications in the profession - step by step. KOWEZiU, Warsaw 2013
19) The curriculum for the professional electrician, 741,103 of the structure of this type of school: basic vocational school, type of program: linear, KOWEZiU, Warsaw 2012
20) The curriculum for the profession of car mechanic, 723,103 of the structure of this type of school: basic vocational school, type of program: linear, KOWEZiU, Warsaw 2012
21) plan for the teaching profession electrician, on-line access: http://www.koweziu.edu.pl/plany_nauczania/pliki/741103_P_ZSZ.pdf
22) plan for the teaching profession of car mechanic, access on-line: http://www.koweziu.edu.pl/plany_nauczania/pliki/723103_P_ZSZ.pdf
23) information about the test confirming the qualifications in the profession electrician (741,103). Central Examination Board, Warsaw 2012, available online: http://archiwum.cke.edu.pl/images/stories/0000000000000002012_informatory/informator_z015_741103_elyk_popr.pdf
24) information about the test confirming the qualifications in the profession of car mechanic (723,103). Central Examination Board, Warsaw 2012, available online: http://archiwum.cke.edu.pl/images/stories/0000000000000002012_informatory HYPERLINK http://archiwum.cke.edu.pl/images/stories/0000000000000002012_informatory/informator_z038_723103_mps_popr2.pdf" /038_723103_mps_popr2.pdf
25) The procedures for organizing and conducting the qualification examination in the profession, available online: http://cke.edu.pl/images/files/zawodowe/procedury/Procedury_od_2014a.pdf

26) Standard examination - in the profession journeyman electrician , online access: http://www.zrp.pl/Dzia%C5%82alno%C5%9B%C4%87ZRP/O%C5%9Bwiatazawodowa/Egzaminy/Standardyegzaminacyjne/Wykazstandard%C3%B3wegzaminacyjnych/tabid/288/language/pl-PL/Default.aspx
27) Standard examination - a journeyman in the profession of car mechanic, available online: http://www.zrp.pl/Dzia%C5%82alno%C5%9B%C4%87ZRP/O%C5%9Bwiatazawodowa/Egzaminy/Standardyegzaminacyjne/Wykazstandard%C3%B3wegzaminacyjnych/tabid/288/language/pl-PL/Default.aspx
28) http://www.cke.edu.pl
29) http://www.infor.pl/prawo/praca/umowa-o-prace/89167,Co-nalezy-wiedziec-o-pracy-mlodocianych.html
30) https://www.apedukacja.pl/kwalifikacyjne-kursy-zawodowe,785.html

1.8. Appendix

Appendix No. 1

Certificate confirming professional qualifications issued after passing the examination confirming professional qualifications - OKE-II/115/2, document no. 78a

RZECZPOSPOLITA POLSKA

ŚWIADECTWO

POTWIERDZAJĄCE KWALIFIKACJĘ W ZAWODZIE

.....

imię (imiona) i nazwisko

....

data urodzenia miejsce urodzenia numer PESEL

zdał... egzamin potwierdzający kwalifikacje w zawodzie w zakresie kwalifikacji

.....

wyodrębnionej w zawod... .....

.....

i uzyskał...

z części pisemnej egzaminu: **z części praktycznej egzaminu:**

... % punktów możliwych do uzyskania ... % punktów możliwych do uzyskania

..... dnia ..... r.

miejscowość

Nr .....

m.p.

.....

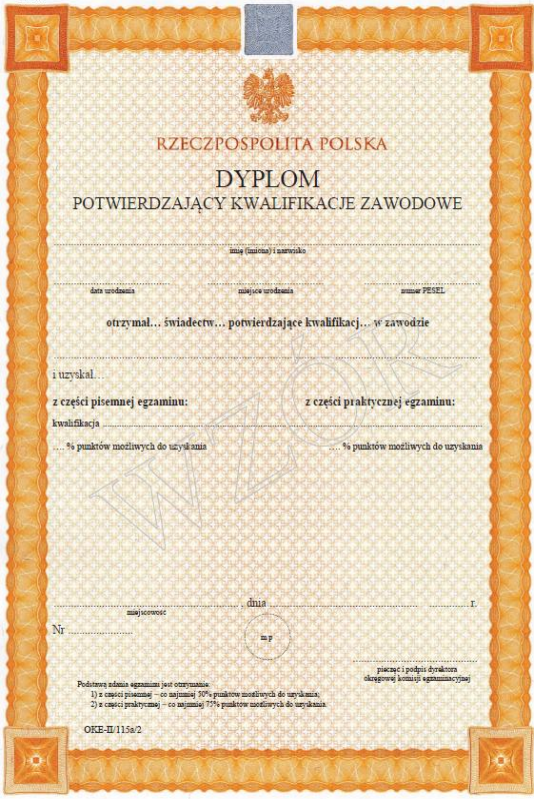
pieczęć i podpis dyrektora okręgowej komisji egzaminacyjnej

Podstawą zdania egzaminu jest otrzymanie:
1) z części pisemnej – co najmniej 50% punktów możliwych do uzyskania,
2) z części praktycznej – co najmniej 75% punktów możliwych do uzyskania.

OKE-II/115/2

Appendix No. 2

Diploma confirming professional qualifications – OKE-II/115a/2, document 78b



RZECZPOSPOLITA POLSKA

DYPLOM

POTWIERDZAJĄCY KWALIFIKACJE ZAWODOWE

.....

imię (imiona) i nazwisko

....

data urodzenia miejsce urodzenia numer PESEL

otrzymał... świadectw... potwierdzające kwalifikacj... w zawodzie

.....

i uzyskał...

z części pisemnej egzaminu: **z części praktycznej egzaminu:**

kwalifikacja .....

.... % punktów możliwych do uzyskania .... % punktów możliwych do uzyskania

..... dnia ....r.

miejscowość

Nr .....

m.p.

.....

pieczęć i podpis dyrektora okręgowej komisji egzaminacyjnej

Podstawą zdania egzaminu jest otrzymanie:
1) z części pisemnej – co najmniej 50% punktów możliwych do uzyskania,
2) z części praktycznej – co najmniej 75% punktów możliwych do uzyskania.

OKE-II/115a/2

Appendix No. 3

Diploma confirming professional qualifications issued after passing the examination confirming professional qualifications - OKE-II/116/2, document 79

RZECZPOSPOLITA POLSKA

DYPLOM

POTWIERDZAJĄCY KWALIFIKACJE ZAWODOWE

.....

imię (imiona) i nazwisko

....

data urodzenia miejsce urodzenia numer PESEL

zdał... egzamin potwierdzający kwalifikacje w zawodzie

.....

i otrzymał...

z etapu pisemnego egzaminu: **z etapu praktycznego egzaminu:**

z części pierwszej - .... % punktów możliwych do uzyskania .... % punktów możliwych do uzyskania

z części drugiej - .... % punktów możliwych do uzyskania

..... dnia ....r.

miejscowość

Nr .....

m.p.

.....

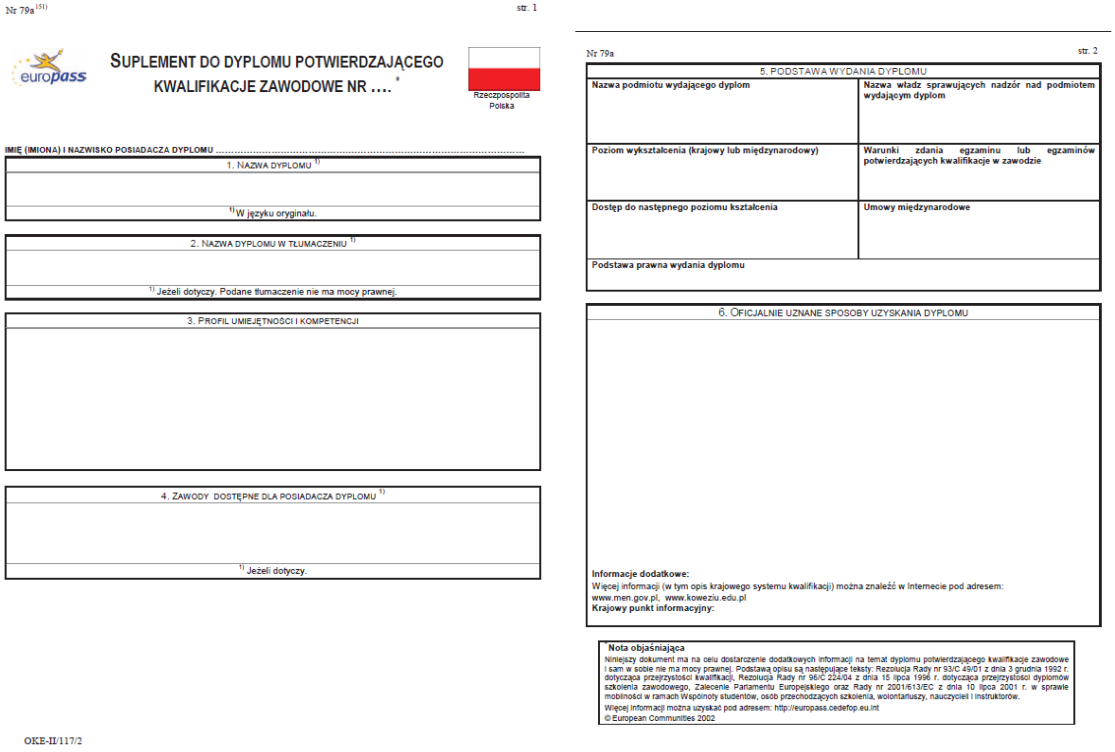
pieczęć i podpis dyrektora okręgowej komisji egzaminacyjnej

Podstawą zdania egzaminu jest otrzymanie:
1) z etapu pisemnego:
a) z części pierwszej – co najmniej 50% punktów możliwych do uzyskania,
b) z części drugiej – co najmniej 30% punktów możliwych do uzyskania,
2) z etapu praktycznego – co najmniej 75% punktów możliwych do uzyskania.

OKE-II/116/2

Appendix No. 4

Supplement to diploma confirming professional qualifications - OKE-II/117/2, document 79a



Nr 79a [1)] str. 1

europass

SUPLEMENT DO DYPLOMU POTWIERDZAJĄCEGO KWALIFIKACJE ZAWODOWE NR .... *

Rzeczpospolita Polska

IMIĘ (IMIONA) I NAZWISKO POSIADACZA DYPLOMU .....

1. NAZWA DYPLOMU [1)]

[1)] W języku oryginału.

2. NAZWA DYPLOMU W TŁUMACZENIU [1)]

[1)] Jeżeli dotyczy. Podane tłumaczenie nie ma mocy prawnej.

3. PROFIL UMIEJĘTNOŚCI I KOMPETENCJI

4. ZAWODY DOSTĘPNE DLA POSIADACZA DYPLOMU [1)]

[1)] Jeżeli dotyczy.

Nr 79a str. 2

5. PODSTAWA WYDANIA DYPLOMU

Nazwa podmiotu wydającego dyplom	**Nazwa władz sprawujących nadzór nad podmiotem wydającym dyplom**
Poziom wykształcenia (krajowy lub międzynarodowy)	**Warunki zdania egzaminu lub egzaminów potwierdzających kwalifikacje w zawodzie**
Dostęp do następnego poziomu kształcenia	**Umowy międzynarodowe**
Podstawa prawna wydania dyplomu	

6. OFICJALNIE UZNANE SPOSOBY UZYSKANIA DYPLOMU

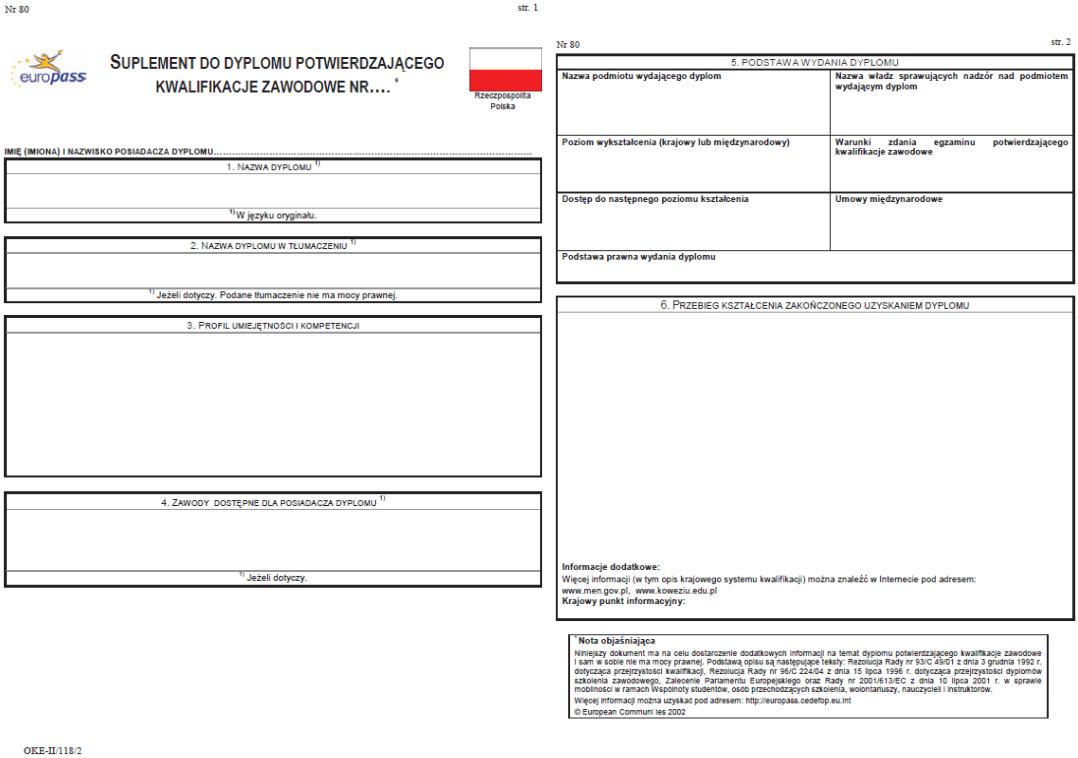
Informacje dodatkowe:
Więcej informacji (w tym opis krajowego systemu kwalifikacji) można znaleźć w Internecie pod adresem:
www.men.gov.pl, www.koweziu.edu.pl
Krajowy punkt informacyjny:

* **Nota objaśniająca**
Niniejszy dokument ma na celu dostarczenie dodatkowych informacji na temat dyplomu potwierdzającego kwalifikacje zawodowe i sam w sobie nie ma mocy prawnej. Podstawą opisu są następujące teksty: Rezolucja Rady nr 93/C 49/01 z dnia 3 grudnia 1992 r. dotycząca przejrzystości kwalifikacji, Rezolucja Rady nr 96/C 224/04 z dnia 15 lipca 1996 r. dotycząca przejrzystości dyplomów szkolenia zawodowego, Zalecenie Parlamentu Europejskiego oraz Rady nr 2001/613/EC z dnia 10 lipca 2001 r. w sprawie mobilności w ramach Wspólnoty studentów, osób przechodzących szkolenia, wolontariuszy, nauczycieli i instruktorów.
Więcej informacji można uzyskać pod adresem: http://europass.cedefop.eu.int

OKE-II/117/2

Appendix no. 5

Supplement to diploma confirming professional qualifications – OKE-II/118/2, document 80



Nr 80 str. 1

europass

SUPLEMENT DO DYPLOMU POTWIERDZAJĄCEGO KWALIFIKACJE ZAWODOWE NR.... *

Rzeczpospolita Polska

IMIĘ (IMIONA) I NAZWISKO POSIADACZA DYPLOMU.....

1. NAZWA DYPLOMU [1)]

[1)] W języku oryginału.

2. NAZWA DYPLOMU W TŁUMACZENIU [1)]

[1)] Jeżeli dotyczy. Podane tłumaczenie nie ma mocy prawnej.

3. PROFIL UMIEJĘTNOŚCI I KOMPETENCJI

4. ZAWODY DOSTĘPNE DLA POSIADACZA DYPLOMU [1)]

[1)] Jeżeli dotyczy.

Nr 80 str. 2

5. PODSTAWA WYDANIA DYPLOMU

Nazwa podmiotu wydającego dyplom	**Nazwa władz sprawujących nadzór nad podmiotem wydającym dyplom**
Poziom wykształcenia (krajowy lub międzynarodowy)	**Warunki zdania egzaminu potwierdzającego kwalifikacje zawodowe**
Dostęp do następnego poziomu kształcenia	**Umowy międzynarodowe**
Podstawa prawna wydania dyplomu	

6. PRZEBIEG KSZTAŁCENIA ZAKOŃCZONEGO UZYSKANIEM DYPLOMU

Informacje dodatkowe:
Więcej informacji (w tym opis krajowego systemu kwalifikacji) można znaleźć w Internecie pod adresem:
www.men.gov.pl, www.koweziu.edu.pl
Krajowy punkt informacyjny:

* **Nota objaśniająca**
Niniejszy dokument ma na celu dostarczenie dodatkowych informacji na temat dyplomu potwierdzającego kwalifikacje zawodowe i sam w sobie nie ma mocy prawnej. Podstawą opisu są następujące teksty: Rezolucja Rady nr 93/C 49/01 z dnia 3 grudnia 1992 r. dotycząca przejrzystości kwalifikacji, Rezolucja Rady nr 96/C 224/04 z dnia 15 lipca 1996 r. dotycząca przejrzystości dyplomów szkolenia zawodowego, Zalecenie Parlamentu Europejskiego oraz Rady nr 2001/613/EC z dnia 10 lipca 2001 r. w sprawie mobilności w ramach Wspólnoty studentów, osób przechodzących szkolenia, wolontariuszy, nauczycieli i instruktorów.
Więcej informacji można uzyskać pod adresem: http://europass.cedefop.eu.int

OKE-II/118/2

Appendix No. 6

Journeyman certificate – symbol IRz-II/1

ŚWIADECTWO
CZELADNICZE

Pani/Pan .....
(imię (imiona) i nazwisko)

urodzon ... dnia ..... r.

w .....

(fotografia 37 x 52 mm) woj. .....

zdał ... egzamin czeladniczy przed Komisją Egzaminacyjną

.....
(nazwa izby rzemieślniczej)

otrzymał ... ocenę ..... i uzyskał ... tytuł

CZELADNIKA
w zawodzie

.....

Świadectwo czeladnicze jest dokumentem potwierdzającym kwalifikacje zawodowe zgodnie z art. 3 ust. 1 pkt 3 ustawy z dnia 22 marca 1989 r. o rzemiośle (Dz. U. z 2002 r. Nr 112, poz. 979, z późn. zm.).

Nr .....

PRZEWODNICZĄCY KOMISJI EGZAMINACYJNEJ

PREZES IZBY RZEMIEŚLNICZEJ

.....
(podpis)

m.p.

.....
(siedziba izby rzemieślniczej, data)

Skala ocen: celujący, bardzo dobry, dobry, dostateczny, niedostateczny

ŚWIADECTWO CZELADNICZE

Appendix no. 7

Supplement to the journeyman certificate – symbol IRz-II/4

Strona 1

europass

SUPLEMENT DO ŚWIADECTWA CZELADNICZEGO NR ....*

Rzeczpospolita Polska

IMIĘ (IMIONA) I NAZWISKO POSIADACZA ŚWIADECTWA .....

1. NAZWA ŚWIADECTWA[1)]
[1)] W języku oryginału

2. NAZWA ŚWIADECTWA W TŁUMACZENIU[1)]
[1)] Jeżeli dotyczy. Podane tłumaczenie nie ma mocy prawnej.

3. PROFIL UMIEJĘTNOŚCI I KOMPETENCJI

4. ZAWODY DOSTĘPNE DLA POSIADACZA ŚWIADECTWA[1)]
[1)] Jeżeli dotyczy.

Strona 2

5. PODSTAWA WYDANIA ŚWIADECTWA	
Nazwa podmiotu wydającego świadectwo	**Nazwa władz sprawujących nadzór nad podmiotem wydającym świadectwo**
Poziom wykształcenia (krajowy lub międzynarodowy)	**Warunki zdania egzaminu czeladniczego**
Dostęp do następnego poziomu kształcenia	**Umowy międzynarodowe**
Podstawa prawna wydania świadectwa	

6. PRZEBIEG KSZTAŁCENIA ZAKOŃCZONEGO UZYSKANIEM ŚWIADECTWA
Informacje dodatkowe: Więcej informacji (w tym opis krajowego systemu kwalifikacji) można znaleźć w Internecie pod adresem: www.zrp.pl, www.men.gov.pl, www.koweziu.edu.pl www.europass.org.pl **Krajowy punkt informacyjny:**

*** Nota objaśniająca**

Niniejszy dokument ma na celu dostarczenie dodatkowych informacji na temat świadectwa czeladniczego potwierdzającego kwalifikacje zawodowe i sam w sobie nie ma mocy prawnej. Podstawą opisu są następujące teksty: Rezolucja Rady nr 93/C 49/01 z dnia 3 grudnia 1992 r. dotycząca przejrzystości kwalifikacji, Rezolucja Rady nr 96/C 224/04 z dnia 15 lipca 1996 r. dotycząca przejrzystości dyplomów szkolenia zawodowego, Zalecenie Parlamentu Europejskiego oraz Rady nr 2001/613/EC z dnia 10 lipca 2001 r. w sprawie mobilności w ramach Wspólnoty studentów, osób przechodzących szkolenia, wolontariuszy, nauczycieli i instruktorów.

Więcej informacji można uzyskać pod adresem: http://europass.cedefop.eu.int

Chapter 2

Database of qualifications and learning outcomes in Germany for the profession of electricians and car mechanics

2.1. Description of the acquisition of the professional qualification of electrician and car mechanic professions

Objective of the vocational training: Acquisition of occupational competence

The objective of all vocational training is to develop occupational competence. This is defined within this context as the willingness and ability of an individual person to behave appropriately, thoughtfully and in an individually and socially responsible manner in social, occupational and private situations. During the 3,5 years of vocational training for motor vehicle mechatronics technicians and electronics technicians for energy and building technology all necessary knowledge, skills and competences (= occupational competence) have to been taught to enable the trainees in planning, processing and evaluating professional tasks independently *(Outline Curriculum for vocational education and training in the occupation of Motor vehicle mechatronics technician, Culture and Education Ministers Conference Resolution of 25 April 2013).*

This competency bundle must be demonstrated in the context of examinations regulated by law (Vocational Training Act and training regulations).

Examinations

The training regulations and the outline curriculum regulate the aims and content of the vocational education and training and form the basis of final qualification in a regulated occupation. In the training regulations of each profession the examination requirements are defined. Based on vocational practice the function of the final examination is to ascertain whether the candidate has acquired occupational competence.

Generally the final examinations comprise four to five different areas of examinations.

In the final examination, candidates are to demonstrate in these areas that they have obtained the necessary skills for this purpose, are in possession of the required vocational knowledge and abilities and are familiar with the teaching material to be imparted during teaching at the vocational school *(Outline Curriculum for vocational education and training in the occupation of Motor vehicle mechatronics technician, Culture and Education Ministers Conference Resolution of 25 April 2013).*

As self-governing bodies of industry, the chambers have been assigned public tasks in dual training (competent bodies). Next to counseling and monitoring functions the chambers take care of the overall organization of examinations by fixing dates and setting up examination boards which administer the examinations. Furthermore, the chambers issue the certificates

which are awarded to successful candidates. Nevertheless the chambers have to possibility to authorize / accredit the guilds with the overall organization of examinations *(Federal Ministry of Education and Research, Dual Training at a glance, Berlin 2011).*
As examination boards, fixing dates for examination and the admission to the examination are specifically regulated is described below:

Examination boards *(Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009)*
Usually the chambers have to install examination boards for each profession to be examined. Several chambers can install a joint examination board at one chamber. Provided that the responsible guilds are capable to organize the examinations the chambers can accredit guilds to found examination boards and organize the examination for all trainees of their district *(Publisher Handwerk GmbH, Handicrafts Regulation act § 33, Düsseldorf 2008).*

The examination boards are composed of at least three members who are representatives of employers, employees and vocational schools. Being qualified for the special areas of examination and for the participation in auditing the representatives are elected for no longer than five years.
To participate in the examination board for electronic technicians or motor vehicle mechatronic technicians:

- the employers have to possess a master certification (in electronics or mechatronics) or being entitled to train people (= ordinance on Trainer aptitude (AEVO)),
- the employees have successfully passed the final examination in the appropriate trade or in a familiar recognized occupation requiring formal training (§ 4 BBiG) . The have to be engaged in relevant handicrafts.

The activities in the examination boards are voluntary.
A chairman and a deputy are elected from different member groups (employers, employees and vocational schools). The examination board constitutes a quorum if two-thirds of the members, at least three, participate.

Fixing dates for examinations *(Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009)*

The competent authority (Chamber of Crafts and Trade or the responsible guild) usually sets two examination periods per year matching with the training process and the school year.

The responsible chambers or the guilds fix the examination dates and release them at least one month before the expiration of the application period. Releasing the examination dates means that the competent body writes a letter to each candidate with the information of time and application form.

When exceeding the deadline, the application for examination acceptance may be denied. Using standardized, supra-regional tasks within the written examinations the fixing dates have to be coordinated between the competent authorities.

Conditions of admission *(Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009)*

The trainee applies for admission to the examination at the responsible competent authority within the appropriate time-limit.

The following documents have to be submitted:

- Within the initial examinations: all corresponding verifications appropriate to the admission requirements (see Table 1 below)
- Within re-examinations: application to the examination in due time and form

Admission procedure:

- Decision of the chairman of the examination board concerning the admission to the examination of each trainee , if the chairman denies the admission based on the insufficient corresponding verifications, all representatives of the examination board decide,
- In case of successfully admission: a written information about the day of examination, the location and the permitted additional material and work tools is forwarded to the trainee,
- In case of non-admission: a reasoned written information is forwarded to the trainee.

Table 6. Conditions of admission – Overview

Generally (both examination parts are tested together)	**The examination parts are held at separate times**	**After attending a vocational School (https://www.bmbf.de/pub/non-formal_and_informal_learning_in_germany.pdf)**	**General exceptiones**
Conditions of admission:	Conditions of admission:	Conditions of admission:	Conditions of admission:
1. Having finished the required training time or the vocational training will be finished until two months after the final examination	For Part 1 of the final examination: 1. Having finished the required training time up to intermediate examination	- Having training at a full-time vocational school or other vocational training institutions equivalent to vocational training in a recognised apprenticeship, candidates of this educational pathway shall be admitted (§43 (2) BBiG) Conditions: − Content, requirements and duration are equivalent to the respective training regulation − Systematic conducting of courses regarding a subject-specific and chronological structure − Professional education / training in cooperation with practice partners	− Possible admission to a final examination in an apprenticeship trade if people can provide evidence that they have been working in the trade for at least one and a half times (previously twice) the training period. However, this evidence of a minimum period may be waived if the candidate can demonstrate that he/ she has acquired the necessary vocational action competences − Possibility of an earlier examination due to excellent performances (Hearing of vocational school and employer is necessary)
2. The intermediate examination is passed and the record of training is written and can be shown by the trainees	2. The record of training is written and can be shown by the trainees		
3. The professional training relation between employer and trainee is entered in the register of apprentices by the competent body	3. The professional training relation between employer and trainee is entered in the register of apprentices by the register of apprentices by the competent body		
	For Part 2 of the final examination: --> see first column „Generally"		

Source: Publisher Handwerk GmbH, Handicrafts Regulation act § 36, Düsseldorf 2008

2.2. Description of the final examinations for motor vehicle mechatronics technicians and electronics technicians for energy and building technology

For the two occupations the journeyman's examination is designed as followed:

The final examination comprises Parts 1 and 2, which are held at separate times. The objective of the final examination is to ascertain whether candidates have acquired occupational employability skills. In the final examination, candidates should demonstrate mastery of the necessary occupational skills, possession of the required occupational knowledge competences and familiarity with the teaching material essential to the vocational education and training to be imparted via teaching at vocational school. The training regulation shall constitute the basis of the examination. Skills which have already constituted an object of examination in Part 1 of the final examination shall only be included in Part 2 of the final examination to the extent that such inclusion is necessary for the determination of the requisite occupational competence pursuant to § 38 of the Vocational Training Act *(Federal Institute for Vocational Education and Training, Ordinance on Vocational Education and Training in the Occupation of Mechatronics Fitter 01/2013, Bonn 2013).*

The examination board respectively the trade associations decide about the examination tasks based on the training regulation. Standardized, supra-regional tasks have to be assumed. When performing only written examinations at one day the maximum duration of the examinations is 300 minutes.

The non-public examination takes part after the successful application of the trainees. The examination board supervises the examinations. The candidate must be able to identify. After having instructions about test procedure, duration and permitted additional material and work tools, the candidates run the test under supervision of the proctor *(Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009).*

Motor vehicle mechatronics technicians *(Federal Law Gazette, Training regulations of motor vehicle mechatronics technicians 14.06.2013, Bonn 2013)*

Part 1 of the journeyman examination (before the end of the second year of training)

(35 % weighted)

Examination area: a work assignment

Performance and execution of examinations:

1. Carrying out a work related task corresponding to customer orders and consisting of different subtasks *(Time: 3 hours)*

   The candidate has to choose at least one of the following systems:

   a) power supply system,
   b) lighting system,
   c) charging current system,
   d) Start system
   e) mechanics of braking

   The following tasks have to be completed:

   - measuring and testing,
   - diagnosing errors, malfunctions and their causes,
   - preparing of test records and reports,
   - disassembling, maintaining, and assembling of subassemblies of vehicle technology,
   - document work.

2. Situational specialist interview consisting of several conversation phases *(Time: 10 min within the 3 hours of nr. 1)*

3. Answering written examination questions based on work related tasks

   (*Time: 120 min)*

Part 2 of the journeyman examination (at the end of training)

(65 % weighted)

Examination area:

a. a customer order (35 % weighted)
b. vehicle and maintenance technology (10 % weighted)
c. Diagnostic techniques (10 % weighted)
d. Economics and social studies (10 % weighted)

Performance and execution of examinations:

a. *Examination area „customer order“* (Time: 5 hours)

1. Carrying out three equivalent work related tasks corresponding to customer orders and consisting of different subtasks *(Time: 180 min)*

   - First task: Examining vehicles or systems or in accordance with manufacturer specifications and vehicle registration regulations

   - Second task: Diagnosing errors, malfunctions and their causes of at least one of the following systems:
     a. Brake system
     b. Chassis system
     c. Power transmission system
     d. Drive system
     e. Comfort system
     f. Safety system
     g. High-voltage system
     h. Networked systems

   - Third task: fitting of vehicles and systems

   The content of the second and the third task have to be chosen based on the specialization described in O1: Private motor vehicle technology specialist area.

2. Situational specialist interview consisting of several conversation phases (Time: 20 min within the 5 hours of nr. 1)

b. Examination area „vehicle and maintenance technology "
(Time: 120 min)

Answering written examination questions based on work related tasks

c. *Examination area „diagnostic techniques "*
(Time: 120 min)

Answering written examination questions based on work related tasks

d. Examination area „Economics and social studies" (Time: 60 min)

Answering written examination questions based on work related tasks

Electronics technicians – specializing in energy and building technology *(Federal Law Gazette, Training regulations of electronic technicians 25.07.2008, Bonn 2008)*

Part 1 of the journeyman examination (before the end of the second year of training)
(40 % weighted)

Examination area: a work assignment

Performance and execution of examinations:

1. Carrying out a complex work task demonstrated on a functional electrical system part *(Time: 10 hours)*
2. Situational specialist interview consisting of several conversation phases *(Time: 10 min within the 10 hours of nr. 1)*
3. Answering written examination questions based on work related tasks (*Time: 120 min within the 10 hours of nr. 1)*

Part 2 of the journeyman examination (at the end of training)
(60 % weighted)

Examination area:

a. a customer order (25 % weighted)
b. system design (12,5 % weighted)
c. function and system analysis (12,5 % weighted)
d. Economics and social studies (10 % weighted)

Performance and execution of examinations:

a. *Examination area „customer order“* (Time: 16 hours)
    1. Set up, maintain and adjust an electrical plant or building services installations enclosing documentation of the performance with the help of corresponding documents (70 % weighted)
    2. Situational specialist interview consisting of several conversation phases (Time: 20 min within the 16 hours of nr. 1) (30 % weighted)

b. *Examination area „system design” (Time: 2 hours)*
    Answering complex written examination questions concerning a draft of an adjustment of an electrical plant or building services installations, enclosing documentation with the help of corresponding documents

c. *Examination area “function and system analysis” (Time: 2 hours)*
    Answering complex written examination questions concerning an analysis of an electrical plant or building services installations, enclosing documentation with the help of corresponding documents

d. *Examination area „Economics and social studies“ (Time: 60 min)*
    Answering written examination questions based on work related tasks

The performances of the candidates are assessed by each member of the examination board independently and finally summarized in the examination board. The results are documented accordingly.

Table 7. Grading scale

Grading scale / Pass requirements	
100-92 points =	1= excellent
91 - 81 points =	2= good
80 - 67 points =	3= average
66 - 50 points =	4= pass
49 - 30 points =	5= poor
29 - 0 points =	6= fail
A total of at least 50 grade points are required to pass.	

Source: https://www.bibb.de/tools/berufesuche/index.php/certificate_supplement/en/kraftfahrzeugmechatro niker2013_e.pdf

The final examination is deemed to have been passed if:

1. an overall result of at least ‚pass' is achieved in part 1 and part 2;
2. an overall result of at least ‚pass' is achieved in part 2;
3. an overall result of at least ‚pass' is achieved in the examination area "Customer order" (= first examination area of part 2)
4. an overall result of at least ‚pass' is achieved in at least two of the other examination areas of part 2
5. no mark of "fail" is recorded in any examination area in part 2.

Supplementary oral examination

At the request of the candidate, an examination in one of the areas b, c or d of part 2 for which a mark of worse than ‚pass' has been awarded should be supplemented by an oral examination of approximately 15 minutes if this may be decisive for the passing of the examination. In calculating the result for this examination area, the previous result and the result of the supplementary oral examination should be accorded weighting in the ratio of 2:1 *(Federal Institute for Vocational Education and Training, Ordinance on Vocational Education and Training in the Occupation of Mechatronics Fitter 01/2013, Bonn 2013).*

2.3. Description of the qualifications, skills and competences proved in the journeyman's examination

The objective of all learning fields (see Outline Curriculum) is the development of employability skills. In order to emphasise selected facts and circumstances relating to personal and social competence and methodological, learning and communication competence, different competences are expressly included as an integral part of some learning fields. In all other learning fields, these competences should be addressed situationally and individually according particular consideration to the typical main characteristics of the occupation and should be consolidated and extended *(Skeleton Curriculum for the training occupation of Electronics technician for industrial engineering).*

In the outline curriculum and in the training regulations is a distinction between

- basic vocational skills and knowledge
- specialist vocational skills and knowledge
- specialist vocational skills and knowledge according to specialist area

The following different qualifications, skills and competences are proved in the journeyman's examination:

Motor vehicle mechatronics technician

(*https://www.bibb.de/tools/berufesuche/index.php/certificate_supplement/en/kraftfahrzeugmechatro_niker2013_e.pdf and Federal Law Gazette, Training regulations of motor vehicle mechatronics technicians 14.06.2013, Bonn 2013)*

Part 1 (before the end of the second year of training)

The candidate has to choose at least one of the following systems:

a) power supply system,
b) lighting system,
c) charging current system
d) start system
e) mechanics of braking

The candidate has to demonstrate that he / she is able to:

- plan the stages of work, research of data, analyse circuit diagrams and functions, select the correct work and measuring equipment, conduct measurements (diagnosing errors, malfunctions and their causes), document the results (=preparing a test record and report),
- comply maintenance requirements (=disassembling, servicing, assembling a vehicle technology assembly and document the results) in consideration of the connection between technics, work organisation, environment protection, safety and health protection,
- demonstrate specialist problems and their solutions, present the relevant specialist background in respect of the work related tasks and justify the approach taken in the carrying out of the work related tasks

Part 2 (at the end of training):

In the four examination areas of part 2 the candidate has to demonstrate that he / she is able to:

a) Examination area „customer order“

- plan and implement work processes and document the results
- make use of information systems and communicate with customers
- operate and explain motor vehicles and systems
- startup and shut-down of vehicle technological systems fahrzeugtechnische Systeme
- test system functions, deploy diagnostic systems, diagnose errors and malfunctions
- maintain or retro-fit of vehicles and their systems
- document results, prepare and analyse test records and reports
- demonstrate problems and their solutions, present the relevant specialist background in respect of the work related tasks and justify the approach taken in the carrying out of the work related tasks

b) Examination area „vehicle and maintenance technology”

- describe of motor vehicle technology systems and their functions, carry out problem analyses, analyse and evaluate technological and mathematical areas including the describing of approaches and solving of the problems

- use safety, health and environmental regulations, regulatory requirements and maintenance methods whilst paying due to quality management and to the basic principles of customer orientation as well as being able to evaluate the results
- select the spare parts, tools, measuring and testing devices, workshop facilities and re-sources necessary for maintenance, paying due to technical rules and manufacturers instructions
- plan these measures taking in-company processes into account
- use and evaluate databases and software specific to the industry
- constitute an electro-technical work on highvoltage components using safety regulations

c) Examination area "diagnostic techniques"

- carry out problem analyses, analyse and evaluate technological and mathematical areas including the describing of approaches and solving of the problems
- evaluate information from functional plans, circuit diagrams and network plans, software specific to the industry and manufacturers' instructrions
- narrow down and identify errors, malfunctions and their causes systematically
- use and evaluate the results of measuring, testing and diagnostic devices and information received from customers
- describe and analyse the cross-linking of motor vehicle systems

d) Examination area „economics and social studies"

- Demonstrate and assess general economic and social aspects of the world of work and employment. Knowlegdge about vocational education and training, employment and collective bargaining law, the structure of the company providing training, health and safety at work, environmental protection, planning and preparation of work processes and the monitoring and evaluation of work results, quality management.

Electronics technician – specialising in energy and building technology *(Federal Law Gazette, Training regulations of electronic technicians 25.07.2008, Bonn 2008)*

Part 1 (before the end of the second year of training)

The candidate has to demonstrate in producing a functional electric system part that he / she is able to:

- analyse technical documents, determine technical parameters, plan and coordinate work processes and dispose tools and material
- install, wire, connect and set plant components, comply with safety rules, accident prevention regulations and environmental requirements
- assess of the safety of electrical systems and equipment and check electrical protections
- analyse electrical systems, check their functions, identify and fix errors
- put products into operation, hand over, explain and document the order execution
- prepare technical documents including test reports

Part 2 (at the end of training):

In the four examination areas of part 2 the candidate has to demonstrate that he / she is able to:

- plan and implement work processes and document the results
- make use of information systems and communicate with customers
- operate and explain motor vehicles and systems
- startup and shut-down of vehicle technological systems
- test system functions, deploy diagnostic systems, diagnose errors and malfunctions
- maintain or retro-fit of vehicles and their systems
- document results, prepare and analyze test records and reports
- demonstrate problems and their solutions, present the relevant specialist background in respect of the work related tasks and justify the approach taken in the carrying out of the work related tasks

a) Examination area „customer order“

- Analyze work orders, gather information of available documents, clarify technical and organisational interfaces, evaluate and select several solution variants regarding technical, economic and ecological aspects
- Define subtasks, plan and coordinate order processing, prepare planning documents in consideration of workflow und responsibilities at the work locations
- Carry out work orders, check and document functions and safety, note norms and specifications concerning quality and safety of systems and identify errors, malfunctions and their causes systematically
- Release and transfer systems or system components, provide specialist information also using technical terms in English, prepare acceptance reports, document and evaluate work results and services, account for all services provided and document all data of devices, systems and documents

b) Examination area „„system design”

- Carry out a technical problem analyses considering the legal and technical regulations and operational efficiency, develop a solution concept
- Determine asset specification, select electro technical components and software, adapt circuitry documents and use standard software

c) Examination area „function and system analysis“

- Select circuitry documents and evaluate system documents, select test records and reports and diagnose systems
- Analyze systems concerning their functional contexts, analyze and change programs, assign signals to interfaces functionally
- Evaluate diagnoses, determine causes of error and evaluate electric protections

d) Examination area „economics and social studies“

- Demonstrate and assess general economic and social aspects of the world of work and employment. Knowlegdge about vocational education and training, employment and collective bargaining law, the structure of the company providing training, health and safety at work, environmental protection, planning and preparation of work processes and the monitoring and evaluation of work results, quality management

2.4. Description of the formal documents and their contents confirming professional qualifications pursuant to the passed examination

The examination certificate consists of *(Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009)*

- The official designation
    1. „examination certificate as per § 31 HwO (German Skilled Crafts and Trades Act), or
    2. „examination certificate as per § 42i paragraph 3 in conjunction with § 31 article 2 HwO, or
    3. „examination certificate as per § 37 paragraph 2 BBiG, or
    4. „examination certificate as per § 62 paragraph 3 BBiG in conjunction with § 37 article 2 BBiG,
- The personal data of the candidate (surname, first name, date of birth)
- The description of the trained occupation including specialization or examination related focus. Further examination related differentiations indicated in the training regulation can be listed.
- The results (points) of the examination areas and the overall result as far as provided in the training regulations
- The date of passing the examination
- The individuale name (Faksimile) or signature of the chairman of the examination board and the representative of the competent authority (Chamber of crafts and trades) or of the responsible guild (equipped with a seal).

Furthermore autonomous examination performances of an examination area (§ 23 Abs. 2 article 2) can be listed without grading in the examination certificate.

At the request of the trainee:

- the examination certificate can be translated into English or French. The translated examination certificate shall be enclosed.
- the results of all individual assessments / achievements in vocational schools can be listed at the examination certificate (§31 paragraph 3 HwO und § 37 pargraph 3 BBiG).

For the preparation of the examination certificate the obligatory required form of the competent authority (Chamber of Crafts and Trades) need to be used.

At the point of 1.8 Appendix the formal documents for motor vehicle mechatronics technician and electronics technician are shown *(Chamber of Crafts and Trade in Erfurt, example of an examination certificate of Motor vehicle Mechatronic Technicians, March 2016)*.

2.5. Description of the examination system and the passing rate – a case study of a selected vocational school

The passing rate of all trainees is statistically recorded on a regular basis. It is shown above.

Due to the German examination system it is not possible to distinguish between theoretical and practical passing rates.

Overview of passed final examinations during the last 5 years:

Table 8. Motor vehicle mechatronic technicians

		2011	2012	2013	2014
Passing rate – nationwide					
final examinations after successful examination (including retests)	Passed overall	17.187 of 18.954 (90,7 %)	15.573 of 16.785 (92,8 %)	14.241 of 15.570 (91,5 %)	14.706 of 16.218 (90,7 %)
	men	16.788 of 18.516 (90,7 %)	15.090 of 16.281 (92,7 %)	13.845 of 15.144 (91,4 %)	14.280 of 15.759 (90,6 %)
	women	399 of 438 (91,1 %)	483 of 507 (95,3 %)	396 of 429 (92,3%)	426 of 459 (92,8 %)
Passing rate – Thuringia					
final examinations after successful examination (including retests)	Passed overall	522 of 555 (94,1 %)	417 of 444 (93,9 %)	327 of 354 (92,4 %)	324 of 342 (94,7 %)
	men	513 of 546 (94,0 %)	405 of 435 (93,1 %)	324 of 351 (92,3 %)	315 of 336 (93,8 %)
	women	9 of 9 (100 %)	12 of 12 (100 %)	3 of 3 (100 %)	9 of 9 (100 %)

Source: Federal Institute for Vocational Education and Training, Data and time sheet of Motor vehicle mechatronics technician, Bonn 11.01.2016

Table 9. Electronics technician – specialising in energy and building technology

		2011	2012	2013	2014
Passing rate - nationwide					
final examinations after successful examination (including retests)	Passed overall	7.329 of 8.841 (82,9 %)	7.116 of 8.496 (83,8 %)	6.774 of 8.139 (83,2 %)	7.155 of 8.568 (83,5 %)
	men	7.245 of 8.739 (82,9 %)	7.023 of 8.394 (83,7 %)	6.684 von 8.040 (83,1 %)	7.068 of 8.472 (83,4 %)
	women	81 of 102 (79,4 %)	90 of 99 (90,9 %)	90 von 99 (90,9%)	87 of 96 (90,6 %)
Passing rate – Thuringia					
final examinations after successful examination (including retests)	Passed overall	183 of 243 (75,3 %)	174 of 219 (79,5 %)	120 of 159 (75,5 %)	105 of 141 (74,5 %)
	men	180 of 240 (75 %)	171 of 213 (80,3 %)	120 of 159 (75,5 %)	102 of 138 (73,9 %)
	women	3 of 3 (100 %)	3 of 6 (50 %)	0	3 of 3 (100 %)

Source: Federal Institute for Vocational Education and Training, Data and time sheet of Electronic technicians, Bonn 11.01.2016

In the Occupational Training Centre of the Erfurt Chamber of Crafts and Trades no vocational training as practiced in vocational schools is taking place. The Occupational Training Centre only provides additional off-the-job education that strengthens the solid foundation of practical on-the-job-training in the company at accompanies it throughout the course of the apprenticeship.

As described above the final examinations are planned and organized by the responsible authorities. All trainees for the occupation of motor vehicle mechatronic technicians and electronics technician – specialising in energy and building technology whose training company is located in Erfurt or in the regions of central and north Thuringia have to pass their examinations at the guilds authorized for the examination process by the Erfurt Chamber of Crafts and Trades. The Thuringian guild of automotive mechanics and the Thuringian guilds of electronics located in Erfurt are responsible for the preparation of the examination tasks, the examination boards and the organization of the examination.

Due to the different training companies, the vocational schools of the trainees and the responsibility of the chambers and guilds it is hardly possible to describe the examination system at one vocational school.

In this context it is necessary to point out that the content alignment, the time and the organizational design of the examinations differ between the different training professions in the same way as the participation / role of different institutions (Chambers, guilds and local or federal professional associations) varies.

Specified below are the particular features of the examination system for motor and electronics technician in central Thuringia.

The examination system of motor vehicle mechatronic technicians – a case study of the participation of a vocational school in Erfurt (Walter-Gropius-school), the Thuringian guild of automotive mechanics and the German association for motor trades and repairs (*Interview with the Thuringian guild of automotive mechanics, Erfurt 5.4.2016*)

Once a year a meeting of the members of the examination board is held at the Thuringian guild of automotive mechanics in Erfurt. The members discuss about the annual examination tasks, create new tasks referring to current topics and developments and choose the tasks for the written, oral and practical examination parts. All possible tasks are placed in a task pool and can be selected from this pool.

The creation and selection of examination tasks is supported by the advisory board. It consists of representatives of the German association for motor trades and repairs (Zentralverband des deutschen Kraftfahrzeuggewerbes, ZDK) which is the responsible authority for all guilds of automotive mechanics in the federal states. The representatives give suggestions and recommendations for the federal examination tasks.

As described above the examination board of motor vehicle mechatronic technician consists of one employer, one employee and one vocational school teacher. The current chairman is an employer.

After specification / selection of the tasks and fixing of the examination dates (*The examination dates are set after consulting the vocational school Walter-Gropius-Schule (performance of the written and oral examination parts) and the Occupational Training Centre of the Erfurt Chamber of Crafts and Trades (performance of the practical examination parts) concerning the availability of rooms and staff*) the guild releases the dates at least one month before the expiration of the application period.

Usually the guild sends a letter to each trainee with the information of the examination dates and the application form. Annually part 1 takes place in May / June, part 2 takes place in January. In 2016 the re-examinations of part 2 are in May / June. Usually the re-dates are fixed by the members of the examination boards after the examination took place.

As described in chapter 1 the trainees (or their training organization) apply (them) for admission to the examination. When they meet all described requirements they are invited to the practical and theoretical exams.

The theoretical exams take place in a computer laboratory of the Walter-Gropius-School in Erfurt. The Walter-Gropius-School is an officially recognized vocational school in Erfurt which offers the vocational training for motor vehicle mechatronic technicians.
After identifying and having instructions about the test procedure, duration and permitted additional material and work tools, the candidates get a code for logging in the computer and solving the examination tasks under supervision of the proctor. The online examination tasks and the necessary online-system are provided by the ZDK. The written tasks include work assignments (part 1) and vehicle and maintenance technology, diagnostic techniques and economics and social studies (part 2).
The examination tasks are divided into blocks of 60 minutes. Each member of the examination board (= examiners) gets a code to examine/check the online performance of each candidate.

The practical exams take place in the Occupational Training Centre of the Erfurt Chamber of Crafts and Trades. Different stations based on the described tasks for work assignments (part 1) and customer order (part 2) are developed by the staff of the Occupational Training Center. Within the intended time the candidates have to demonstrate that they are able to plan, process and evaluate professional tasks independently.

In January 2016 9 of 90 candidates failed the examinations. They have the possibility of a re-test by an oral examination of approximately 15 minutes. They have to apply for the re-test in May / June 2016. Until the supplementary oral examination takes part the candidates have the possibility to get a support payment for coaching by the employment agency.

After passing the examination the results are reported by guilds to the Chamber of Crafts and trades Erfurt and to the trade associations. The guild issues the examination certificate / journeyman's certificate.

The examination system of electronics technician (specialising in energy and building technology) – a case study of the participation of a vocational school in Erfurt (Andreas-Gordon-school), the electrical guild of central Thuringia and the Trade Associations of Electrical and Information Technology in Thuringia, Saxony and Saxony-Anhalt ***(****Interview with the electrical guild of central Thuringia, Erfurt 12.4.2016)*

Twice or three times a year a meeting of the members of the examination board is held at the Thuringian guild of electronics technician in Erfurt. In opposite to the examination tasks of the mechatronic technicians the examination tasks of the electronics technicians are prepared by the Trade Associations of Electrical and Information Technology in Thuringia, Saxony and Saxony-Anhalt *(The members of the guilds respectively the examination boards can be members of the trade associations as well).*[29] Each year the responsibility for the suggestion of examination tasks changes between the trade associations of the three federal states (Thuringia, Saxony and Saxony-Anhalt). After the creation of new tasks and the selection of tasks placed in a task pool, the responsible trade association proposes the tasks to a cross-federal states committee. This committee selects and decides about the annual practical and theoretical tasks for part 1 and 2 and about the examination dates in all three federal states. This information is given to all guilds respectively examination boards.

In opposite to the mechatronic technician there is no advisory board consisting of the national trade association of Electrical and Information Technology and supporting the creation, selection and performance of the examinations.

As described above the examination board of electronics technician consists of one employer, one employee and one vocational school teacher. The current chairman of the examination board is an employer.

Analogous to the mechatronics technicians the annual examination dates of part 1 are in May / June, part 2 takes place in January. The re-examinations are taken place semi-annually, constantly during the examination part of the first examination of part 1 / part 2.

As described in chapter 1 the trainees (or their training organization) apply (them) for admission to the examination. When they meet all described requirements they are invited to the practical and theoretical exams.

The theoretical and practical examinations take place in the Andreas-Gordon-School in Erfurt. The Andreas-Gordon-School is an officially recognized vocational school in Erfurt which offers the vocational training for electronics technicians.
After identifying and having instructions about the test procedure, duration and permitted additional material and work tools, the candidates start their paper-based written examinations. The written tasks include work assignments (part 1) and system design, function and system analysis and economics and social studies (part 2).

During the practical examinations the candidates are in technical classrooms where different stations are prepared. They are based on the described tasks for work assignments (part 1) and customer order (part 2). Within the intended time the candidates have to demonstrate that they are able to plan, process and evaluate professional tasks independently.

In January 2016 4 of 24 candidates failed the examinations. They have the possibility of a re-test by an oral examination of approximately 15 minutes. They have to apply for the re-test in May / June 2016. Until the supplementary oral examination takes part the candidates have the possibility to get a support payment for coaching by the employment agency.

After passing the examination the results are reported by the guilds to the Chamber of Crafts and trades Erfurt and the trade associations. The Chamber issues the examination certificate / journeyman’s certificate.

2.6. Summary

The objective of all vocational training is to develop occupational competence. During the 3,5 years of vocational training all necessary knowledge, skills and competences (= occupational competence) have to been taught to enable the motor vehicle mechatronics technicians and the electronics technicians in planning, processing and evaluating professional tasks independently. This competency bundle must be demonstrated in the context of examinations regulated by law (Vocational Training Act and training regulations).

The training regulations and the outline curriculum regulate the aims and content of the vocational education and training and form the basis of final qualification in a regulated occupation. In the training regulations of each profession the examination requirements are defined. The chambers or the accredited guilds are the competent bodies responsible for the overall organization of the examinations. Working togheter with national and federal trade associations for motor trades and repairs respectively electrical and information technology in central Thuringia the guilds have to found and elect examaniation boards and organise the examanition (releasing fixing dates, distribution of examination tasks, counseling and monitoring).
An examination board have to be installed for each profession to be examined. The examination boards are composed of at least three members who are representatives of employers, employees and vocational schools. The have to fulfill special requirements based on special formal training certifications and professional experiences. The activities in the examination boards are voluntary.

The final examination comprises the parts 1 and 2, which are held at separate times. Part 1 takes place in May / June after 2 years of vocational training. Part 2 takes place in January after 3,5 years of vocational training. Each part consists of different practical and theoretical topics. The results of both parts are included in the overall result of the final certificate.
The examination boards respectively the members of the trade associations take the annual decision about the single examination tasks. Standardized, supra-regional tasks have to be assumed for the electronic technicians.

The non-public examination takes part after the successful application of the trainees. The examination board supervises the examinations taking place in vocational schools or

occupational training centers. The candidate must be able to identify. After having instructions about test procedure, duration and permitted additional material and work tools, the candidates run the test under supervision of the proctor. Each member of the examination board checks the examination assignments of each candidate. If the result of the examination is worse than grade 4, a supplemented oral examination of approximately 15 minutes can be passed 6 months later at the request of the candidate.

The examination tasks for motor vehicle mechatronic technicians are created and scheduled by the Thuringian guild of automotive mechanics and the German association for motor trades and repairs. The theoretical exams take place in a computer laboratory of the Walter-Gropius-School in Erfurt which is an officially recognized vocational school in Erfurt. The practical exams take place in the Occupational Training Centre of the Erfurt Chamber of Crafts and Trades where different stations based on the described tasks are developed. As shown in the overview the passing rates of motor vehicle mechatronic technicians is about 90 %. Each year about 10 % fail the examinations.

The examination tasks for electronics technicians are created and scheduled by the electrical guild of central Thuringia and the Trade Associations of Electrical and Information Technology in Thuringia, Saxony and Saxony-Anhalt. The theoretical paper-based exams and the practical technological-station based exams take place in the Andreas-Gordon-School in Erfurt which is an officially recognized vocational school in Erfurt. As shown in the overview the passing rates of electronics technicians is about 75 to 80 %. Each year about 20 to 25 % fail the examinations.

After the successfully passed examination of part 1 and 2 the candidates get their examination certificate / journeyman's certificate issued by the guilds. The certificate can be translated into English or French.

At the certificate the personal data of the candidates and the name and results of the topics of part 1 and 2 are listed. All performances and grades achieved in vocational school are generally not mentioned on the certificate. Nevertheless the candidate has the possibility to apply for an additional listing of the performances / grades.

2.7. References

1) Outline Curriculum for vocational education and training in the occupation of Motor vehicle mechatronics technician, Culture and Education Ministers Conference Resolution of 25 April 2013
2) Outline Curriculum for vocational education and training in the occupation of Electronic technicians, Culture and Education Ministers Conference Resolution of 16.05.2003
3) Federal Ministry of Education and Research, Dual Training at a glance, Berlin 2011
4) Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009
5) Chamber of Crafts and Trade in Erfurt, example of an examination certificate of Motor vehicle Mechatronic Technicians, March 2016
6) Chamber of Crafts and Trade in Erfurt, example of an examination certificate of Electronics Technicians, March 2016
7) Federal Institute for Vocational Education and Training, Ordinance on Vocational Education and Training in the Occupation of Mechatronics Fitter 01/2013, Bonn 2013
8) Federal Law Gazette, Training regulations of motor vehicle mechatronics technicians 14.06.2013, Bonn 2013
9) Federal Law Gazette, Training regulations of electronic technicians 25.07.2008, Bonn 2008
10) Skeleton Curriculum for the training occupation of Electronics technician for industrial engineering
11) Publisher Handwerk GmbH, Handicrafts Regulation act, Düsseldorf 2008
12) Federal Institute for Vocational Education and Training, Data and time sheet of Motor vehicle mechatronics technician, Bonn 11.01.2016
13) Federal Institute for Vocational Education and Training, Data and time sheet of Electronic technicians, Bonn 11.01.2016
14) Interview with the Thuringian guild of automotive mechanics, Erfurt 5.4.2016
15) Interview with the electrical guild of central Thuringia, Erfurt 12.4.2016
16) https://www.bmbf.de/pub/non-formal_and_informal_learning_in_germany.pdf
17) https://www.bibb.de/tools/berufesuche/index.php/certificate_supplement/en/kraftfahrzeugmechatroniker2013_e.pdf
18) https://www.bibb.de/tools/berufesuche/index.php/certificate_supplement/en/elektroniker_fr_energietechnik_e.pdf

1.8. Appendix

Appendix No. 1

Examination Certificate

as per § 31 HwO (German Skilled Crafts and Trades Act)

Max Muster

born on **25th decembre 1984 in Erfurt**

has passed the **Final Apprenticeship Examination** for the profession of

Motor Vehicle Mechatronics Technician
Focus Cars

Overall grade: **average**

The results of the individual areas of the examination are as follows*:

Part 1	
Work assignment	**68,67 of 100 points**
Part 2	**72,08 of 100 points**
Customer order	65,00 of 100 points
Vehicle and maintenance technology	80,00 of 100 points
Diagnostic techniques	80,00 of 100 points
Economics and social studies	70,00 of 100 points

The overall result of the Final Apprenticeship Examination is based on Part 1 (35%) and Part 2 (65%).

Place and date of the determination of the overall examination result

Representative of the Competent Authority

This is the official translation of the German Chambers of Crafts and Trades.

* The weighting of the individual sections of the examination is regulated by the Training Act.

Key to the results
The grading of the examination sections is based on the following scale: 100 - 92 points = grade 1 = excellent; 91 - 81 points = grade 2 = good; 80 - 67 points = grade 3 = satisfactory; 66 - 50 points = grade 4 = sufficient; 49 - 30 points = grade 5 = poor; 29 - 0 points = grade 6 = very poor.

This qualification is aligned to level 4 of the German and European Qualifications Framework; cf. Federal Gazette (Bundesanzeiger) of 20 November 2013 (BAnz AT 20.11.2013 B2).

Grade(s) awarded by the vocational school: Grade(s)

Appendix No. 2

europass Deutschland

CERTIFICATE SUPPLEMENT (*)

Deutschland

1. TITLE OF THE CERTIFICATE (DE) (1)

Abschlussprüfung / Gesellenprüfung im staatlich anerkannten Ausbildungsberuf Kraftfahrzeugmechatroniker/ Kraftfahrzeugmechatronikerin

(1) in original language

2.TRANSLATED TITLE OF THE CERTIFICATE (EN)(1)

Final examination / journeyman's examination in the state-recognized training occupation Motor vehicle mechatronics technician

(1) This translation has no legal status.

3. PROFILE OF SKILLS AND COMPETENCES

- Diagnose faults and malfunctions in vehicles
- Carry out service and maintenance works
- Disassemble, repair and assemble components, sub-assemblies and systems
- Carry out tests on vehicles in accordance with legal stipulations
- Operate vehicles and systems
- Decommission and commission technical vehicle systems
- Measure and check systems
- Fit, refit and retrofit vehicles
- Plan and prepare work processes, check and evaluate work results
- Company and technical communication
- Carry out quality assurance measures.

4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE CERTIFICATE (1)

Motor vehicle mechatronics technicians work for vehicle manufacturers and service companies in the planning, servicing, inspection, diagnosis, repair, equipping and retrofitting of motor vehicles in the key areas of automobiles, commercial vehicles, systems technology, high voltage technology and bodywork engineering.

(1) if applicable

(*)Explanatory notes

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

More information on transparency is available at: www.europass.cedefop.eu.int/transparency

5. OFFICIAL BASIS OF THE CERTIFICATE	
Name and status of the body awarding the certificate Chamber of Crafts and Trades, Chamber of Industry and Commerce	**Name and status of the national/regional authority providing accreditation/recognition of the certificate** Chamber of Crafts and Trades, Chamber of Industry and Commerce
Level of the certificate (national or international) ISCED 3B German Qualifications Framework (DQR) level 4 (alignment is preliminary pursuant to "German Qualifications Framework for Lifelong Learning" - German EQF - Referencing report of 15 November 2012). Published by: Federal Ministry of Education and Research (BMBF), Berlin and Bonn; Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (Conference of the Ministers of Education and Cultural Affairs - KMK), Berlin)	**Grading scale / Pass requirements** 100-92 points = 1 = excellent 91 - 81 points = 2 = good 80 - 67 points = 3 = average 66 - 50 points = 4 = pass 49 - 30 points = 5 = poor 29 - 0 points = 6 = fail A total of at least 50 grade points are required to pass the examination.
Access to next level of education / training Certified motor vehicle service technician Master craftsman qualification in motor vehicle engineering State certified technician	**International agreements** In the field of vocational training, joint declarations on the comparability of qualifications obtained in the respective vocational training systems have been signed on the basis of bilateral agreements concluded between Germany and France and between Germany and Austria.
Legal basis Ordinance on Initial Vocational Education and Training in the Occupation of Motor vehicle mechatronics technician of 06/14/2013 (Federal Law Gazette, Part I, p 1578) Resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany, KMK, of 25.04.2013)	

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE
Final examination administered by the competent body: 1. after completion of dual training in a company and at part-time vocational school (normal procedure) 2. after retraining in a recognized training occupation 3. as an external examination for working people without formal vocational qualifications or persons who have been trained at full-time vocational schools or other vocational training institutions
Additional information **Entry requirements:** Entry requirements are not governed by legislation; as a rule, young people are admitted after completing (nine or ten years of) general education. **Duration of training:** 3,5 years. **Training in the "dual system":** Teaching of the knowledge, skills and competences needed for an occupation is based on the typical requirements of work and business processes and prepares the trainees for a specific job. **The training is provided in a company and at part-time vocational school**: In the company, the trainees acquire practical skills in a real working environment. On one or two days per week, the trainees attend part-time vocational school, where they are taught general and vocational knowledge related to their training occupation. **More information** is available at: www.berufenet.arbeitsagentur.de **National Europass Centre** www.europass-info.de

Appendix No. 3

Examination Certificate

as per § 31 HwO (German Skilled Crafts and Trades Act)

Thomas Müller

born on **28th march 1987 in Weimar**

has passed the **Final Apprenticeship Examination** for the profession of

Electronics Technician
Field Energy and Building Technology

Overall grade: **good**

The results of the individual areas of the examination are as follows*:

Part 1	
Work assignment	**83,78 of 100 points**
Part 2	**81,97 of 100 points**
Customer order	85,00 of 100 points
System design	77,00 of 100 points
Function and system analysis	80,00 of 100 points
Economics and social studies	79,00 of 100 points

The overall result of the Final Apprenticeship Examination is based on Part 1 (40%) and Part 2 (60%).

Place and date of the determination of the overall examination result

Representative of the Competent Authority

This is the official translation of the German Chambers of Crafts and Trades.

* The weighting of the individual areas of the examination is regulated by the Training Act.

Key to the results
The grading of the examination sections is based on the following scale: 100 - 92 points = grade 1 = excellent; 91 - 81 points = grade 2 = good; 80 - 67 points = grade 3 = satisfactory; 66 - 50 points = grade 4 = sufficient; 49 - 30 points = grade 5 = poor; 29 - 0 points = grade 6 = very poor.

This qualification is aligned to level 4 of the German and European Qualifications Framework; cf. Federal Gazette (Bundesanzeiger) of 20 November 2013 (BAnz AT 20.11.2013 B2).

Grade(s) awarded by the vocational school: Grade(s)

Appendix No. 4

europass Deutschland

CERTIFICATE SUPPLEMENT (*)

Deutschland

1. TITLE OF THE CERTIFICATE (DE) (1)

Gesellenprüfung im staatlich anerkannten Ausbildungsberuf
Elektroniker/ Elektronikerin - Fachrichtung Energie- und Gebäudetechnik

(1) in original language

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)(1)

journeyman's examination in the state-recognized training occupation Electronics technician – specialising in energy and building technology

(1) This translation has no legal status.

3. PROFILE OF SKILLS AND COMPETENCES

- Advise customers
- Plan, install and commission electrical installations in accordance with customer requirements
- Install and configure software, components, devices and networks
- Test electrical protective devices and other safety equipment
- Analyse malfunctions in equipment and eliminate faults
- Carry out inspections and maintenance work and repair equipment
- Attend to customers and provide services
- Under the provisions of the Prevention of Accidents Regulations, electronics technicians specialising in energy and building technology are deemed to be skilled electrical and electronic engineering workers.
- Design energy supply and building technology systems
- Install lighting equipment, drives, switching devices and control equipment, decentralised power supply installations, emergency power supply equipment, receive-only and broadband communications equipment and data networks
- Connect telecommunications end devices to telecommunications networks
- Commission energy and building technology equipment
- Install, configure and parameterise building control equipment and bus systems
- Create control programmes
- Test building technology systems.

4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE CERTIFICATE (1)

Although electronics technicians specialising in energy and building technology mainly work for electro-technology craft trade companies, they also find employment at companies operating in other branches.

(1) if applicable

(*) Explanatory notes

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

More information on transparency is available at: www.europass.cedefop.eu.int/transparency

5. OFFICIAL BASIS OF THE CERTIFICATE

Name and status of the body awarding the certificate	**Name and status of the national/regional authority providing accreditation/recognition of the certificate**
Chamber of Crafts and Trades	Chamber of Crafts and Trades
Level of the certificate (national or international) ISCED 3B German Qualifications Framework (DQR) level 4 (alignment is preliminary pursuant to "German Qualifications Framework for Lifelong Learning" - German EQF - Referencing report of 15 November 2012). Published by: Federal Ministry of Education and Research (BMBF), Berlin and Bonn; Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (Conference of the Ministers of Education and Cultural Affairs - KMK), Berlin)	**Grading scale / Pass requirements** 100-92 points = 1 = excellent 91 - 81 points = 2 = good 80 - 67 points = 3 = average 66 - 50 points = 4 = pass 49 - 30 points = 5 = poor 29 - 0 points = 6 = fail A total of at least 50 grade points are required to pass the examination.
Access to next level of education / training Master craftsman qualification in electro technology, state certified technician	**International agreements** In the field of vocational training, joint declarations on the comparability of qualifications obtained in the respective vocational training systems have been signed on the basis of bilateral agreements concluded between Germany and France and between Germany and Austria.
Legal basis Ordinance on Initial Vocational Education and Training in the Occupation of Electronics technician – specialising in energy and building technology of 07/25/2008 (Federal Law Gazette, Part I, p 1413) Resolution of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany, KMK, of 16.05.2003), (Federal Gazette, No 10a of 16.01.2004)	

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

Final examination administered by the competent body:
1. after completion of dual training in a company and at part-time vocational school (normal procedure)
2. after retraining in a recognized training occupation
3. as an external examination for working people without formal vocational qualifications or persons who have been trained at full-time vocational schools or other vocational training institutions

Additional information

Entry requirements: Entry requirements are not governed by legislation; as a rule, young people are admitted after completing (nine or ten years of) general education.

Duration of training: 3,5 years.

Training in the "dual system":
Teaching of the knowledge, skills and competences needed for an occupation is based on the typical requirements of work and business processes and prepares the trainees for a specific job. **The training is provided in a company and at part-time vocational school**: In the company, the trainees acquire practical skills in a real working environment. On one or two days per week, the trainees attend part-time vocational school, where they are taught general and vocational knowledge related to their training occupation.

More information is available at:
www.berufenet.arbeitsagentur.de

National Europass Centre
www.europass-info.de

Chapter 3

Database of qualifications and learning outcomes in Portugal for the profession of electricians and car mechanics

3.1. Formal path of achieving qualifications in the professions of electricians and car mechanics

In Portugal qualifications in the professions are obtainable:

- In the school system (by Education Cycles),
- Through the apprenticeship system,
- In the form of continuing education.

The path of achieving qualifications in the professions of an electrician and car mechanic through the school system

The basic path of achieving qualifications is the school path in which new levels of education are achieved and the professional competences are confirmed on the basis of practical exams:

- The stage of general education, which at the date of preparation of the study, includes Cycle 1 Cycle 2 Cycle 3 described as Primary Education,
- Stage of general education in the form of higher secondary school,
- Stage of vocational education which includes vocational courses.

Stage of general education ends up with obtaining a certificate necessary for further education. Each student is required to take the exam to obtain the certificate and continue education in high school.

Examinations are performed after each cycle of learning.

Exam after the Third Cycle consists of Portuguese language and the main subject of the course of education.

Graduates of the Third Cycle may continue education by entering high school.

Table 10. Obligatory Education

Level	Class	Age
Ensino basico – Cycles 1 and 2 (primary education)	Classes – I -IV (Cycle 1) Classes – V - VI (Cycle 2)	6-10 years 10-12 years
Ensino basico – Cycle 3 (first degree high school education)	Classes – VII- IX (Cycle 3)	12-15 years

Source: DGERT 2007

Students who have reached the age limit of compulsory education (15 years), and have not completed the ninth grade with positive assessments may continue compulsory education within adult education. Admission to basic education is based primarily on the principle of regionalization, however, parents have the opportunity to place their children in other schools, if they have vacancies.

Higher Education - II degree

Table 11. Types of education

Type of education programmes	Grade	Age
Education on the level of second grade of secondary school • General programmes: mathematic-scientific-humanistic • Technical programmes • Artistic programmes • Professional programmes	X, XI, XII	15-18
Post-high school education Specialist technical programmes - CET		18-19

Source: DGERT 2007

Upper secondary education includes state schools, private schools funded by public and independent private schools.

Admission criteria

Recruitment of students to upper secondary education schools generally takes place in accordance with the principle of regionalization, but at the request of parents, it is possible to place a child outside the local area if there are vacancies in the school, as well as selected profile in accordance with the preferences of the student. State schools do not charge a fee. The government also supports, within the framework of agreements, private agencies operating in areas where state schools do not exist or do not have enough places.

Programs and content

At the national level curricula are developed, among which schools select those that they will follow. Selecting a program may be dependent on local / regional socio-economic conditions and the labor market needs for specific qualifications. Organization of general education takes different forms within the two main sections of education: programs oriented on continuing education and programs oriented at starting work. Students can change the profile of education in the course of learning. The programs offered by vocational schools are designed for people whose goal after graduation is to immediately enter professional life. Specialist artistic programs are targeted at people characterized by exceptional abilities and offer training in visual arts, audiovisual arts, dance and music. Component of a general, common to all sections of general education includes the following compulsory subjects: Portuguese language, a foreign language, philosophy and physical education, while the component common to the general profiles of vocational education includes Portuguese and foreign language. Adult education programs create a "second chance" to those who left school prematurely or did not have the possibility of continuing at a younger age. Specialized technical programs within the framework of post-secondary education promote educational path that combines acquiring qualifications while acquiring skills and professional competence.

List of items:

Portuguese Language (grade 10, 11 and 12)
Physical education (grade 10, 11 and 12)
Philosophy (grade 10 and 11)
Foreign languages (grade 10 and 11)
Religious Education (grade 10, 11 and 12 – optional)
Mathematics (grade 10, 11 and 12)
Specific subjects (grade 10 and 11)
Biology and Geology, Geometry, Physics and Chemistry (two of them)
Optional items – Class 12 - biology, geology, physics, chemistry, psychology or other (two of them)
Humanities and Social Sciences
History (grade 10, 11 and 12)

Specialist subjects – grade 10 and 11 – Geography, Foreign Language II (or III), Portuguese literature, mathematics applied to Social Sciences (two of them)
Elective courses – grade 12 – Law and Sociology, Latin, geography, psychology, philosophy, economics, or other (two of them)
Socio-economic

Mathematics (grade 10, 11 and 12)
Specialist subjects - grade 10 and 11 - Economics, History B, geography (two of them)
Elective courses - grade 12 - economics, geography, sociology, psychology, law or other (two of them)
Visual Science
Specialist subjects - grade 10 and 11 - Geography, Foreign Language II (or III), Portuguese literature, Mathematics applied to Social Sciences (two of them)
Elective courses - grade 12 - Law and Sociology, Latin, geography, psychology, philosophy, economics, or other (two of them)
Socio-economic

Mathematics (grade 10, 11 and 12)
Specific subjects - grade 10 and 11 - Economics, History B, geography (two of them)
Elective courses - grade 12 - economics, geography, sociology, psychology, law or other (two of them)
Visual Science

Main subject - drawing (class 10, 11 and 12)
Specific subjects – Grade 10 and 11 – geometry, mathematics B, history of art and culture (two of them)
Elective courses – Grade 12 – Art Atelier, Multimedia Atelier, materials and technology, psychology, philosophy, and others (two of them)
Professional programs
Sport
Architecture
Civil construction
Electronics

Data processing

Projects

Multimedia

Administration

Marketing

Environment and Territory Order

Social action

Social animation

Other

Specialized artistic programs

Music

Dance

Theatre and cinema

Visual arts and audiovisual

Other

A student enrolled in the profession of electrician or car mechanic attends the selected vocational course for 3 years. Preparing graduates takes place according to the teaching program, on the basis of which each school creates a school curriculum. Example teaching plans are presented in the following tables.

Table 12. An indicative list of subjects for the course of professional electrician

PLANO DE ESTUDOS Instalações Elétricas			
Componentes de Formação (Ciclo de Formação)	**BLOCOS**		
	10º	**11º**	**12º**
Formação Sociocultural			
• Português	3	2	2
• Língua Estrangeira	2	1	2
• Área de Integração	2	3	
• TIC	2		
• Educação Física	1	1	1
Formação Científica			
• Matemática	2,5	3	2
• Física e Química	2	1,5	1
Formação Técnica			
• Eletricidade e Eletrónica	2,5	3	3
• Tecnologias Aplicadas	1	2	2,5
• Desenho Esquemático	1	1	1
• Práticas Oficinais	2,5	3	3
TOTAL	21	20,5	17,5
Nº de Semanas/ano	33	29	27
FCT (Horas)		200	400

Source: www.comoiprel.pt

Table 13. An indicative list of items for the professional course of car mechanic

CURSO

TÉCNICO DE MANUTENÇÃO INDUSTRIAL/ MECATRÓNICA AUTOMÓVEL

DISCIPLINAS	CARGAS HORÁRIAS ANUAIS			
FORMAÇÃO SOCIOCULTURAL	1° (10°)	2° (11°)	3° (12°)	TOTAL DISC
PORTUGUÊS	105	110	105	320
LÍNGUA ESTRANGEIRA - INGLÊS	75	72	73	220
ÁREA DE INTEGRAÇÃO	75	72	73	220
EDUCAÇÃO FÍSICA	35	70	35	140
TECNOLOGIAS DA INFORMAÇÃO E COMUNICAÇÃO	100	---	---	100
FORMAÇÃO CIENTÍFICA				
MATEMÁTICA	99	99	102	300
FISICA E QUIMICA	70	70	60	200
FORMAÇÃO TÉCNICA.				
TECNOLOGIA E PROCESSOS	185	95	70	350
ORGANIZAÇÃO INDUSTRIAL	60	60	---	120
DESENHO TÉCNICO	65	90	---	155
PRÁTICAS OFICINAIS	130	150	195	475
FORMAÇÃO EM CONTEXTO DE TRABALHO	140	280	280	700
TOTAL HORAS / ANO / CURSO	**1139**	**1168**	**993**	**3300**

Source: www.epvozuela.pt

Qualifications in the profession of an electrician are obtained:

- through an exam conducted after 12th cycle by an external committee.

Documents confirming qualifications in the profession of electrician are high school diploma and a certificate confirming completion of the professional training and qualifications in the profession of electrician.

Qualifications in the profession of car mechanic are obtained:

- through an exam conducted after 12th cycle by an external committee.

Documents confirming qualifications in the profession of car mechanic are high school diploma and a certificate confirming completion of the professional training and qualifications in the profession of car mechanic.

The path of achieving a qualification in the professions of electrician and car mechanic through the system of apprenticeship.

Obtaining qualifications in the professions of electrician and car mechanic in this form includes vocational training of young workers. Classes offered through the apprenticeship system – alternating training – are designed for young people aged 15 to 25 years and are run by the Instituto do Emprego e Formação Profissional [Institute for Employment and Vocational Training - IEFP]. Their goal is to prepare and qualify students for their first job and to facilitate the entry into professional life.

Vocational training is done by

Preparation and signing of an agreement between the intern and the company of the internship / training, which defines the rights and responsibilities of each party.

Vocational training courses have different length, depending on their nature, and contain the following elements:

Socio-cultural, scientific, technological and practical training (as in the working environment and is at least 30% of all hours). Training in the workplace is monitored by a caretaker appointed by the body responsible for the training component.

After successful completion of the training, participants receive a Level 2 vocational qualification and a certificate of completion of the 3 primary or Level 3 vocational qualification and a secondary school certificate.

The path of achieving a qualification in the professions of electrician and car mechanic through lifelong learning

The main forms of continuing training and adult education are aimed at adults at the working age who are employed, unemployed, endangered with unemployment or belong to groups at risk of exclusion.

Cursos de educação e Formação are directed to adults over the age of 18 who are not qualified in the professions of electrician and car mechanic or whose qualifications are inadequate for integration into the labor market.

The process Reconhecimento, Validação e Certificação de Competências [Recognition, validation and certification of skills - RVCC] is the most common platform to access these courses. The purpose of these activities is to increase the academic adult population and professional qualifications in the field of the professions of electrician and car mechanic by offering a combination of education and training, which increases their employability and certifies acquired education. The courses are based on:

- flexible training paths aimed at the recognition and validation of skills of adults acquired through formal, non-formal and informal paths;
- coordinating the training path, which includes basic training and education, technology, or simply basic training;
- the training focuses on the acquisition of knowledge, know-how and skills that complement and promote internships.

These courses lead to the completion of Cycle 3 of education and training at Level 2 and to obtaining a certificate or a certificate of secondary education and a certificate of Level 3 vocational training.

Participation in the course of the EFA, which does not lead to certification entitles participants to request a validation of skills certificate that lists all the skills validated during the training

EFA Courses are designed and led by relevant authorities or by a third party. In both cases, the training institution must be part of a network of training institutions located in the national system of qualifications.

Other training

Regarding the vocational training for people of working age, or the unemployed, other courses are also offered in the professions of electrician and car mechanic, including:

- qualification courses or retraining;
- refreshing, updating or further training courses;

Training paths offered in the professions of electrician and car mechanic typically comprise units or modules leading to skills that can be approved for certification purposes in a lifelong learning perspective. The courses are usually designed to meet the specific needs and circumstances of the organization and employees; they may, for example, support the introduction of new equipment, technology or organizational models for the modernization of enterprises. They implement new production methods and forms of work organization.

3.2. Procedures for exams confirming qualifications in the professions of electrician and car mechanic

To start learning in secondary education and thus start a course in the field of electrician and car mechanic, the student must hold a certificate of completion of the nine-year compulsory education. Students over 18 years of age who want to continue their education, pursue programs in adult education. Pupils are assessed at the end of each cycle. To obtain the promotion it is necessary to obtain min. 10 points (on a scale 0-20) as a result of an assessment at the school level. At the end of a program of mathematical sciences and humanities national exams are organized for students. Students who have completed this cycle of education, receive a certificate of completion of secondary education; Students who have completed technical or artistic school receive both vocational qualification certificate 3rd level, as well as a secondary school certificate. In vocational schools, students receive a certificate confirming professional qualifications level 3, which will also be considered equivalent to a certificate of completion of secondary school. Students who have completed post-secondary education receive a certificate confirming both technical specialization and technical skills 4th level. After completing specialized technical education you can also receive a certificate of professional qualifications. The condition for admission to higher education is the state exams (exames nacionais) covering a range of subjects designated by the Ministry of Science, Technology and Higher Education.

An examination of the qualifications in the profession.

How the final evaluation is done:

Professional courses

The final classification is the result of the formula:

CF = [2MCD + (0,3FCT 0,7PAP +)] / 3

where:

CF = the end of the course ranking, rounded to the nearest unit;

MCD = simple arithmetic average of the final results of all subjects

FCT = classification of training in the workplace, rounded to the nearest unit;

PAP = professional classification skills test, rounded to the nearest unit.

Vocational courses

The final classification of the course is the result of the formula:

CF = (mcfd MUFCD + EF) / 3

where:

CF = the end of the course ranking, rounded to the nearest unit;

Mcfd = is the simple arithmetic average of the final results of all disciplines rounded to one decimal place,

Technological and technical courses

The final classification is the result of the formula:

CFC = (9MCD 1PAT +) / 10

where:

CFC = the end of the course ranking (rounded to the nearest unit);

MCD = is a simple arithmetic average, rounded to the units,

PAT = marks obtained in the technology skills test.

3.3. Obtained qualifications and learning outcomes confirmed by the qualification exam learning outcomes

Professional competence for the profession of electrician

KNOWLEDGE OF:

1. Mathematics.
2. Technical Drawing.
3. Welding.
4. English language (the use of specific technical vocabulary).
5. Systems of telecommunications.
6. Mechanics.
7. Electrical energy.
8. Electronics.
9. Home automation .
10. Safety, hygiene, health and environmental protection, applied to professional activities.
11. Rules and their application to professional activities.
12. Typology and characteristics of the materials relating to the execution and maintenance of electrical installations.
13. Typology and characteristics of the materials relating to the execution and maintenance of lighting and electrical equipment.
14. Typology and characteristics of the materials relating to the execution and maintenance of electrical driving force.
15. Typology and characteristics of the materials relating to the installation of infrastructure related to television antennas.
16. Typology and characterization tools used for construction and maintenance of electrical installations.
17. Types and operation of electrical installations.
18. Types and operation of electrical lighting systems.
19. Types and operation of electrical traction equipment.
20. Installation and testing of electrical installations.
21. Techniques for the installation and testing of electrical installations and electric lighting.
22. Technical installation and controlling the electrical driving force.
23. Preventive and corrective technical work, maintenance of electrical installations.

24. Techniques of preventive and corrective maintenance of lighting and electrical equipment.
25. Techniques of preventive repair and maintenance of electric driving force.

KNOWS/CAN:

1. Interpret technical specifications for electrical installations and their maintenance.
2. Techniques and ways to prepare the appropriate equipment, tools, components and materials suitable for the electrical installation and maintenance.
3. Identify and know the characteristics of various types of equipment, tools, components, and materials used to make electrical installations, lighting or TV antennas.
4. Use the tools and materials necessary for the electrical installation
5. Determine the distribution and distribution systems and electrical equipment.
6. Use the methods and techniques for implementing the determination of points and the baseline electrical installation.
7. Know the procedures for verification of various installation modes.
8. Use procedures and techniques of installation and connection of the circuit and knows the equipment suitable for the installation of electrical risers and entrances, electrical lighting and power; knows the installation of automatic controls, installation of electrical equipment and installations of TV antenna.
9. Use appropriate procedures, methods and techniques to verify and test the installation of electrical systems, electric power transmission, antenna systems, television, lighting and power.
10. Identify the malfunction of electrical wiring, lighting and electric appliances and TV antenna systems.
11. Apply techniques and procedures for replacement and repair of components of the circuit and wiring devices, electrical installations, lighting and power equipment, electrical installations and equipment of television antennas.
12. Apply the principles of safety, hygiene, health and environmental protection in relation to the activity.
13. Apply the principles of electrical installations, in accordance with applicable regulations.

BEHAVIOR:

1. Interacts with other team members in the performance of certain tasks together.
2. Maintains standards of safety, hygiene, health and environmental protection in the course of professional activities.
3. Observes the rules and regulations for electrical installations in the exercise of their professional activities.
4. Is able to adapt to new situations and technologies.

Professional competences for the profession of a car mechanic

KNOWLEDGE

1. English or another foreign language appropriate to the performed tasks
2. Technical drawing (Interpretation of assembly drawings of mechanical parts and electric components).
3. Mathematics (arithmetic, percentages, proportions and simple equations).
4. Electric energy (batteries, alternators and electrical circuits).
5. Physics and Chemistry (materials, combustion and mechanics).
6. Electronics (system control technology of passenger cars)
7. Norms and quality standards.
8. Protection of the environment.
9. Informatics
10. Communication and interpersonal relationships
11. Structure, operation and regulation of gasoline and diesel engines in passenger cars.
12. Construction, operation and regulation of the steering system, suspension, brakes and active safety systems.
13. Construction, operation and regulation of transmission systems.
14. Construction, operation and regulation of ignition systems of cars.
15. Construction, operation and regulation of electric power systems, turbocharger and antifouling systems.
16. Construction, operation and regulation systems of cooling and lubrication of cars.
17. Operating systems and control of passenger and freight car.

KNOWLEDGE:

1. Safety, hygiene and health at work.
2. Technical standards (manufacturer's instructions).
3. Metrology (number, measurement procedures, standards and tolerances).
4. Mechanical technology.
5. Technology of materials.
6. Technology of equipment used in the diagnosis of faults in cars.
7. Types of equipment and tools used to repair cars.
8. The process of repair and testing of car engines.
9. The process of repair and testing of steering, suspension, brakes and active safety systems.
10. Diagnostic procedures, anomalies of wheels and tires.
11. The process of repair and testing of transmission systems of passenger cars.
12. The process of repair of propulsion and ignition systems.
13. The process of repair of energy systems.
14. The process of repair cooling and lubrication light vehicles.
15. The process of diagnosis and components of the load system and engine starter.
16. The process of fault diagnosis and replacement of mechanical air conditioning systems of cars.

KNOWS AND CAN:

1. Interpret technical drawings, patterns and reuse instruction and other technical documentation of various mechanical systems.
2. Apply the rules and procedures relating to the safety, health and the environmental protection associated with the professional activity.
3. Identify defects and use diagnostic equipment.
4. Identify and use a variety of tools and equipment used in various systems of repairing the passenger cars.
5. Identify and recognize the features of the petrol and diesel in passenger cars.
6. Using the appropriate methods and techniques to detect abnormalities in gasoline.
7. Use techniques for repairing motor gasoline and diesel passenger cars.
8. Using the appropriate test techniques can diagnose problems in gasoline engine and diesel cars.

9. Identify and recognize the features of the steering, suspension, brakes and active safety systems.
10. Apply the methods and techniques suitable for detecting anomalies in the steering, suspension, brakes and active safety systems.
11. Use a repair technique of steering, suspension, braking and active safety systems.
12. Use research techniques of steering, suspension, brakes and active safety systems.
13. Apply the methods and techniques suitable for detecting defects in wheels and tires of passenger cars.
14. Use techniques of wheel parts and tires for cars.
15. Identify and recognize the features of the transmission systems of passenger cars.
16. Apply the methods and techniques suitable for the detection of anomalies in transmission systems of passenger cars.
17. Use a repair technique of light transmission systems.
18. Use techniques for testing transmission systems of passenger cars.
19. Identify and recognize the features of operating automotive ignition systems in light cars.
20. Apply the methods and techniques suitable for the detection of anomalies in ignition systems of the engine.
21. Use repair techniques of ignition drive systems.
22. Use technology research of power systems, turbocharger systems and limiting emissions.
23. Identify and recognize the features of the energy systems, turbocharger systems and limiting emissions.
24. Use technology research of power systems, turbocharger systems and emission reduction.
25. Identify and recognize the features of operating systems, cooling and lubricating light vehicles.
26. Apply the methods and techniques suitable for detecting irregularities in the cooling system and lubrication of vehicles.
27. Use repair technique of cooling systems and engine lubrication.
28. Use of repair techniques of mechanical system of the light and air conditioning systems.
29. Use techniques to test cooling systems.
30. Identify and recognize the characteristics of systems work load and light motor starting.
31. Apply the methods and techniques suitable for detecting fault in starter and load systems.
32. Use technology exchange components system of load and engine starter.
33. Use the techniques and products necessary for the maintenance of the parts and conditions of cleaning systems.

34. Using the procedures and products necessary to maintain the cleanliness of the workplace, tools and used equipment.
35. Knows the technical documentation regarding to the business registration.

BEHAVIOR:

1. Interaction with other employees in the process of diagnosing faults and repair light vehicles.
2. The organization of the workplace, enabling the proper performance of the work.
3. Observe the rules and procedures of safety, hygiene, health and environmental protection in the course of professional activities.
4. Take responsibility for action in the performance of their tasks.
5. Assertive behavior in relationships with others.
6. Co-operation in achieving the objectives.
7. Take the initiative to find a suitable solution.
8. Adjusts to new technologies.

3.4. Formal documents and their contents confirming qualifications issued in connection with passing the final exam

The person who passed the exam confirming qualification/s in the profession, receives a certificate confirming vocational qualifications.

Certificate is awarded to the person who has passed the professional exam in all the qualifications required for the profession and has a level of education required for the job.

Certificate confirming the qualification in the profession

Certificate confirming the qualification in the profession is given to the person who has passed the exam confirming the qualification in the profession (the person obtained at least 50% points).

Certificate confirming the qualification in the profession shall contain: the name (s) and surname, date and place of birth, identification number of the person who passed the exam confirming qualifications in the profession, the name of the qualification.

Certificate confirming vocational qualifications

A person can get a certificate confirming vocational qualifications, if he/she has:

1) certificates confirming all the qualifications, and
2) a certificate of completion of secondary school or current post primary school or a certificate of passing external examinations with the terms set out in the general education curriculum.

Issuance of Certificate

Graduates of schools leading professional courses who in the school year received a leaving certificate and certificate confirming qualification separated in a profession in which educates school certificate shall be issued on the basis of passing the examination. This certificate is issued by the Ministry of Education.

The term of issuing certificate of vocational qualifications

The Ministry shall determine date of issuing Certificates confirming qualification in the profession - as the date of passing the qualification examination / s in the profession.

Director of the school or institution or employer or a person authorized by him provides to those who passed the exam, certificates confirming qualification in the profession.

3.5. The system of examination, confirmations of qualifications and pass rate in the profession of electrician and car mechanic on the example of Escola Secundaria de Barcelos and Escola Profissional Cooperativa de Ensino

The system of performing exams concerning the professional courses in Portugal requires many changes.

Presently the system is organized in a form of a practical exam. The student's task is to prepare a presentation on a project on a chosen subject. He presents the work to the panel of external experts who mark his/her work and decide on the issuing a certificate.

As students have up to 560 hours (within 3 years of a professional course) in companies, quite usually they choose to prepare a project connected with the work performed during the stages.

It was measured and observed that on the basis on Escola Secundaria de Barcelos all 75 students who underwent professional course for electricians, passed the exam and received a Certificate.

In Escola Profissional Cooperativa de Ensino in 2014, 83 students trained to become car mechanics, and also, like in the case of ESB, all of them graduated and passed the practical exam.

Presently there is a debate in Portuguese Ministry of education on changing the form of the examination, so it allows students to combine the theoretical and practical knowledge they receive during the years of study.

3.6. Summary

The system of vocational training in Portugal does not exist as such. There is a dispute between the Ministry of Education and Ministry of Social Policies concerning the party responsible for vocational training. Portuguese schools and local governments see the need for changes. They are trying to achieve that through taking part in different European projects. Unfortunately, majority of training courses is not properly performed and the students do not receive proper practical training in companies. The schools are also suffering from the lack of proper equipment – especially within vocational training, in order to provide their listeners with the best practical training possible. The introduction of dual system is still in progress and a lot of electricians and car mechanics gained the skills not on the basis of properly gained knowledge at school, but through real life experience.

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3.8. Appendix

Appendix No. 1

Diferencial ENGENHARIA
SEGURANÇA DO TRABALHO
MEIO AMBIENTE - ELÉTRICA

CERTIFICADO

Certificamos que **NOME DO ALUNO** participou do Curso Básico - Segurança em Instalações e Serviços com Eletricidade - Curso exigido pela Portaria 598 do Ministério do Trabalho e Emprego MTE, de 07/12/2004 - Norma Regulamentadora Nº 10, item 10.8 e anexo II da referida Norma.

MODELO

Belo Horizonte – MG, xx de xxxxxxxx de 201x

GILSON ANTÔNIO FAGUNDES
Engº Eletricista / Engº Seg. Trabalho
Gestor Ambiental / CREA-MG: 42642/D

NOME DO ALUNO
CPF: XXX.XXX.XXX-XX

2 Tabelionato de Notas
CARTÃO DE ASSINATURA

RNP - Registro Nacional Profissional no CONFEA – Conselho Federal de Engenharia, Arquitetura e Agronomia Nº: 1.408.073.439.
Obrigatório Conforme Resoluções Nº 1007/03, 494/06 e 504/07 do CONFEA

CEDE Nº XXXX

Appendix No. 2

CENTRO PAULA SOUZA — GOVERNO DO ESTADO SÃO PAULO

CENTRO ESTADUAL DE EDUCAÇÃO TECNOLÓGICA PAULA SOUZA
GOVERNO DO ESTADO DE SÃO PAULO
Praça Coronel Fernando Prestes, 74 - Bom Retiro - CEP: 01124-060 - São Paulo - SP
(11) 3327-2000 - http://www.centropaulasouza.sp.gov.br

MATRIZ CURRICULAR – 1º SEMESTRE DE 2013

Unidade Escolar		Código		Município	
Eixo Tecnológico	CONTROLE E PROCESSOS INDUSTRIAIS	Curso	TÉCNICO EM MECÂNICA		

Resolução SE n.º 78, de 7-11-2008, Lei Federal n.º 9394/96, Decreto Federal n.º 5154/2004, Parecer CNE/CEB n.º 39/2004, Lei Federal n.º 11741/2008, Resolução CNE/CEB nº 6, de 20-9-2012, Parecer CNE/CEB nº 11, de 12-6-2008, Resolução CNE/CEB n.º 3, de 9-7-2008, alterada pela Resolução CNE/CEB n.º 4, de 6-6-2012, Deliberação CEE n.º 105/2011, das Indicações CEE n.º 8/2000 e n.º 108/2011.
Plano de Curso aprovado pela Portaria Cetec – 127, de 3-10-2012, publicada no Diário Oficial de 4-10-2012 – Poder Executivo – Seção I – página 25 4.

MÓDULO I – 1º semestre de 2013				MÓDULO II – 1º semestre de 2013				MÓDULO III – 1º semestre de 2014				MÓDULO IV – 1º semestre de 2014			
Componentes Curriculares	Carga Horária (Hora-aula)			Componentes Curriculares	Carga Horária (Hora-aula)			Componentes Curriculares	Carga Horária (Hora-aula)			Componentes Curriculares	Carga Horária (Hora-aula)		
	Teoria	Prática	Total		Teoria	Prática	Total		Teoria	Prática	Total		Teoria	Prática	Total
I.1 – Desenho Técnico Mecânico	00	100	100	II.1 – Resistência dos Materiais	60	00	60	III.1 – Projetos Mecânicos	100	00	100	IV.1 – Organização Industrial	40	00	40
I.2 – Processos de Fabricação I	00	60	60	II.2 – Metrologia II	00	40	40	III.2 – Desenho Auxiliado Por Computador II	00	300	300	IV.2 – Automação Industrial II	00	100	100
I.3 – Metrologia I	00	60	60	II.3 – Elementos de Máquinas II	00	60	60	III.3 – Automação Industrial III	00	60	60	IV.3 – Processos de Fabricação IV	00	100	100
I.4 – Eletricidade Aplicada	00	40	40	II.4 – Desenho Auxiliado Por Computador I	00	300	300	III.4 – Processos de Fabricação III	00	60	60	IV.4 – Tecnologia em CNC II	00	40	40
I.5 – Mecânica Técnica	40	00	40	II.5 – Processos de Fabricação II	00	60	60	III.5 – Tecnologia em CNC I	00	40	40	IV.5 – Ética e Cidadania Organizacional	40	00	40
I.6 – Tecnologia Mecânica I	60	00	60	II.6 – Automação Industrial I	60	00	60	III.6 – Planejamento do Trabalho de Conclusão de Curso (TCC) em Mecânica	40	00	40	IV.6 – Desenvolvimento do Trabalho de Conclusão de Curso (TCC) em Mecânica	00	60	60
I.7 – Elementos de Máquinas I	60	00	60	II.7 – Tecnologia Mecânica II	40	00	40	III.7 – Tecnologia Mecânica III	60	00	60	IV.7 – Tecnologia em Manufatura	60	00	60
I.8 – Aplicativos Informatizados em Mecânica	00	40	40	II.8 – Inglês Instrumental	40	00	40	III.8 – Linguagem, Trabalho e Tecnologia	40	00	40	IV.8 – Tecnologia em Soldagem	60	00	60
I.9 – Segurança Ambiental e do Trabalho	40	00	40	II.9 – Ensaios Tecnológicos dos Materiais	00	40	40								
TOTAL	200	300	500	TOTAL	300	300	500	TOTAL	240	260	500	TOTAL	200	300	500

MÓDULO I Qualificação Técnica de Nível Médio de ASSISTENTE DE PROCESSOS INDUSTRIAIS	MÓDULOS I + II Qualificação Técnica de Nível Médio de ASSISTENTE DE USINAGEM	MÓDULOS I + II + III Qualificação Técnica de Nível Médio de ASSISTENTE TÉCNICO EM MECÂNICA	MÓDULOS I + II + III + IV Habilitação Profissional Técnica de Nível Médio de TÉCNICO EM MECÂNICA

Total da Carga Horária Teórica	840 horas-aula	Trabalho de Conclusão de Curso	120 horas
Total da Carga Horária Prática	1160 horas-aula	Estágio Supervisionado	Este curso não requer Estágio Supervisionado.

Data: ____/____/_____

DIRETOR DE ETEC
(assinatura e carimbo)

Homologação: ____/____/_____

SUPERVISOR EDUCACIONAL
(assinatura e carimbo)

Unidade de Ensino Médio e Técnico (CETEC) / Grupo de Formulação e Análises Curriculares – GFAC

Appendix No. 3

FEDERAÇÃO DE ESCOLAS
FACULDADES INTEGRADAS SIMONSEN

O Diretor Geral da Federação de Escolas Faculdades Integradas Simonsen, no uso de suas atribuições, e tendo em vista a conclusão do Curso de HISTÓRIA, *em* 30 *de* dezembro *de* 2002, *confere o título de* LICENCIADO EM HISTÓRIA *a* Francisco Assis de Lima *carteira de identidade nº* [redacted] *órgão expedidor* IIFP/RJ *data:* 26/04/1995 *nascido a* 02 *de* julho *de* 1966, *natural de* Minas Gerais, *e outorga-lhe o presente Diploma, a fim de que possa gozar de todos os direitos e prerrogativas legais.*

Rio de Janeiro, 08 *de* setembro *de* 2004

Secretário

Diretor

Diplomado