

Comparative study of vocational education systems for electrician and automotive technician in formal education, identification of educational effects, definition of common and differentiating education effects for Partner countries and knowledgeability of vocational qualifications

Prepared by:

Wyższa Szkoła Ekonomiczno-Społeczna (High Economic and Social School) in Ostrołęka (Poland)

Instytut Technologii i Eksploatacji Państwowy Instytut Badawczy (Institute for Sustainable Technologies. National Research Institute) in Radom (Poland)

Agencja Rozwoju Regionalnego Spółka z o.o. (Regional Development Agency Ltd.) in Ostrołęka (Poland)

Handwerkskammer Erfurt (Germany)

Associação Intercultural Amigos da Mobilidade (Portugal)



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Chapter 1

Formal path of obtaining professional qualifications for the profession of electrician and automotive technician – comparison of descriptions between the educational systems in Germany, Poland and Portugal and indicating common and differentiating elements of Partner countries

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Table 1.

The formal procedure for acquisition of vocational qualifications of electrician and automotive technician – comparison of descriptions between valid education systems in Germany, Poland and Portugal and indication of common and differentiating elements for Partner countries

PROCEDURE FOR ACQUISITION OF VOCATIONAL QUALIFICATIONS BY WAY OF SCHOOL EDUCATION			
	POLAND (PL)	GERMANY (DE)	PORTUGAL (PT)
COMPARISON OF DESCRIPTIONS BETWEEN VALID EDUCATION SYSTEMS IN GERMANY, POLAND AND PORTUGAL	<p>The basis of Polish education system for vocational education is the completion of basic cycle of general education.</p> <p>Stage of general education includes:</p> <ul style="list-style-type: none"> - Elementary school: grades I – VI - Junior high school: grades VII – IX. <p>Basic general education lasts 9 years (9 grades) in total and ends with secondary school exams. The result of the exams is a percentage result including humanistic and natural science part of the exam.</p> <p>(http://www.cke.edu.pl).</p> <p>Documents confirming the accomplishment of basic general education cycle are as follows:</p> <ul style="list-style-type: none"> - certificate of completion of education in the secondary school, - certificate regarding 	<p>The basis of German education system for vocational education is the completion of basic cycle of general education.</p> <p>Stage of general education includes:</p> <ul style="list-style-type: none"> - Elementary school: grades I-IV (exception: Berlin and Brandenburg region grades I-VI), - general school (Hauptschule) grades V-IX or V-X or Realschule grades V-X. <p>General education ends with an exam.</p> <p>Document confirming the accomplishment of basic general education cycle is the certificate of completion of <i>Hauptschule</i>/certificate of completion of <i>Realschule</i> (it is the essential condition for attendance in vocational training within dual education.</p> <p>One of the elements of</p>	<p>The basis of Portuguese education system for vocational education is the completion of basic cycle of general education (primary education) including:</p> <ul style="list-style-type: none"> - Cycle 1 grades I-IV, - Cycle 2 grades V-VI, - Cycle 3 grades VII-IX <p>Basic general education lasts 9 years (9 grades) in total.</p> <p>Each cycle of education finishes with exams.</p> <p>Stage of general education is terminated with achievement of Certificate that allows further education.</p> <p>Examination after third Cycle includes part regarding knowledge of Portuguese language and part regarding main subject from given course of education</p> <p>Vocational qualifications are acquired by continuation of education at 2nd degree high school (grades X, XI and XII) with technical</p>

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	<p>detailed results of secondary school exam, issued for each secondary school graduate.</p> <p>Vocational qualifications are acquired by continuation of education in basic vocational school (upper-secondary school). This stage of education lasts 3 years (grades X-XII).</p> <p>Secondary school graduates that chose vocational education of electrician or automotive technician, are taking part in recruitment process by submitting the documents to the selected school.</p> <p>Graduate preparation takes place in accordance with the educational program (for profession of electrician no. 741103 with basic structure, for profession of automotive technician no. 723103 with basic structure). Examples of educational programs were developed by National Centre for Supporting Vocational and Continuing Education. This program contains:</p> <ul style="list-style-type: none"> – educational targets and tasks, 	<p>general education grades V-VI is preparation for making a decision regarding selection of profession with opinion about further education career and choice of profession after completion of this stage of education.</p> <p>Vocational qualifications are acquired by continuation of education in dual system. This stage of education lasts 3-3,5 years (grades X-XII).</p> <p>Vocational education in dual system prepares for work in accordance with training rules determined at national level (component at workplace) and in accordance with educational programs defined by federal states (activities at school).</p> <p>The condition for starting education at vocational school is a course contract concluded between the educational company and the student. Based on this contract, the student may attend a vocational school.</p> <p>During the vocational training the students must pass exams twice: midterm exams and final exams. The education is finished with exam taken by the candidates</p>	<p>program and, simultaneously, attendance to selected vocational course.</p> <p>The electrician acquires his vocational qualifications after completion of 12th cycle of education and passing the vocational exam conducted by the external board.</p> <p>The documents confirming the acquisition of qualifications for electrician are: the certificate of completion of secondary education and Certificate confirming the completion of vocational course and qualification acquisition for electrician.</p> <p>Qualifications for automotive technician is acquired after completion of 12th cycle of education and passing the vocational exam conducted by the external board.</p> <p>The documents confirming the acquisition of qualifications for automotive technician are: the certificate of completion of secondary education and Certificate confirming the completion of vocational course and qualification acquisition for automotive technician.</p>
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	<ul style="list-style-type: none"> - information about profession of electrician, - substantiation of need for education in profession of electrician, - profession connections with other professions, - detailed educational targets, - education plan, - education programs for separate subjects. <p>Certificate confirming qualifications of electrician and automotive technician is acquired by:</p> <ul style="list-style-type: none"> - accomplishment of basic vocational school, - passing the exam or exams confirming the profession qualifications. 	<p>of dual system before the examining board, which consists of representatives of chamber of crafts, of chamber of commerce and industry, of chamber of professionals or of other chambers of commerce. The examination includes theoretical and practical exercises.</p>	
<p>COMMON ELEMENTS</p>	<ul style="list-style-type: none"> - Initiating vocational education requires completion of basic stage of general education (Poland – elementary school and secondary school, Germany – elementary school (Grundschule), <i>Hauptschule</i> or <i>Realschule</i>, Portugal - Cycle 1 and Cycle 2 (Ensino básico 1.º e 2.º ciclos). - In the end of basic stage of general education the students take exams and acquire documents confirming the completion of this stage of education authorizing the continuation of educational path. - The students complete basic stage of general education by the age of 15-16. - Vocational education for electrician and automotive technician lasts 3 years. - In each system of vocational education acquisition of profession of electrician and automotive technician requires completion of vocational education stage and passing the vocational exams. 		
<p>DIFFERENTIATING ELEMENTS</p>	<ul style="list-style-type: none"> - In Poland, the entity responsible for 	<ul style="list-style-type: none"> - In Germany, the entity responsible for 	<ul style="list-style-type: none"> - In Portugal, the entity responsible for

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	<p>organization of vocational education system is the State.</p> <ul style="list-style-type: none"> - Vocational education takes place at basic vocational school responsible for theoretical and practical education. - Practical vocational education takes place at public educational institutions, centers for practical education or within employers. - The contract with employer regarding practical vocational education is concluded by the school. 	<p>organization of vocational education system within the scope of theoretical education is the State/federal state and within the scope of practical education is the employer.</p> <ul style="list-style-type: none"> - Vocational education takes place in dual system, in which the vocational school is responsible for theoretical preparation and the employer responsible for practical education of profession. - The contract with employer regarding practical vocational education is concluded by the student. - Chambers of industry/crafts play a major role in vocational education system within the scope of cooperation in developing practical programs for vocational courses and controlling the employers in the implementation of practical part of vocational course. 	<p>organization of vocational education system is the State.</p> <ul style="list-style-type: none"> - Vocational education takes place at 2nd degree high school with technical or vocational program. - Theoretical vocational education takes place at school and practical vocational education takes place in the form of vocational courses and apprenticeship within the employers. - The contract with employer regarding practical vocational education is concluded by the student.
PROCEDURE FOR ACQUISITION OF VOCATIONAL QUALIFICATIONS BY WAY OF OCCUPATIONAL EDUCATION, TRAINEESHIPS			

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	POLAND (PL)	GERMANY (DE)	PORTUGAL (PT)
COMPARISON OF DESCRIPTIONS BETWEEN VALID EDUCATION SYSTEMS IN GERMANY, POLAND AND PORTUGAL	<p>Vocational qualifications for electrician and automotive technician may be acquired by vocational education organized by the employer and theoretical training.</p> <p>Vocational education lasts 33-36 months.</p> <p>The secondary school graduate may choose the employer that will conclude a contract with him as an adolescent employee for the purpose of vocational education.</p> <p>Such contract includes identification of the parties, form of practical and theoretical training and the date of planned education completion. The regulations of indefinite duration employment contract may be applied for concluding and dissolution of employment contracts with adolescents.</p> <p>The employer, employing adolescent for the purpose of vocational education, is directing him/her for theoretical training: at vocational school, at vocational training centre or organizes such theoretical</p>	<p>In Germany there is no equivalent for acquisition of vocational qualifications on analogous educational path as for occupational education in Poland.</p> <p>However, the path for acquisition of qualifications for electrician and automotive technician in Germany as part of dual system has multiple common attributes with path of vocational qualification acquisition in Poland by way of occupational education.</p>	<p>Acquisition of qualifications for electrician and automotive technician in this form includes vocational training of adolescent workers (15 -25 years). This training consists of alternance training conducted by Instituto do Emprego e Formação Profissional [Institute of Employment and Professional Training - IEFP]. The objective of this procedure is to prepare young people to first occupation and facilitate their entrance into occupational career.</p> <p>Occupational training takes place by the way of:</p> <ul style="list-style-type: none"> - organizing and signing the contract between interns and company with internship/training program, - contribution in occupational training courses (they have different duration, depending on their behavior). Occupational training courses include: <ul style="list-style-type: none"> • social-cultural training,

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	<p>training by himself. Theoretical training is intended to conduct core curriculum of obligatory theoretical vocational subjects. <i>(http://www.infor.pl/prawo/praca/umowa-o-prace/89167,Co-nalezy-wiedziec-o-pracy-mlodocianych.html).</i></p> <p>The vocational education is completed with examination. Adolescents, at employers not being craftsmen, trained at:</p> <ul style="list-style-type: none"> - vocational schools, directly after acquisition of certificate of completion of basic vocational school, pass exams confirming their vocational qualifications within the scope of qualification distinct in this profession - other forms of education rather than school education, pass extramural qualification exams confirming their vocational qualifications within the scope of qualification distinct in this 		<ul style="list-style-type: none"> • scientific and technological training • practical training (in work environment and constitutes at least 30% of all hours). <p>Trainings taking place at workstation is monitored by mentor appointed by the entity responsible for given training component.</p> <p>After successful completion of training process, the participants acquire:</p> <ul style="list-style-type: none"> - Level 2 of vocational qualifications and certificate of cycle 3 of primary education - Level 3 of vocational qualifications and certificate of high school completion.
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	<p>profession. In case where there is more than one qualification distinct from profession – extramural exams confirming the vocational qualifications within the scope of all qualifications distinct in this profession in accordance with regulations regarding the extramural exams. Adolescents, employed as craftsmen, pass journeyman qualification exams conducted in accordance with the regulations regarding journeyman and master craftsman qualification exams.</p> <p>After completion of education and passing the exam, the employee receives the title of qualified laborer or journeyman.</p> <p><i>(Announcement of the Prime Minister dated December 6, 2013 concerning the issue of consolidated text of regulation of Prime Ministers regarding the licensure of adolescents and their</i></p>		
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	<i>remuneration).</i>		
COMMON ELEMENTS	<ul style="list-style-type: none"> - The employer is responsible for practical occupational education. - The obligation of acquisition and complementing the theoretical education corresponding to core curriculum of obligatory vocational subjects. - For acquisition of electrician and automotive technician profession it is required to complete the stage of vocational education and pass the vocational exams. - Adolescent concludes a contract for practical vocational training with an employer. 		
DIFFERENTIATING ELEMENTS	<ul style="list-style-type: none"> - The practical vocational training may be performed at the employer being an entrepreneur or at the employer being a craftsman. - In case of entrepreneur the vocational exams are organized analogically to vocational school exams. - In case of craftsman the entity responsible for vocational exams is the chamber of crafts. 	<ul style="list-style-type: none"> - The practical vocational education is performed at the employer. - The vocational exams are organized by chambers of industry/crafts. 	<ul style="list-style-type: none"> - The practical vocational education is performed at the employer. - The vocational exams are organized by the employer, school. - Vocational education courses include: <ul style="list-style-type: none"> • social-cultural training, • scientific and technological training • practical training (in work environment)
PROCEDURE FOR ACQUISITION OF VOCATIONAL QUALIFICATIONS BY WAY OF LIFELONG LEARNING			
	POLAND (PL)	GERMANY (DE)	PORTUGAL (PT)
COMPARISON OF DESCRIPTIONS BETWEEN VALID EDUCATION SYSTEMS IN GERMANY, POLAND AND PORTUGAL	<p>Acquisition of qualifications for electrician and automotive technician as a part of lifelong learning requires completion of qualification vocational training within qualification according to given profession.</p> <p>The qualification</p>	<p>Stages of vocational education in Germany are the following:</p> <ul style="list-style-type: none"> • preparation for vocational education – it is intended for young people, who did not find business teaching profession, in which they may be trained or they 	<p>Acquisition of qualifications for electrician and automotive technician as a part of lifelong learning is possible by the means of supplementary training. This one is addressed to adults, who did not complete the stages of education or terminated the education.</p>

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	<p>vocational training is performed in accordance with education program including core curriculum of lifelong learning for professions in terms of one qualification (K). In terms of electrician profession, the person must accomplish the qualification course in terms of E.7 qualification – Installation and maintenance of electrical machines and devices and E.8 qualification – Installation and maintenance of electrical installations. In terms of automotive technician profession, the person must accomplish the qualification course in terms of qualification M.18. Diagnostics and maintenance of vehicle subassemblies and assemblies.</p> <p>The course graduate acquires the certificate for completion of qualification vocational training, which entitles him to take an exam confirming vocational qualifications in terms of given qualification. The person that completes qualification vocational training and passes the exam confirming vocational</p>	<p>are not ready for education yet.</p> <ul style="list-style-type: none"> • vocational education – vocational education is divided into basic vocational education and vocational education with specialization. Education for individual professions follows based on general educational rules. • in-service training – offers sustaining and deepening the vocational qualifications. It ensures job retention and helps in adjusting your qualifications for new anticipations, e.g. knowledge of new technologies. It acts as a basis for promotion. • vocational training – it allows performance of new function at work, it aids improvement of career standing and position on labor market. <p>In many German States there are public schools implementing lifelong learning. This way of acquisition of vocational education is mostly used by people having any vocational</p>	<p>The paths for conclusion of secondary education and acquisition of qualification are as follows:</p> <ul style="list-style-type: none"> – adults training course, – education courses. <p>The process of Reconhecimento, Validação e Certificação de Competências [Skills recognition, validation and certification - RVCC] is the most popular platform for accessing those courses. The purpose of these courses is an increase of academic skills of adult population and vocational qualifications in terms of electrician and automotive technician professions by offering educational combinations and courses. Courses are conducted based on:</p> <ul style="list-style-type: none"> • flexible educational paths aimed at crediting and validating the skills of adults, obtained through formal, out of regular and informal paths; • coordinated educational path that includes basic and technology education or, simply, basic training;
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	<p>qualifications in terms of given qualifications, acquires certificate confirming vocational qualifications. <i>(developed based on information from webpage https://www.apedukacja.pl/kwalifikacyjne-kursy-zawodowe,785.html).</i></p>	<p>experience. Schools, at which the lifelong learning is performed, are: adults evening schools (Abendgymnasien), evening Realschule schools (Abendrealschulen) and colleges (Kollegs), in some States gathered in a group, so called, lifelong learning colleges. Furthermore, in many States You may take an extramural exam in front of educational (national) examination board, after which You receive certificate of completion of school. Organization and conduct of exams is, in general, a competence of public schools (e.g. adults evening schools, schools for adults etc.). Private, commercial institutions have no rights for conducting the exams and, therefore, they may only offer preparatory courses for extramural exams. The scope of lifelong learning consists of forms of school education/cycles for adults evening schools, evening Realschule schools and colleges. It is about free public comprehensive schools, where after</p>	<p>Such courses result in completion of Cycle 3 of education and vocational education on Level 2 and acquisition of certificate or secondary education attestation and Level 3 certificate of vocational education.</p> <p>Taking part in EFA course, that does not lead to certification, provides the participants with authorization for request for skills validation certificates, which mentions all skills confirmed during course.</p> <p>EFA courses are designed and conducted by relevant entities or by third party. In both cases the training body must be a part of training institutions network located in national qualification system.</p> <p>Other trainings</p> <p>While continuing vocational trainings for people in productive age or unemployed, the courses for electrician and automotive technician are also offered for them, including:</p> <ul style="list-style-type: none"> • qualification courses or retraining; • refreshing, updating or
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		<p>graduation You receive the same certificate as for youth schools. Wage-earning persons or vocationally educated adults may take the matriculation and repeat it after completion of 3-4 year courses or pass (repeat) the so-called vocational exam.</p>	<p>further education courses; Usually, the training paths offered for electrician and automotive technician jobs include units or modules leading to acquisition of skills that may be approved for certification purposes in perspective of lifelong learning. Courses are usually designed to fulfill specific needs and circumstances of organization and employees; they may, for example, support introduction of new equipment, technology or organizational models for modernization of companies. They implement new methods of production and forms of work organization.</p>
COMMON ELEMENTS	<ul style="list-style-type: none"> - Acquisition of electrician or automotive technician profession requires completion of vocational training and passing the vocational exams. - Having a level of education corresponding to core curriculum of vocational school/2nd degree school. - The vocational courses are addressed to adults. - Qualification vocational courses are used for acquisition of a job for unemployed or for the purpose of retraining with respect to market needs. 		
DIFFERENTIATING ELEMENTS	<ul style="list-style-type: none"> - Lifelong learning is taking place at public/private educational institutions in accordance with uniform core curriculum 	<ul style="list-style-type: none"> - Lifelong learning is taking place at adults evening schools (Abendgymnasien), evening Realschule schools 	<ul style="list-style-type: none"> - Lifelong learning is taking place in the form of education and training combination. - Education is performed by vocational education

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	<p>for given vocational qualification.</p>	<p>(Abendrealschulen) and colleges (Kollegs) or at the Centers for adults education</p> <ul style="list-style-type: none"> - There is a form of continuing education leading to acquisition of qualifications required for completion of the school. 	<p>centers belonging to Institute of Employment and Professional Training (IEFP) and other accreditation institutions.</p> <ul style="list-style-type: none"> - The exam allows to confirm the competences acquired through formal and informal process. - People taking part in such courses must present three years of vocational experience.
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Source: Own study

Chapter 2

Educational effects confirmed by the vocational exam for the profession of electrician and automotive technician – the comparison of descriptions between current educational systems in Germany, Poland and Portugal and indicating common and differentiating elements of Partner countries

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Table 2.

The effects of education confirmed by the vocational exam for electrician and automotive technician – comparison of descriptions between educational systems valid in Germany, Poland and Portugal and identification of common and differentiating

POLAND (PL)	GERMANY (DE)	PORTUGAL (PT)
<p>The allocation of professions of electrician and automotive technician within National Qualifications Framework in Poland</p>	<p>The allocation of professions of electrician and automotive technician within National Qualifications Framework in Germany</p>	<p>The allocation of professions of electrician and automotive technician within National Qualifications Framework in Portugal</p>
<p>For the profession of Automotive technician - 723103 the following qualifications were distinguished: M.18. <i>Diagnostics and maintenance of vehicle subassemblies and assemblies;</i></p>	<p>Automotive mechatronic technician– specialization: automotive technician-25212</p> <p>Part 1 of the exam (after completion of second year of education)</p> <p>The candidate must select at least one from the following qualifications:</p> <ul style="list-style-type: none"> a) <i>Diagnostics of wiring system</i> b) <i>Diagnostics of lighting system</i> c) <i>Diagnostics of power supply system</i> d) <i>Diagnostics of start-up system</i> e) <i>Diagnostics of braking system</i> <p>Part 2 of the exam (at the end of education cycle):</p> <p>Qualifications:</p> <ul style="list-style-type: none"> a) <i>Customers' orders</i> b) <i>Service of motor vehicles</i> c) <i>Diagnostics</i> d) <i>Market research</i> 	<p>Automotive technician - 525083</p> <p>Area of education and training: 525 – Manufacture and maintenance of motor vehicles; National Qualifications Framework – Level 2 (The effects of education corresponding to level 2 – basic factual within the area of work or education)</p> <p>Qualifications:</p> <ul style="list-style-type: none"> a) <i>Maintenance and diagnostics of malfunctions,</i> b) <i>Repairs of different mechanical systems of motor vehicles in accordance with the parameters and requirements defined by the manufacturer and with the safety and environment protection regulations.</i>
<p>For the profession of Electrician the following qualifications were specified: E.7. Installation and maintenance of electrical machines and devices and E.8 <i>Installation and</i></p>	<p>Electronics engineer – specialization: energy and construction technologies - 26212 (Electronics engineer profession also includes other specializations, such</p>	<p>Electrician – 522060</p> <p>Area of education and training: 522 - Electricity and electric power National Qualifications Framework – Level 2</p>

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<p><i>maintenance of electrical installations.</i></p>	<p>as: <u>Information technology and telecommunication</u>, in which a student is dealing with data processing and transfer systems based on the example of alarm systems, access control systems, phone systems and monitoring systems; and <u>Automatics</u>, based on automatic devices and automatic systems, i.e. manufacture systems, traffic control systems and construction services, i.a. ventilation of heating systems, as well as automatic systems used in car manufacture industry, machine manufacturing and installation).</p> <p>Part 1 of the exam (after completion of second year of education cycle)</p> <p>Qualification:</p> <ul style="list-style-type: none"> - <i>Construction of functional parts of electrical system</i> <p>Part 2 of the exam (at the end of education cycle):</p> <p>Qualifications:</p> <ul style="list-style-type: none"> a) <i>Orders</i> b) <i>Project of the system and power electronics devices</i> c) <i>Analysis of operation of system and devices</i> d) <i>Market research</i> 	<p>Qualifications:</p> <ul style="list-style-type: none"> a) <i>construction of electrical installations in buildings and providing control,</i> b) <i>installation and maintenance of electrical devices, household electronics and automatics in accordance with occupational health and safety regulations and regulations regarding environment protection and actual regulations</i>
<p>The effects of education proper for qualification isolated from profession of automotive technician in Poland</p>	<p>The effects of education proper for qualification isolated from profession of automotive mechatronic technician, specialization: automotive technician and electronics engineer</p> <ul style="list-style-type: none"> - specialization: energy and 	<p>The effects of education proper for qualification isolated from profession of automotive technician in Portugal</p>

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	construction technologies, in Germany	
<p>The effects of education common for all professions <u>(BHP). Occupational health and safety regulations</u></p> <p>Differentiates the terms corresponding to occupational health and safety regulations, fire protection, environment protection and ergonomics. Foresees the threats to human health, human life, property and environment related to existence of harmful factors of work environment. Uses means of personal and collective protection during vocational tasks performance; observes the occupational health and safety regulations and applies the law regarding fire and safety protection. Gives first aid to victims of accidents at work and when in health- or life-threatening conditions. Differentiates tasks and authorizations of institutions and services operating within the scope of labor protection and environment protection in Poland. Defines laws and obligations of the employee and employer within the scope of occupational health and safety regulations</p> <p>Defines the results of influence of harmful effects on human body;</p> <p>Organizes workstation in accordance with effective ergonomics, occupational health and safety</p>	<p>The effects of education common for all professions <u>(BHP). Occupational health and safety regulations</u></p> <p>Uses occupational health and safety regulations, regulatory requirements and maintenance methods, while pointing out the quality management and basic rules of orientation for customer ,as well as, is able to evaluate the results. Creates projects using safety regulations. Installs and sets in accordance with safety rules, occupational health and safety regulations and environment protection requirements. Evaluates the safety level of systems and checks their protections.</p>	<p>The effects of education common for all professions <u>(BHP). Occupational health and safety regulations</u></p> <p>Observes the rules and procedures of occupational health and safety and environment protection during the professional activity, takes responsibility for performing his/hers activities.</p> <p>Observes the laws and regulations regarding electrical installations in terms of performance of his/hers professional activity.</p> <p>Organizes relevant workstations enabling proper performance of career.</p>

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<p>regulations, fire protection regulations and environment protection regulations.</p>		
<p><u>(PDG). Commencement and conduct of business activity</u> Uses terms from the area of market economy, applies labor legislation, provisions of the law regarding protection of personal data, tax regulations and copyright laws; applies provisions of the law regarding enterprise; differentiates companies and institutions functioning in business and relations between them; analyzes the activities performed by companies functioning in business; initiates common enterprises with different companies from given business; prepares documentation necessary for launching and conducting the business activity; maintains correspondence related to conducting the business activity; maintains office appliances and uses computer programs supporting conduct of business activity; plans and undertakes marketing operations of conducted business activity; optimizes the costs and revenues of conducted business activity.</p>	<p><u>(PDG). Commencement and conduct of business activity</u> Presents and assesses the general social and economic aspects of the world of work and employment. Has knowledge about education and vocational training, employment, collective bargaining, structure of the company conducting education, occupational health and safety regulations, environment protection, planning and preparation of work processes and monitoring and assessment of work results, quality management.</p>	<p><u>(PDG). Commencement and conduct of business activity</u> Knows the technical documentation regarding business activity registration. Knows the regulations regarding conduct of business activity and manages to apply them. Adjusts to new technical technologies, organizes workstations enabling proper performance of it.</p>
<p><u>(JOZ). Vocationally oriented foreign language</u> uses vocabulary (lexical,</p>	<p><u>(JOZ). Vocationally oriented foreign language</u> initiates and transfers systems or</p>	<p><u>(JOZ). Vocationally oriented foreign language</u> uses English language or other</p>

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<p>grammatical, orthographic, and phonetic) enabling performance of vocational tasks; interprets statements regarding performance of typical business activities, articulated in calm and clear manner, in standard language inflection; analyzes and interprets short pieces of text regarding performance of typical vocational activities; formulates short and clear statements and written texts enabling the communication within work environment; uses foreign sources of information.</p>	<p>system components, provides specialist information using terms in English, prepares admission reports, substantiates and assesses services and work results, provides an account for all services, substantiates information regarding all devices, systems and documents.</p>	<p>foreign language corresponding to performance of tasks. Uses specific English technical vocabulary</p>
<p><u>(KPS). Personal and social competence</u> Observes cultural and ethical rules; is creative and consequent in tasks performance; foresees the effects of conducted activities; is opened to changes; manages with stress; updates knowledge and improves vocational abilities; observes the vocational secrecy; manages to take responsibility for performance of activities; manages to negotiate the conditions of the agreement; cooperates in a team.</p>	<p><u>(KPS). Personal and social competence</u> Presents and assesses the general social and economic aspects of the world of work and employment. Has knowledge about education and vocational training, employment, collective bargaining, structure of the company conducting education, occupational health and safety regulations, environment protection, planning and preparation of work processes and monitoring and assessment of work results, quality management.</p>	<p><u>(KPS). Personal and social competence</u> Interaction with other members of a team to perform commonly defined tasks while conducting business activity; Observes laws and legal regulations regarding performance of his/hers business activity; manages to adjust to new technical technologies, organizes workstations enabling proper performance of it; takes responsibility for activities within his/hers own tasks; behaves assertively within relations with others; cooperates in achieving designated objectives. Takes initiative in order to find the best solution.</p>
<p>The effects of education corresponding to qualifications isolated for profession of automotive technician</p>	<p>The effects of education corresponding to qualifications isolated for profession of automotive mechatronic technician</p>	<p>The effects of education corresponding to qualifications isolated for profession of automotive technician</p>

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<p>Qualification: M.18. Diagnostics and maintenance of vehicle subassemblies and assemblies;</p>	<p>Part 1 (after completion of second year of training)</p> <p>The candidate must select <u>at least</u> one from the following qualifications:</p> <ul style="list-style-type: none"> a) Diagnostics of wiring system b) Diagnostics of lighting system c) Diagnostics of power supply system d) Diagnostics of initial system e) Diagnostics of braking system 	<p><u>Qualifications:</u></p> <ul style="list-style-type: none"> a) Maintenance and diagnostics of malfunctions, b) Repairs of different mechanical systems of motor vehicles in accordance with the parameters and requirements defined by the manufacturer and with the safety and environment protection regulations.
<p><u>The candidate shows the following skills:</u></p> <p>1. Diagnostics and maintenance of vehicle subassemblies and assemblies</p> <p>Receives the motor vehicle for diagnostics and makes documentation of this reception; prepares motor vehicle for diagnostics; describes the construction of motor vehicle and explains the mechanisms of action of subassemblies and assemblies of these vehicles; defines subassemblies and assemblies of motor vehicle; uses tool and measurement devices to perform diagnostics of motor vehicles; selects methods and defines the scope of diagnostics of subassemblies and assemblies of motor vehicles; uses programs for motor vehicle diagnostics; performs measurements and diagnostics of motor vehicles and interprets their results; assesses the technical state of motor vehicles.</p>	<p><u>The candidate must show that he/she is able to:</u></p> <p>Plan work stages, research data, analyze diagrams and functions, select appropriate work and measurement devices, perform measurements (diagnostics of errors, faults and their causes), document the results (=prepares testing platform and report); fulfill maintenance requirements (= removal, maintenance, installation of car technologies and document the results) in view of relation between technique, work organization, environment protection, safety and health protection show specialist problems and their solutions, present significant, specialist basics in terms of tasks related with activity and explain the approach used to perform tasks related with activity</p> <p>Within four examination areas–<u>qualifications:</u></p> <p>1. Customer orders</p>	<p><u>The candidate must show his/hers knowledge of the following ranges:</u></p> <p>Technical drawing (interpretation of installation drawings for mechanical parts and electrical components);structure, operation and adjustment of petrol and diesel in passenger cars; construction, maintenance and adjustment of steering system, suspension, brakes and active safety systems; construction, maintenance and adjustment of transmission system; construction, maintenance and adjustment of car ignition systems; construction, maintenance and adjustment of electric power systems, turbochargers and antipollution systems; construction, maintenance and adjustment of car cooling and lubrication systems; operating and control systems for passenger cars and trucks; technical standards (manufacturers' manuals); metrology (amounts, measurement procedures,</p>

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<p>2. Maintenance of motor vehicle assemblies and subassemblies locates damage to motor vehicle assemblies and subassemblies based on measurements and results of diagnostics; estimates costs of motor vehicles maintenance; selects methods and defines the scope of motor vehicle maintenance; performs removal of vehicle assemblies and subassemblies; performs verification of vehicle assemblies and subassemblies; selects for replacement vehicle assemblies or subassemblies or their equivalents; replaces damaged vehicle assemblies and subassemblies using workshop devices and tools; performs an installation of vehicle subassemblies and assemblies; performs preservation of vehicle assemblies and subassemblies; explains the rules of vehicle maintenance and selects maintenance materials; performs tests after vehicle repairs; assesses the workmanship of maintenance and determines its cost.</p>	<p>2. Vehicles and maintenance technology 3. Diagnostics techniques 4. Economy and social survey from part 2 the candidate must show that he/she is able to: Plan and introduce work processes and document the results, use IT systems and communicate with customers; maintain and explain the construction of mechanical vehicles and systems, activate and deactivate technical systems of vehicles (fahrzeugtechnische Systeme), test system functions, introduce diagnostics systems; diagnose errors and faults, maintain or modernize vehicles and their systems, document results, prepare and analyze results from research and reports, indicate problems and their solutions, present significant, specialist basics in terms of tasks related to work and substantiate the approach to perform tasks related to work; describe the technical systems of motor vehicles and their functions, perform the analysis of problems, analyze and assess the technological and mathematical areas by attachment of description of approaches and problem solutions; apply occupational health and safety regulations, regulatory requirements and maintenance methods while pointing out the quality management and basic</p>	<p>standards and tolerances); mechanical technology; material technology; technology of devices used in defects diagnostics for passenger cars; types of equipment and tools used for car repairs; maintenance and testing processes for passenger car engines; maintenance and testing processes for steering systems, suspensions, brakes and active safety systems; diagnostic procedures, car wheel and tire anomalies; maintenance and testing processes for transmission systems; maintenance processes for propulsion and ignition systems; maintenance processes for power supply systems; maintenance processes for cooling and lubrication systems for light vehicles; diagnostics processes and components of engine loading and starting system; fault diagnostics processes and replacement of mechanical elements of car air conditioning systems. The candidate manages to: identify faults and use diagnostics devices; identify and use of different devices and tools used in different car maintenance systems; identify and recognize characteristics of petrol and diesel in passenger cars; by means of suitable methods and techniques detect abnormalities in petrol; use techniques for petrol and diesel engine maintenance; by means of suitable techniques manages to</p>
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	<p>rules of orientation for customer ,as well as, is able to evaluate the results, select spare parts, tools, devices, measurement devices, workshop equipment and resources necessary for maintenance, pointing out the technical regulations and manufacturers' manuals, plan the activities while taking into account processes taking place in the company, use and assess databases and branch specific software, create electro technical works with high voltage components using safety rules; performance of problem analysis, analysis and assessment of technological areas, including mathematical areas consisting of description of approaches and troubleshooting, assessment of information from functional plans, diagrams and network plans, branch specific software and manufacturers' manuals; semantically restrict and identify errors, faults and their causes; use and assess the measurement results, control and diagnostics devices and information provided by customers; describe and analyze networking of mechanical vehicle systems</p>	<p>diagnose problems with petrol and diesel engine of passenger car; identify and recognize characteristics of steering system, suspension, brakes and active safety systems; use methods and techniques applicable for detecting anomalies in steering system, suspension system, braking system and active safety systems; use maintenance techniques for steering system, suspension system, braking system and active safety systems; use of research techniques for steering systems, suspension systems, braking systems and active safety systems; use methods and techniques applicable for detection of car wheels and tires defects. use techniques for car spare wheels and tires; identify and recognize characteristics of car transmission systems, use methods and techniques applicable for detection of anomalies in car transmission systems; use maintenance techniques for light transmission systems; use techniques for testing car transmission systems; identify and recognize characteristics of light car ignition systems; use methods and techniques applicable for detection of anomalies in engine ignition systems; use maintenance techniques for ignition of propulsion systems; use research techniques of electrical power systems, turbocharger and systems reducing</p>
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		<p>emission of exhaust gases; define and identify characteristics of electrical power systems, turbocharger and systems reducing emission of exhaust gasses; identify and recognize operational characteristics of cooling and lubrication systems of light vehicles; use methods and techniques applicable for detection of malfunctions in car cooling and lubrication systems; use maintenance techniques for engine cooling and lubrication systems; use maintenance techniques of lighting mechanical systems and air conditioning systems; use testing techniques for cooling systems; define and recognize operational characteristics for engine loading and light start-up of the engine; use methods and techniques applicable for detection of malfunctions in starting systems and loading systems; use techniques for replacement of loading system and engine starter components; use techniques and products necessary for maintaining parts and conditions of cleaning systems; by means of procedures and products necessary to maintain cleanliness of workstation, tools and used equipment.</p>
<p>The effects of education corresponding to qualifications isolated for profession of electrician</p>	<p>The effects of education corresponding to qualifications isolated for profession of electronics engineer – specialization: energy and construction technology</p>	<p>The effects of education corresponding to qualifications isolated for profession of electrician</p>

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<p><u>Qualifications:</u></p> <p>E.7. Installation and maintenance of electrical machines and devices and E.8 Installation and maintenance of electrical installations.</p>	<p>Part 1 of the exam (after completion of second year of education cycle)</p> <p><u>Qualification:</u></p> <p>– Construction of functional parts of electrical system</p>	<p><u>Qualifications:</u></p> <p>a) construction of electrical installations in buildings and providing control,</p> <p>b) installation and maintenance of electrical devices, household electronics and automatics in accordance with occupational health and safety regulations and regulations regarding environment protection and actual regulations.</p>
<p>The candidate shows the following skills:</p> <p>E.7. Installation and maintenance of electrical machines and devices</p> <p>1. <u>Installation of electrical machines and devices</u></p> <p>classifies electrical machines and devices in accordance with defined criteria; defines technical parameters of electrical machines and devices; differentiates parameters of elements and subassemblies of electrical machines and devices; recognizes electrical machines and devices and their elements; differentiates construction materials used in electrical machines and devices; recognizes power supply, control and protection systems of electrical machines and devices and their elements; recognizes electrical wires and cables; defines the purpose of electrical machines and devices; defines functions of elements and</p>	<p>The candidate must show a <u>qualification</u> that he/she is able to:</p> <p>Analyze technical documents, define technical parameters, plan and coordinate work processes and dispose materials and tools; install, connect to power supply, set electrical wires in accordance with safety rules, occupational health and safety regulations and requirements for environment protection</p> <p>Assess the safety level of electrical systems and check electrical protections; analyze electrical systems, check their functions, identify and repair errors; introduce products to operation, transfer, explain and document performed orders; prepare technical documentation including report from carried out research</p> <p>Part 2 of the exam (at the end of education cycle):</p> <p>Within four examination areas–</p>	<p>The candidate must show the knowledge from the following ranges:</p> <p>Technical diagram, welding and knowledge of: Telecommunication systems; mechanics; electrical energy; electronics; household automatics; typology and characteristics of materials regarding performance and maintenance of electrical installation; typology and characteristics of materials regarding construction and maintenance of lighting and electrical energy devices; typology and characteristics of construction and maintenance of electrical installations of propulsion system; typology and characteristics of materials relative to infrastructure installation related to TV antennas; typology and characteristics of tools used to construct and maintain electrical installations; types and operation of electrical installation devices; types and performance of</p>

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<p>subassemblies used in electrical machines and devices; reads and makes drawings and diagrams of electrical machines and devices; selects tools for installation of electrical machines and devices; performs mechanical installation of electrical and electronics subassemblies; installs power supply, control, regulation and protection systems of electrical machines and devices based on documentation; checks compliance of performed activities with documentation; performs measurements of parameters of electrical machines and devices.</p> <p>2. <u>Maintenance of electrical machines and devices</u></p> <p>recognizes spare parts of electrical machines and devices; locates typical damages to electrical machines and devices; observes rules of maintenance of electrical machines and devices; plans the sequence of activities during removal and installation of electrical machines and devices; performs measurements of power supply voltage, winding resistance and insulation resistance; performs the replacement of used or damaged elements and subassemblies of electrical machines and devices; performs the replacement of damaged elements of control systems and protections of electrical machines and devices; checks correctness of</p>	<p><u>qualifications:</u></p> <ol style="list-style-type: none"> Order Project of the system and power electronics devices Analysis of operation of system and devices Market research <p>from part 2 the candidate must show that he/she is able to:</p> <p>Plan and introduce work processes and document the results; use of IT systems and communicate with customers; maintain and explain mechanical vehicles and systems; activate and deactivate technical vehicle systems; test system functions, introduce diagnostics systems, diagnose errors and faults; maintain or modernize vehicles and their systems; document the results, prepare and analyze research results and their solutions; show problems and their solutions, present significant, specialist basics in terms of tasks related to work and explain the approach for performance of tasks related to work; analyze orders, gather information about accessible documents, explain technical and organizational interfaces and choose several variants of solutions regarding economical, technical and ecological aspects; define subtasks, plan and coordinate performance of orders, prepare planning documents including work organization and</p>	<p>electrical devices of lighting systems; types and performance of electrical systems of traction equipment; installation and testing of electrical installations; techniques for installation and testing of electrical installations and electrical lighting; technical installation and control of electrical installations of propulsion system; preventive and maintenance technical actions, preservation of electrical installations; preventive, maintenance and lighting preservation techniques for electrical energy devices; preventive, maintenance and preservation techniques for electrical installations of propulsion system.</p> <p>The candidate manages to: Interpret technical specifications for electrical installations and their maintenance; techniques and methods to prepare relevant equipment, tools, components and materials applicable for construction of electrical installations and performance of maintenance; identifies and knows characteristics of different types of devices, tools, components and materials used for construction of electrical installations, lighting and TV 4 antennas. Use tools and materials necessary for construction of electrical installations; defines layout and arrangement of systems and electrical devices; use methods and techniques to determine reference</p>
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<p>performed installation of control systems and protections of electrical machines and devices based on documentation; performs inspection and maintenance of electrical machines and devices; checks the performance of electrical machines and devices after installation and maintenance.</p> <p>E.8. Installation and maintenance of electrical installations</p> <p>1. <u>Installation of electrical installations</u></p> <p>differentiates wires used in electrical installations; recognizes installation equipment; recognizes sources of light and luminaries; defines technical parameters of electrical installations and installation equipment; observes rules of electrical installation performance in residential and industrial buildings; performs installation diagram of electrical installations; routes the wires and location of installation equipment based on diagram; selects tools to construct different kinds of electrical installations; makes connections between electrical subassemblies in accordance with block and installation diagram; checks compliance of installation of electrical installation with the diagram; performs measurements of parameters of installation and protections in accordance with the</p>	<p>obligations at workstation; perform orders, check and document safety functions, note standards and specifications regarding quality and safety, systematically identify errors, faults and their causes; activate and transfer systems or components of the system, ensure specialist information using English vocabulary, prepare admission reports, documentation and assessment of services and work results, provide an account for all services, document information from all devices, systems and documents; perform the analysis of technical problem taking into account legal provisions and technical regulations and operational effectivity, preparation of solution concept; define specifications of assets, select electro technical components and software, adjust documents of electrical circuits and use standard software; select documents of electrical circuits and assess documents of the system, select research results and reports and diagnose the systems; analyze systems and their functional backgrounds, analyze and change programs, functionally assign signals to interfaces; assess the diagnosis, define the causes of errors and assess the electrical protections</p>	<p>points and lines for electrical installation; knows verification procedures of different installation modes; use procedures and techniques of installation and connection of circuit and knows the equipment relevant for risers and inputs of electrical installation and for electrical installation of lighting and propulsion systems, know the installations of automatic control, electrical devices installations and TV antenna installations; use appropriate verification procedures, methods and techniques and test the performance of electrical installations, electrical systems for propulsion system, antenna installations, TV installations, lighting installations and power supply installations; identify faults of electrical installation, lighting installation and power supply installation for electrical devices and TV antenna installations; use techniques and procedures for replacement and maintenance of circuit components and wiring devices, electrical installations, lighting installations and power supply to devices, electrotechnics, installations and equipment of TV antennas; apply occupational health and safety regulations and environment protection regulations for business activity; apply rules of electrical installations in accordance</p>
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<p>manual; checks the performance of electrical installation after installation.</p> <p>2. <u>Maintenance of electrical installations</u></p> <p>observes rules and defines the scope of electrical installation maintenance actions to be performed; recognizes typical damage to electrical installations; selects spare parts of electrical installation based on catalogue data; selects tools for installation and removal of electrical installation elements; selects meters to perform measurements of parameters of electrical installation; checks continuity of phase and protective wires; performs measurements of parameters of electrical installation; performs the replacement of damaged wires and subassemblies of electrical installation; checks the performance of means of fire protection; performs maintenance actions of electrical installation in accordance with documentation.</p>		<p>with applicable regulations.</p>
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CONCLUSION

With regard to analysis of educational effects, confirmed by licensure exam for electrician and automotive technician, it can be said that, even though there are different locations of these professions in National Qualifications Framework, for individual countries and there are differences in vocabulary, they have very much common education effects within the scope of occupational

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health and safety, based on differentiation of terms related to occupational health and safety, fire protection, environment protection and ergonomics and following the safety, health and environment protection rules and procedures; undertaking and conducting business activity in the area of market economy following the provisions of labor legislation, provisions of protection of personal data, provisions of taxation law and intellectual property rights. The business oriented foreign language for each of the countries is English as leading language and the common personal and social competences are: following the cultural and ethical provisions, creativity and consequences in performance of tasks and interactions with other team members. When taking into consideration the educational effects relevant for qualifications distinguished for the given professions, we can see a great amount of similarities, but there are also insignificant differences. The most important differences depend on the fact that in Poland, in the profession of automotive technician, the student goes in for one qualification throughout the whole cycle of education, in Portugal, in the same profession, goes in for two qualifications, while in Germany, mechatronic automotive technician passes at least 5 qualifications throughout the whole cycle of education. M.18 qualification, as a sole qualification in the profession of automotive technician in the Polish education system, indicates the drastic analogy to both qualifications of automotive technician profession in the Portuguese education system. Both qualifications are based on knowledge and abilities from the range of diagnostics and maintenance of subassemblies and assemblies of cars or automotive vehicles. German education system also includes diagnostics and maintenance of individual systems being a part of an automotive vehicle. The difference, in relation to the previous two qualifications, is based only on creating the opportunity to select strictly indicated: one or few specializations at the first stage of education, within the scope of diagnostics preparing for the first part of exam. Two qualifications throughout the whole cycle of education for electrician in Portuguese and Polish education system verify the knowledge and abilities from the range of installation and maintenance of electrical installations and electric, electronic and automatic devices. While, the installation and maintenance of electric machines is assigned to the E.7. qualification and passed by the students or graduates from Polish schools only. In the German education system there is no typical profession of electrician, as you may encounter in Portugal and Poland. The most approximate educational effects corresponding to electrician qualifications can be found in Germany, for the profession of electronics engineer with the specialization of energy and construction technologies. The core curriculum includes the contents

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within the scope of installation and maintenance of electrical installation and electric, electronic and automatic devices, extended by elements from electroenergetics and mechatronics range. The students and graduates from Germany, Poland and Portugal taking examinations confirming the vocational qualifications shall show similar knowledge and acquire the same skills. When comparing these professions: electrician in Poland and Portugal and electronics engineer in Germany, we see that there is a huge similarity of educational effects between them, especially when talking about acquired knowledge and abilities. The condition for obtaining the document confirming acquired qualifications in above mentioned professions is to pass the exam from two qualifications in Poland and Portugal and five qualifications in Germany.

Chapter 3

**Procedures related to exams confirming
the obtainment of professional qualifications
for the profession of electrician and automotive
technician –the comparison of descriptions
between current educational systems in Germany,
Poland and Portugal and indicating common
and differentiating elements of Partner countries**

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Table 3

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

POLAND (PL)	GERMANY (DE)	PORTUGAL (PT)
<p>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 (<i>Związek Rzemiosła Polskiego – ZRP</i>) (for craft occupations).</p> <p>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.</p> <p>Role of the external institutions are performed by: Central</p>	<p>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 be taught to enable the trainees in planning, processing and evaluating professional tasks independently (<i>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</i>).</p> <p>This competency bundle must be demonstrated in the context of examinations regulated by law (Vocational Training Act and training regulations).</p> <p>Examinations</p>	<p>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</p>

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<p>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.</p> <p>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 than 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.</p> <p>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.</p> <p>Number of qualifications in a profession = number of examinations confirming professional qualifications</p> <p>The examination confirming professional qualifications may be</p>	<p>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.</p> <p>Generally the final examinations comprise four to five different areas of examinations.</p> <p>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 (<i>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</i>).</p> <p>As self-governing bodies of industry, the chambers have been assigned public tasks in dual training (competent bodies). Next to counseling and monitoring</p>	<p>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.</p> <p>An examination of the qualifications in the profession.</p> <p>How the final evaluation is done:</p> <p>Professional courses</p> <p>The final classification is the result of the formula:</p> $CF = [2MCD + (0,3FCT + 0,7PAP +)] / 3$ <p>where:</p> <p>CF = the end of the course ranking, rounded to the nearest unit;</p> <p>MCD = simple arithmetic average of the final results of all subjects</p> <p>FCT = classification of training in the workplace, rounded to the nearest unit;</p> <p>PAP = professional classification skills test, rounded to the nearest unit.</p> <p>Vocational courses</p> <p>The final classification of the course is the result of the formula:</p> $CF = (mcf + MUFC + EF) / 3$ <p>where:</p>
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<p>taken by:</p> <ul style="list-style-type: none"> – 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. <p>The professional examination is also conducted as extramural examination for persons who:</p> <ul style="list-style-type: none"> – 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. <p>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 <i>the Regulation of the Minister of Education dated January 11, 2012 on extramural examinations</i>, Journal of Laws of 2012, item 188).</p>	<p>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 (<i>Federal Ministry of Education and Research, Dual Training at a glance, Berlin 2011</i>).</p> <p>As examination boards, fixing dates for examination and the admission to the examination are specifically regulated is described below:</p> <p>Examination boards (<i>Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009</i>)</p> <p>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 (<i>Publisher Handwerk GmbH, Handicrafts Regulation act § 33, Düsseldorf 2008</i>).</p>	<p>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,</p> <p>Technological and technical courses</p> <p>The final classification is the result of the formula: $CFC = (9MCD + PAT) / 10$ 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.</p> <p>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.</p> <p>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.</p> <p>It was measured and observed that on the basis on Escola Secundaria de</p>
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<p>In order to take an examination confirming professional qualifications, one should submit a written declaration or a request.</p> <p><i>Declaration of accession to the examination confirming professional qualifications is submitted by:</i></p> <ul style="list-style-type: none"> – 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. <p>Specific requirements and rules for submission of declarations are specified in <i>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</i> (Journal of Laws of 2012, item 262).</p> <p>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</p>	<p>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.</p> <p>To participate in the examination board for electronic technicians or motor vehicle mechatronic technicians:</p> <ul style="list-style-type: none"> – 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. <p>The activities in the examination boards are voluntary.</p> <p>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.</p> <p>Fixing dates for examinations</p>	<p>Barcelos all 75 students who underwent professional course for electricians, passed the exam and received a Certificate.</p> <p>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.</p> <p>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.</p>
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<p>examination not later than one month before the date of each part of the examination.</p> <p>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.</p> <p><i>Application</i> 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 <i>Regulation of the Minister of Education dated January 11, 2012 on extramural examinations</i> (Journal of Laws of 2012, item 188).</p> <p>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</p>	<p><i>(Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009)</i></p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Conditions of admission (<i>Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009</i>)</p> <p>The trainee applies for admission to the examination at the responsible competent authority within the appropriate time-limit.</p> <p>The following documents have to be submitted:</p> <ul style="list-style-type: none"> - Within the initial examinations: all corresponding verifications 	
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<p>later than two months before the date of each part of the examination.</p> <p>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.</p> <p>Detailed information and explanations on the examination confirming professional qualifications shall be provided by the school headmaster and the Director of OKE.</p> <p>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 <i>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</i> (Journal of Laws of 2012,</p>	<p>appropriate to the admission requirements (see Table 1 below)</p> <ul style="list-style-type: none"> - Within re-examinations: application to the examination in due time and form <p>Admission procedure:</p> <ul style="list-style-type: none"> - 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. <p>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</p>	
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<p>item 262).</p> <p>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.</p> <p><u>A written part</u> is conducted in a form of a written test with the use of:</p> <ul style="list-style-type: none"> - electronic system for conducting professional examination, after authorization by the institution conducting the examination or - examination papers and answer cards. <p>A written part for professions of electrician and motor vehicle</p>	<p>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 (<i>Federal Institute for Vocational Education and Training, Ordinance on Vocational Education and Training in the Occupation of Mechatronics Fitter 01/2013, Bonn 2013</i>).</p> <p>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.</p> <p>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</p>	
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<p>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: <i>guidebooks on examination confirming professional qualifications in professions of electrician and motor vehicle mechanic</i>).</p> <p>During a written part of the professional examination, each examinee works at:</p> <ul style="list-style-type: none"> – 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. <p>Result of a written part of the professional examination shall be determined by OKE based on:</p> <p>1) answers saved and archived in an electronic system for conducting professional examination - in</p>	<p>permitted additional material and work tools, the candidates run the test under supervision of the proctor (<i>Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009</i>).</p> <p>Motor vehicle mechatronics technicians (<i>Federal Law Gazette, Training regulations of motor vehicle mechatronics technicians 14.06.2013, Bonn 2013</i>)</p> <p>Part 1 of the journeyman examination (before the end of the second year of training) (35 % weighted)</p> <p><i>Examination area: a work assignment</i> <i>Performance and execution of examinations:</i></p> <p>1. Carrying out a work related task corresponding to customer orders and consisting of different subtasks (<i>Time: 3 hours</i>)</p> <p>The candidate has to choose at least one of the following systems:</p> <ul style="list-style-type: none"> a) power supply system, b) lighting system, c) charging current system, d) Start system e) mechanics of braking <p>The following tasks have to be completed:</p> <ul style="list-style-type: none"> – measuring and testing, – diagnosing errors, malfunctions and their causes, 	
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<p>case the written part of the professional examination is conducted using an electronic system for conducting professional examination;</p> <p>2) electronic reading of answer card - in case the written part of the professional examination is conducted using examination papers and answer cards.</p> <p>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.</p> <p>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</p>	<ul style="list-style-type: none"> - preparing of test records and reports, - disassembling, maintaining, and assembling of subassemblies of vehicle technology, - <i>document work.</i> <p>2. Situational specialist interview consisting of several conversation phases <i>(Time: 10 min within the 3 hours of nr. 1)</i></p> <p>3. Answering written examination questions based on work related tasks <i>(Time: 120 min)</i></p> <p>Part 2 of the journeyman examination (at the end of training) (65 % weighted)</p> <p><i>Examination area:</i></p> <ul style="list-style-type: none"> 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) <p><i>Performance and execution of examinations:</i></p> <ul style="list-style-type: none"> a. <i>Examination area „customer order“</i> (Time: 5 hours) <p>1. Carrying out three equivalent work related tasks corresponding to customer orders and consisting of</p>	
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<p>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.</p> <p><u>Practical part</u> 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.</p> <p>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: <i>guidebooks on examination confirming professional qualifications in professions of electrician and motor vehicle mechanic</i>).</p> <p>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</p>	<p>different subtasks (<i>Time: 180 min</i>)</p> <p>First task: Examining vehicles or systems or in accordance with manufacturer specifications and vehicle registration regulations</p> <p>Second task: Diagnosing errors, malfunctions and their causes of at least one of the following systems:</p> <ul style="list-style-type: none"> - Brake system - Chassis system - Power transmission system - Drive system - Comfort system - Safety system - High-voltage system - Networked systems <p>Third task: fitting of vehicles and systems</p> <p>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.</p> <p>2. Situational specialist interview consisting of several conversation phases (<i>Time: 20 min within the 5 hours of nr. 1</i>)</p> <p>b. Examination area „vehicle and maintenance technology “ (<i>Time: 120 min</i>)</p> <p>Answering written examination questions based on work related tasks</p> <p>c. Examination area „diagnostic</p>	
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<p>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.</p> <p>The examinee passed the professional examination if he/she obtained:</p> <ol style="list-style-type: none"> 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. <p>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.</p> <p>Detailed rules for submitting objections to the course of the examination, cancellation of</p>	<p><i>techniques</i> “ (Time: 120 min) Answering written examination questions based on work related tasks</p> <p>d. Examination area „Economics and social studies“ (Time: 60 min) Answering written examination questions based on work related tasks</p> <p>Electronics technicians – specializing in energy and building technology (<i>Federal Law Gazette, Training regulations of electronic technicians 25.07.2008, Bonn 2008</i>) Part 1 of the journeyman examination (before the end of the second year of training) (40 % weighted) <i>Examination area: a work assignment Performance and execution of examinations:</i></p> <ol style="list-style-type: none"> 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 	
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<p>examination or a part thereof are specified in the <i>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</i> (Journal of Laws of 2012, item 262).</p> <p>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.</p> <p>Certificates and diplomas are handed to the examinees by the school headmaster, director of the institution, employer or a person authorized by him/her.</p> <p>Examinees who completed a vocational qualifying course, took an examination in an external mode or</p>	<p>within the 10 hours of nr. 1)</p> <p>Part 2 of the journeyman examination (at the end of training) (60 % weighted)</p> <p><i>Examination area:</i></p> <ul style="list-style-type: none"> 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) <p><i>Performance and execution of examinations:</i></p> <ul style="list-style-type: none"> a. <i>Examination area „customer order“</i> (Time: 16 hours) <ul style="list-style-type: none"> 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. <i>Examination area „system design“</i> (Time: 2 hours) <p>Answering complex written examination questions concerning a draft of an</p>	
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<p>have school certificates obtained abroad, receive certificates and diplomas in the proper OKE.</p> <p>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:</p> <ul style="list-style-type: none"> – 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. <p>After three years from the date the examinee took the written part of the examination or failed the examination or could not have taken</p>	<p>adjustment of an electrical plant or building services installations, enclosing documentation with the help of corresponding documents</p> <p>c. Examination area "function and system analysis" (Time: 2 hours)</p> <p>Answering complex written examination questions concerning an analysis of an electrical plant or building services installations, enclosing documentation with the help of corresponding documents</p> <p>d. Examination area „Economics and social studies“ (Time: 60 min)</p> <p>Answering written examination questions based on work related tasks</p> <p>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.</p> <p>Table 1.</p> <p>Grading scale / Pass requirements</p> <ul style="list-style-type: none"> <input type="checkbox"/> 100-92 points = 1 = excellent <input type="checkbox"/> 91 - 81 points = 2 = good <input type="checkbox"/> 80 - 67 points = 3 = average <input type="checkbox"/> 66 - 50 points = 4 = pass 	
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<p>the written part of the examination for the first time, he/she shall take the examination in the full scope.</p> <p>Detailed rules for re-taking of the examination are specified in the <i>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</i> (Journal of 2012 item 262).</p> <p>Qualification examination for the title of journeyman called a <i>journeyman exam</i> 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.</p> <p>A journeyman exam may be accessed by both an adult and a student - young employee who meets one of the following conditions:</p>	<p><input type="checkbox"/> 49 - 30 points = 5 = poor</p> <p><input type="checkbox"/> 29 - 0 points = 6 = fail</p> <p>A total of at least 50 grade points are required to pass.</p>	
	<p>Source: https://www.bibb.de/tools/berufesuche/index.php/certificate_supplement/en/kraftfahrzeugmechatro_niker2013_e.pdf</p> <p>The final examination is deemed to have been passed if:</p> <ol style="list-style-type: none"> 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. <p>Supplementary oral examination</p> <p>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</p>	

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<ul style="list-style-type: none"> - 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 	<p>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 (<i>Federal Institute for Vocational Education and Training, Ordinance on Vocational Education and Training in the Occupation of Mechatronics Fitter 01/2013, Bonn 2013</i>).</p>	
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<p>not included in the classification of professions of vocational education;</p> <ul style="list-style-type: none"> - 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. <p>A person applying for admission to the examination shall submit:</p> <ul style="list-style-type: none"> - 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). <p>Detailed requirements for people accessing the journeyman exam, condition for appointing the</p>		
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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*

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<p><i>profession of motor vehicle mechanic)</i></p> <p>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.</p> <p>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.</p> <p>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</p>		
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<p>accessing the journeyman exam.</p> <p>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.</p> <p>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).</p> <p>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.</p>		
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<p>The examinee passed the exam if he/she received at least satisfactory grades at the practical and theoretical stage of the exam.</p> <p>Fail at at least one examination task at the practical stage of the exam decides about the fail at this stage.</p> <p>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).</p> <p>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.</p> <p>At the request of the examinee, the resit exam may cover the whole stage or respectively written or oral part of the theoretical stage.</p> <p>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</p>		
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<p>the accuracy of the exam.</p> <p>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.</p> <p>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.</p> <p>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</p>		
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<p>examination board to it.</p> <p>Information concerning persons who passed the journeyman exam and the passed journeyman exam shall be entered in the mortgage register of the journeyman exams.</p> <p>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.</p>		
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Source: Own study

Table 4

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

POLAND (PL)	GERMANY (DE)	PORTUGAL (PT)
<p>Person who passed the examination confirming the qualification/s in a profession, shall receive a certificate or diploma confirming the professional qualifications.</p> <p><u>A certificate</u> shall be received by a person who passed the professional examination within the scope of one qualification.</p> <p><i>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</i></p>	<p>The examination certificate consists of (<i>Chamber of Crafts and Trades in Erfurt, Examination regulations, Erfurt 2009</i>)</p> <ul style="list-style-type: none"> – 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 	<p>The person who passed the exam confirming qualification/s in the profession, receives a certificate confirming vocational qualifications.</p> <p><u>Certificate</u> 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.</p> <p>Certificate confirming the qualification in the profession</p> <p>Certificate confirming the qualification in the profession is</p>

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<p><u>A diploma</u> 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.</p> <p>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.</p>	<p>per § 37 paragraph 2 BBiG, or</p> <p>4. „examination certificate as per § 62 paragraph 3 BBiG in conjunction with § 37 article 2 BBiG,</p>	<p>given to the person who has passed the exam confirming the qualification in the profession (the person obtained at least 50% points).</p> <p>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.</p>									
<p>Table 1. Qualifications separated for the profession of electrician</p>	<p>– The personal data of the candidate (surname, first name, date of birth)</p>	<p>Certificate confirming vocational qualifications</p>									
<table border="1"> <thead> <tr> <th>Number of qualification (order) in profession</th> <th>Symbol of qualification from core curriculum</th> <th>Name of qualification</th> </tr> </thead> <tbody> <tr> <td>K1</td> <td>E.7</td> <td><i>Installation and maintenance of electrical machines and equipment</i></td> </tr> <tr> <td>K2</td> <td>E.8</td> <td><i>Installation and maintenance of electrical systems</i></td> </tr> </tbody> </table>	Number of qualification (order) in profession	Symbol of qualification from core curriculum	Name of qualification	K1	E.7	<i>Installation and maintenance of electrical machines and equipment</i>	K2	E.8	<i>Installation and maintenance of electrical systems</i>	<p>– The description of the trained occupation including specialization or examination related focus. Further examination related differentiations indicated in the training regulation can be listed.</p> <p>– The results (points) of the examination areas and the overall result as far as provided in the training regulations</p> <p>– The date of passing the examination</p> <p>– 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).</p>	<p>A person can get a certificate confirming vocational qualifications, if he/she has:</p> <ol style="list-style-type: none"> 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.
Number of qualification (order) in profession	Symbol of qualification from core curriculum	Name of qualification									
K1	E.7	<i>Installation and maintenance of electrical machines and equipment</i>									
K2	E.8	<i>Installation and maintenance of electrical systems</i>									
<p>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)</p>	<p>Furthermore autonomous examination performances of an</p>	<p>Issuance of Certificate</p> <p>Graduates of schools leading professional courses who in the school year received a leaving certificate and certificate confirming qualification separated in a profession in</p>									
<p>In the profession of Motor vehicle mechanic separated is one qualification (table 4), which may be obtained by educating at 3-year basic</p>	<p>Further examination performances of an</p>	<p>separated in a profession in</p>									

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vocational school or during vocational qualifying courses.	examination area (§ 23 Abs. 2 article 2) can be listed without grading in the examination certificate.	which educates school certificate shall be issued on the basis of passing the examination. This certificate is issued by the Ministry of Education.						
Table 2. Qualification separated for the profession of motor vehicle mechanic	At the request of the trainee:	The term of issuing certificate of vocational qualifications						
<table border="1"> <thead> <tr> <th>Number of qualification (order) in profession</th> <th>Symbol of qualification from core curriculum</th> <th>Name of qualification</th> </tr> </thead> <tbody> <tr> <td>K1</td> <td>M.18.</td> <td>Diagnostics and repair of sub-assemblies and assemblies of motor vehicles</td> </tr> </tbody> </table>	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	<ul style="list-style-type: none"> – 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 paragraph 3 BBiG). 	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.
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						
<p>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)</p>	For the preparation of the examination certificate the obligatory required form of the competent authority (Chamber of Crafts and Trades) need to be used.	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.						
Certificate confirming professional qualifications	At the point of 1.8 Appendix the formal documents for motor vehicle mechatronics technician and electronics technician are shown (<i>Chamber of Crafts and Trade in Erfurt, example of an examination certificate of Motor vehicle Mechatronic Technicians, March 2016</i>).							
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								

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<p>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 (<i>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)</i> Sample certificate confirming professional qualification is presented in Appendix No. 1.</p> <p>Diploma confirming professional qualifications</p> <p>A person may receive a diploma confirming professional qualifications if he/she has:</p> <ol style="list-style-type: none"> 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. <p>Diploma confirming professional qualifications in a profession taught at the</p>		
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<p>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:</p> <ol style="list-style-type: none"> 1) a person who has jointly: <ol style="list-style-type: none"> 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 		
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<p>basic vocational school, conducted in accordance with the <i>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)</i>, and meets the conditions in accordance with item 1b and 1 c</p> <p>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.</p> <p>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</p>		
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<p>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.</p> <p>Issuance of the diploma</p> <p>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</p> <p>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.</p> <p>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</p>		
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<p>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.</p> <p>Diploma supplement</p> <p>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.</p> <p>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.</p> <p>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</p>		
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<p>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).</p> <p>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.</p> <p>The term of issuing a certificate/ diploma confirming professional qualifications</p> <p>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.</p> <p>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.</p> <p>Manner of filling the documents confirming professional qualifications</p> <p>The manner of filling the documents confirming professional qualifications, issuance of duplicates and other specific requirements,</p>		
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<p>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 <i>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</i></p> <p>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.</p> <p>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".</p> <p>Legalization of certificates/ diplomas</p> <p>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.</p>		
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<p>Legalization shall be made by placing the following listed things on the certificate, diploma:</p> <ol style="list-style-type: none"> 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. <p>Register of certificates and diplomas</p> <p>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.</p> <p>Confirming qualifications in craft professions</p> <p>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 (<i>Regulation of the Minister of National Education dated September 14, 2012 on journeyman exam, master craftsman's exam and verification exam conducted by examination</i></p>		
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<p>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:</p> <ol style="list-style-type: none"> 1) classification of professions and specialties for the needs of the labor market; 2) classification of professions of vocational education <p>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.</p> <p>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.</p> <p>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</p>		
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<p>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.</p> <p>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.</p> <p>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</p>		
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<p>national information point, entered is website address of the institution designated by the Minister of Education and Training functioning as the National Europass Center.</p> <p>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.</p> <p>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.</p> <p>Recognition of professional qualifications obtained abroad</p> <p>The authorities competent to certify professional qualifications in Poland are:</p> <ul style="list-style-type: none"> • 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; <p>Recognition of education obtained abroad takes place based on the following law regulations:</p> <ul style="list-style-type: none"> – <i>International agreements concluded by the Republic of Poland, on the basis of which the parties mutually recognize the</i> 		
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<p>documents concerning education Art. 93 of the Act dated September 7, 1991 on the education system (<i>Journal of Laws of 2015, item 2156, as amended</i>)</p> <p>– 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 (<i>Journal of Laws, item 447</i>).</p> <p>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.</p>		
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Source: Own study

Chapter 4

Formal documents and their content confirming obtained professional qualifications, issued in case of passing the exam for the profession of electrician and automotive technician –the comparison of descriptions between current educational systems in Germany, Poland and Portugal and indicating common and differentiating elements of Partner countries

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The comparative study of formal documents confirming vocational qualifications in the three partner countries (Poland, Germany, Portugal) was carried out on the basis of Partners' reports (result 01 and 02 and additional detailed information received from the German partner).

The analysis focused on the following aspects (Table 1):

1. names of formal documents,
2. terms of receipt of formal documents,
3. institutions issuing documents,
4. content of documents,
5. EQF level,
6. institutions / bodies authorized to validate certificates / diplomas confirming professional qualifications intended for the conduct of legal translations with foreign countries,
7. institutions / authorities competent to certify professional qualifications obtained abroad (nostrification).

The European Qualifications Framework and the elaboration of national qualifications frameworks, common principles for quality assurance in education and vocational training as well as recognition of qualifications favor the transparency and comparability of knowledge, skills, personal and social competencies within the European Union. Resolution of the Council of Europe (Resolution No. 96/C 224/04 of 15 July 1996) on the transparency of vocational training certificates enables learning and professional mobility. National information centers provide information on national qualifications systems, procedures of recognition and bodies performing them.

A comparison of formal documents confirming vocational qualifications in the occupations of an electrician and a car mechanic demonstrates numerous **similarities**.

- certificates, diplomas, certificates confirming qualifications are based in national legislation,
- formal documents contain comparable substantial content,
- supervision over educational institutions, schools, employers issuing documents attesting to professional qualifications is exercised by central and/or regional public institutions,
- legalization of documents intended for legal transactions with foreign countries is carried out by the ministries of education or provincial/federal government bodies, trade or craft guilds,

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- recognition of formal documents obtained abroad is carried out by provincial/federal government bodies, trade or craft guilds,

The **differences** in the analyzed formal documents confirming professional qualifications in the occupations of an electrician and a car mechanic in Poland, Germany and Portugal apply to qualification levels in those countries. In Poland, completion of vocational and general upper secondary education corresponds to level 3 of the National and European Qualifications Framework. However, in Germany and Portugal training in the aforementioned professions corresponds to level 4 of the German, Portuguese and European Qualifications Framework.

The differences in referring qualifications to the European Qualifications Framework levels should not affect the access to education and the labor market in the case of professional qualifications. Each country allows supplementation of professional knowledge and skills in career training or professional internships at enterprises.

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The Directive of the European Parliament and of the Council 2013/55 / EU of 20 November 2013. amending Directive 2005/36 / EC on the recognition of professional qualifications and Regulation (EU) No 1024/2012 on administrative cooperation through the information exchange system in the internal market in force within the EU member states since 18 January 2016 allows for the establishment of a European professional identity card. It will allow the interested EU citizens to gain recognition of their professional qualifications in a simpler and faster way through a standardized electronic procedure. The card will be based on the use of the Internal Market Information (IMI) System and it will be issued in the form of an electronic document. The card will first be implemented for specialists. It will serve to promote the simplified process of recognition within the frames of the general system.

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Table 5.

Comparison of formal documents confirming professional qualifications in Poland, Germany and Portugal

	POLAND (PL)	GERMANY (DE)	PORTUGAL (PT)
NAME OF DOCUMENT	1. Certificate confirming professional qualifications 2. Diploma confirming professional qualifications 3. Supplement to the diploma confirming professional qualifications 4. Apprentice certificate 5. Supplement to the apprentice certificate	1. Examination Certificate (" <i>Examination certificate in accordance with § 31 of HwO (German Skilled Crafts and Trades Act)</i> ") <i>or</i> " <i>Examination certificate in accordance with § 42 and sec. 3 in conjunction with § 31, sec. 2 of HwO</i> " <i>or</i> " <i>Examination certificate in accordance with § 37 sec. 2 of BBiG</i> " <i>or</i> " <i>Examination certificate in accordance with § 62 sec. 3 of BBiG in conjunction with § 37 Article 2 of BBiG</i> ") 2. Supplement to the examination certificate	1. Examination certificate 2. Supplement to the certificate
TERMS OF DOCUMENT OBTAINING	<i>Ad. 1 and 4</i> Person who passed the examination within the scope of a single qualification required for the profession <i>Ad. 2 and 4</i> a person who passed the examination within the scope of all qualifications required for a particular profession and who has a level of education required for a particular	<i>Ad. 1</i> A person who passed the professional examination within the scope of all qualifications required to practice the profession and has upper secondary level education	<i>Ad. 1</i> A person who passed the professional examination within the scope of all qualifications required to practice the profession and has the level of education required to work

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	profession. <i>Ad. 3 and 5</i> at the request of the person holding a diploma		
INSTITUTIONS ISSUING DOCUMENTS	<i>Ad. 1-3</i> Regional Examination Commission/ School director/ <i>Ad. 4-5</i> Chamber of Crafts	German Chambers of Crafts and Trades	Ministry of Education (Ministerio da EducaçãO) / School Director / Educational Institution / employer
THE CONTENTS OF THE DOCUMENT / S	<i>Ad. 1, 2.</i> Name (s), surname, date and place of birth, social security number, name of qualification and its designation, name and digital symbol of the profession, results of the written and practical part of examination confirming qualifications in the profession, place and date of issue of the certificate, certificate / diploma number, stamp and signature of the Director of the Regional Examination Commission, place and date of issue of the document. <i>Ad. 3</i> number of the supplement to the diploma, name of the holder of the diploma, name of the diploma in Polish and translated into a foreign language, profile of skills and competences, occupations	<i>Ad. 1</i> Full name, date of birth, name of profession / specialization, overall assessment of the practical test in the profession, results (points) from the individual areas of the examination, date of exam, signature of the legal representative of the German Chamber of Crafts, information about the level of qualifications according to the German and European Qualifications Framework. <i>Ad. 2</i> name of the certificate in German and English, profile of skills and competences, occupations accessible to the holder of the certificate, legal basis for issuing the certificate, officially recognized manners of obtaining the certificate	<i>Ad. 1</i> Name and surname, name of training and no. of the regulating legal norm on the basis of which the course is carried out, name of the institution organizing the training, place, date of issue of the document, signature of the school director/ representative of the educational institution/ employer and signature of the chairman of the examination committee <i>Ad. 2</i> name of the certificate in Portuguese and English, profile of skills and competences, occupations accessible to the holder of the certificate, legal basis for issuing the certificate, officially recognized manners of obtaining the certificate

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	<p>accessible to the holder of the diploma, legal basis for issuing the diploma, officially recognized manners of obtaining the diploma</p> <p><i>Ad. 4</i></p> <p>name and surname, date and place of birth, name of the chamber of craft, where the person passed the apprentice examination, result of the examination, title of apprentice in the profession of an electrician / motor vehicles mechanic, signature of the chairman of the examination committee and chairman of the chamber of crafts, ordinal no. of the apprentice certificate, place and date of issue of the document, seal and name of the seat of the chamber of craft.</p> <p><i>Ad 5.</i></p> <p>apprentice certificate number, name and surname of the holder, name of the apprentice certificate (in a foreign language also the name of the apprentice certificate in translation), profile of skills and competences, occupations available to the holder of the apprentice certificate, description of education completed with obtaining the</p>		
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	document (including information about the history of vocational training, website address of the institution - the National Europass Centre		
LEGALIZATION OF DOCUMENTS	<ol style="list-style-type: none"> 1. The Schools Superintendent having jurisdiction over the seat of the school - issued by the schools 2. The minister responsible for matters of education - issued by regional examination commissions, schools, at diplomatic missions, consular offices of the Republic of Poland 3. Polish Craft Association - issued by the chambers of crafts 	1. Crafts Association for the given occupation	The minister responsible for education
RECOGNITION OF PROFESSIONAL QUALIFICATIONS OBTAINED ABROAD	<ol style="list-style-type: none"> 1. Schools Superintendent (external vocational examinations) 2. Polish Craft Association (apprentice diplomas) 	German Chamber of Crafts (in craft professions)	Minister responsible for Education
EQF LEVEL	Level 3 of the European Qualifications Framework (EQF)	Level 4 of the European Qualifications Framework (EQF)	Level 4 of the European Qualifications Framework (EQF)

Source: Own study

Chapter 5

The process of recognisability of professional qualifications for the profession of electrician and automotive technician – the comparison of descriptions between current educational systems in Germany, Poland and Portugal and indicating common and differentiating elements of Partner countries

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Within the three completely different education systems of Germany, Poland and Portugal the examination system for confirming the qualifications of electrician and car mechanic is described on the examples of different vocational schools.

For Poland the examination system of the vocational School No. 1 in Ostrołęka is shown. For Germany the examination system of motor vehicle mechatronic technicians at the Walter-Gropius-School and the occupational training Centre of the Erfurt Chamber of Crafts and Trade is described. The examination of electronics technicians is realised by the Andreas-Gordon-school.

For Portugal the examination system of Escola Secundaria de Barcelos for electricians and Escola Profissional Cooperativa de Ensino for car mechanics is described.

The similarities and differences between these vocational schools are especially for Germany not characteristic for the examination system of the two professions in general. There are huge differences between the 16 federal states and the 16 different chambers of crafts and trade.

5.1. Similarities of the examination systems

The comparison of the three vocational schools shows that there are only three similarities concerning the examination systems of electrician and car mechanic:

1. For confirming qualifications a practical exam has to be done in each vocational school
2. External experts mark the work and decide on issuing a certificate
3. A certificate is issued to confirm vocational competence

In the examination process there is another similarity between Poland and Germany:

Examination boards are installed to organize and conduct the examinations which consist of a practical and theoretical part in both countries.

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5.2. Differences of the examination systems

The differences between the vocational schools are shown regarding the following subitems:

- a) Organisations and institutions involved
- b) Examination tasks
- c) Procedure of application for the examination
- d) Organisation of the exams / procedure of examination
- e) Duration of the exams
- f) Confirming qualifications
- g) the passing rates
- h) re-examinations

Table 6

Examination systems

	POLAND (PL)	GERMANY (DE)	PORTUGAL (PT)
ORGANISATIONS AND INSTITUTIONS INVOLVED	In Poland the director of the Central Examination Commission and the director of the Regional Examination Commission are responsible for publishing the schedule / start of the written and practical examinations and announce it on the website of the Regional Examination Board resp. on the website of the Regional Commission	In Germany the examinations are planned and organized by the responsible authorities which are in central Thuringia the guilds of automotive mechanics and the Thuringian guilds of electronics. The guilds are supported by the German association for motor trades and repairs resp. the Trade Association of Electrical and Information	In Portugal the Ministry of Education issues the certificate of vocational qualifications. Except of the company where the practical training take place no other institution or organization involved was described.

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	District.	Technology in Thuringia, Saxony and Saxony-Anhalt.	
EXAMINATION TASKS	<p>In Poland the formal examination tasks are splitted into:</p> <ul style="list-style-type: none"> - 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 <p>The 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. *</p> <p>The practical part consists in carrying out a task or tasks of the examination,</p>	<p>In Germany the examination tasks are based on the training regulations of the professions and were created by the elected examination board which cooperates with the trade associations. The special feature is that there are two examination parts (each part has practical and theoretical items) for which different examination tasks have to be created aiming at avoiding repetition of examination contents.</p> <p>Whereas the role of the German association for motor trades and repairs combines giving suggestions and recommendations for the federal examination tasks and providing the online examination system, the Trade Association of Electrical and Information</p>	<p>In Portugal the students who are undertaking the exam are preparing a Presentation on their vocational training which is presented to the examination commission.</p>

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	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.	Technology in Thuringia, Saxony and Saxony-Anhalt creates an examination committee which selects and decides about the annual practical and theoretical items of part 1 and 2.	
PROCEDURE OF APPLICATION FOR THE EXAMINATION	In Poland candidates, students and graduates who intend to take part in the exam that improves their qualification in the profession, make a written declaration of accession exam to the Director of the school / institution they attend resp. graduated. The declaration includes personal data, the name and symbol of the digital profession and the name of qualification and information to which part of the professional examination the examinee proceeds again (in case of re-joining the professional examination). The Declaration includes a statement of the candidate's consent to the	In Germany the trainees get a postal invitation to the examination sent by the guilds. The trainee applies for admission to the examination at guild within the appropriate time-limit. All corresponding verifications appropriate to the admission requirements (e.g. having finished the required training time, the written training report, the professional training relation between employer and trainee). It is a decision of the chairman of the examination board concerning the admission to the examination of each trainee. If the chairman	In Portugal all the students who received the graduation Certificate have the right to take the practical exam.

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	<p>processing of personal data referred to in <i>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).</i></p>	<p>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.</p>	
<p>ORGANISATION OF THE EXAMS / PROCEDURE OF EXAMINATION</p>	<p>In Poland for the preparing and conducting the qualification examinations in the certain profession at the accredited school of Professional No. 1 in Ostrołęka corresponds the chairman of the examination staff (ESA), which is the headmaster. He / she develops an internal schedule for the written and practical part of the exam and passes the</p>	<p>In Germany the members of the examination board meet at least once a year to discuss about the annual examination tasks of part 1 and 2. They set up the date for the examinations and the guilds send a postal invitation to the trainees. After the successfully application the theoretical and practical examination take part in the vocational schools resp. in the vocational training centre.</p>	<p>In Portugal the examination system is organized in form of a practical exam. The students 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)</p>

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	<p>information contained in the schedule of the regional examination commission in the manner and within the period set by the regional commission.</p> <p>After application for the examination the practical and written examinations take place as outlined above. The members of the examination board conduct the examination and read the answers recorded and archived in an electronic system or at examination papers and answer cards.</p>	<p>During and after performing the examination tasks each member of the examination board assesses the performance of each trainee.</p>	<p>in companies, quite usually they choose to prepare a project connected with the work performed during the stages.</p>
<p>DURATION OF THE EXAMS</p>	<p>In Poland examinations of formal qualifications in the profession are carried out at the School of Professional No. 1 in Ostroleka in 2016. In three examination sessions for example: January – February, May – July, August – October, according to the Communication Director of the Central.</p>	<p>In Germany part 1 takes place in January, part 2 is usually done in May / June every year. The duration of the examinations of part 1 is 5 hours (for motor vehicle mechatronics technician) resp. 10 hours (for electronics technician). For performing part 2 the envisaged time is 10 hours (for motor vehicle</p>	<p>In Portugal the exams start after the end of school year. As the headmasters have the right to choose the date of the beginning and ending of the school year, usually the general and vocational exams take part at the end of June or beginning of July. The duration of the exam is 20 min.</p>

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	<p>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.</p> <p>The duration of the practical part of the car mechanic professional lasts 120 minutes, and for the electrician profession, is 180 minutes for each of the two qualifications.</p>	<p>mechatronics technician) resp. 21 hours (for electronics technician).</p>	
<p>CONFIRMING QUALIFICATIONS</p>	<p>In Poland 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.</p> <p>The results of the qualification examination in the profession are presented as a percentage.</p> <p>The winner as well as a finalist of the tournament or Olympics associated with the selected object or</p>	<p>In Germany the results of the examination tasks were assessed by each member of the examination board. The results were reported to the guilds which issue the certificates. All results were statistically recorded and reported to the trade associations, the chamber of craft and trade and to the Federal Institute for Vocational Education and Training.</p>	<p>In Portugal the Ministry shall determine date of issuing Certificates confirming qualification in the profession - as the date of passing the qualification examinations in the profession.</p> <p>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</p>

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	<p>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. Exemption is equal with gaining 100 % from the written part of the qualification exam.</p> <p>The diploma confirming vocational qualifications is issued to those who pass the examinations confirming all qualifications distinguished in the profession.</p>		<p>profession.</p>
<p>THE PASSING RATES</p>	<p>In Poland the passing rates of the written examinations of car mechanics are very small. In July 2015 only one third passed the written examinations whereas 100 % passed the practical examinations.</p> <p>Unfortunately there were no passing rates available</p>	<p>The overview of passed final examinations during the last 5 years shows that at least 90 % of the pupils who like to become a motor vehicle mechatronic technician pass the theoretical and practical examinations. In Germany there is no distinction in passing rates</p>	<p>The passing rates are 100 %. 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</p>

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	for electricians.	of theoretical and practical examinations. The passing rates for electronics technicians are worse: Only about 83 % of all candidates in Germany pass the examinations.	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.
RE-EXAMINATIONS	<p>Student (listener):</p> <ul style="list-style-type: none"> - 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. 	<p>In Germany 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. The re-examination can be done at the same time when the original examinations of part 1</p>	<p>In Portugal there is no need for re-examination as the rate is 100%.</p>

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	<p>A graduate or a person who has completed KKZ, taking the extramural professional exam and an adult who has completed vocational training of adults:</p> <ul style="list-style-type: none"> - 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. <p>If a graduate or a person who has completed KKZ, takes an exam or a part of it for the third or more</p>	<p>resp. part 2 take place (= in January or in May / June every year).</p>	
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	<p>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.</p> <p>After 5 years from the date on which the examinee for the first time:</p> <ul style="list-style-type: none"> - 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, 		
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	examinee can take the qualification exam in the profession.		
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Table 7

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

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 %)

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	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	7.023 of 8.394 (83,7 %)	6.684 of 8.040	7.068 of 8.472

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		(82,9 %)		(83,1 %)	(83,4 %)
	women	81 of 102 (79,4 %)	90 of 99 (90,9 %)	90 of 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

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The summary and listing of the most important common and differentiating elements of Partner countries



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This summary will show the most important common and differentiating elements of partner countries.

Common elements

- Acquisition of electrician or automotive technician profession requires completion of vocational training and passing the vocational exams.
- Having a level of education corresponding to core curriculum of vocational school/2nd degree school.
- The vocational courses are addressed to adults.
- Qualification vocational courses are used for acquisition of a job for unemployed or for the purpose of retraining with respect to market needs.
- The National Qualifications Frameworks have very much common education effects within the scope of occupational health and safety, based on differentiation of terms related to occupational health and safety, fire protection, environment protection and ergonomics and following the safety, health and environment protection rules and procedures; undertaking and conducting business activity in the area of market economy following the provisions of labor legislation, provisions of protection of personal data, provisions of taxation law and intellectual property rights. This happens even though there are different locations of these professions in National Qualifications Framework
- The business oriented foreign language for each of the countries is English as leading language and the common personal and social competences are : following the cultural and ethic provisions, creativity and consequences in performance of tasks and interactions with other team members
- All three countries have similar certificates, diplomas, certificates confirming qualifications and are based in national legislation
- Formal documents contain comparable substantial content,

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- Supervision over educational institutions, schools, employers issuing documents attesting to professional qualifications is exercised by central and/or regional public institutions
- Referring to the examination systems it can be said that
 - For confirming qualifications a practical exam has to be done in each vocational school
 - External experts mark the work and decide on issuing a certificate
 - A certificate is issued to confirm vocational competence

Differentiating elements

- Poland - Lifelong learning is taking place at public/private educational institutions in accordance with uniform core curriculum for given vocational qualification.
- Germany - Lifelong learning is taking place at adults evening schools (Abendgymnasien), evening Realschule schools (Abendrealschulen) and colleges (Kollegs) or at the Centers for adults education
- Portugal - Lifelong learning is taking place in the form of education and training combination.
- Poland - in profession of automotive technician, the student goes in for one qualification throughout the whole cycle of education
- Portugal - in profession of automotive technician, the student goes in for two qualifications
- Germany - mechatronic automotive technician passes at least 5 qualifications throughout whole cycle of education
- M.18 qualification, as a sole qualification in the profession of automotive technician in Polish education system, indicates the drastic analogy to both qualifications of automotive technician profession in Portuguese education system. Both qualifications are based on knowledge and abilities from the range of diagnostics and maintenance of subassemblies and assemblies of cars or automotive vehicles. German education system also includes diagnostics and maintenance of individual systems being a part of automotive vehicle.

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- In Poland, completion of vocational and general upper secondary education corresponds to level 3 of the National and European Qualifications Framework. However, in Germany and Portugal training in the aforementioned professions corresponds to level 4 of the German, Portuguese and European Qualifications Framework.