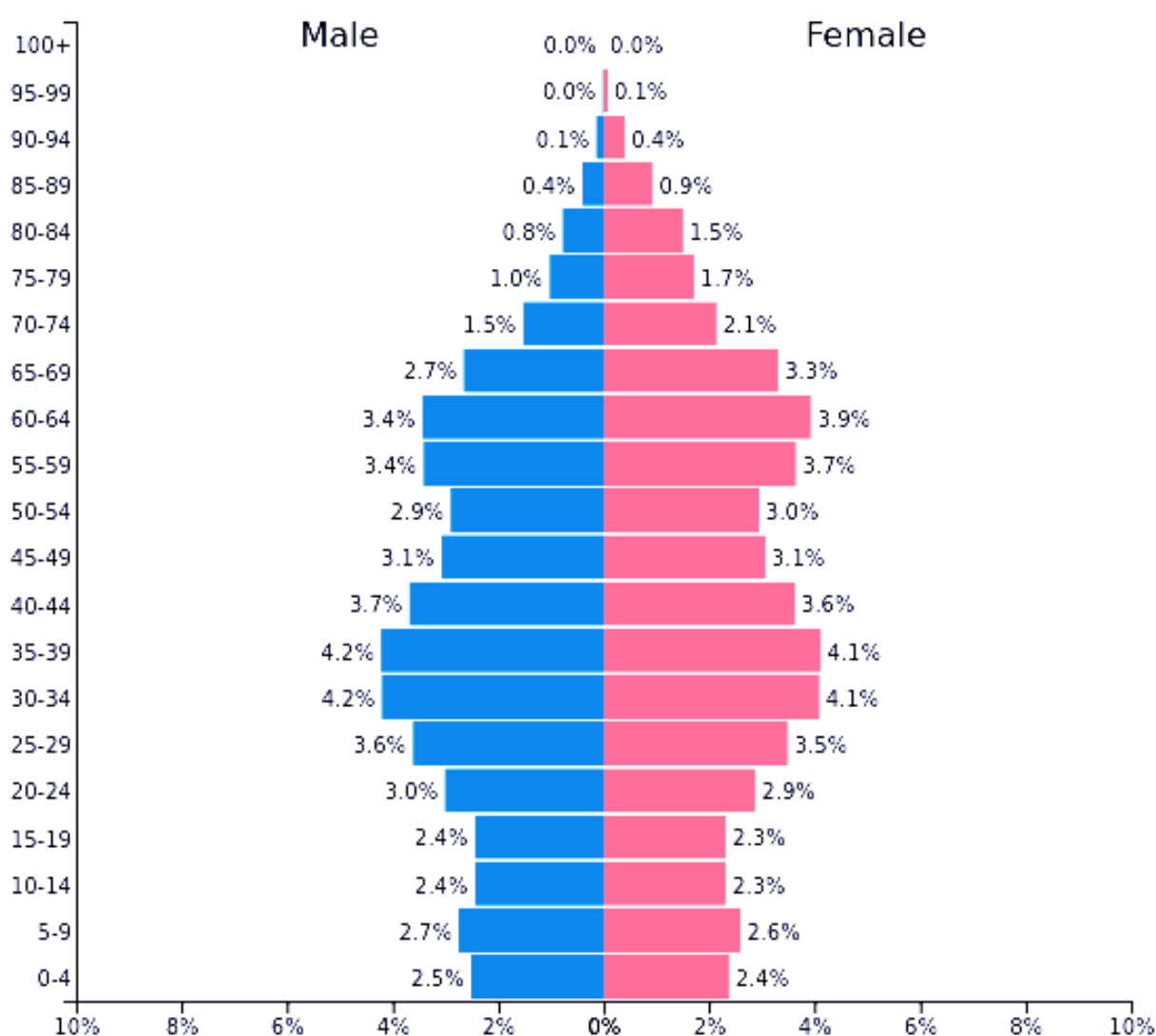


1. OVERALL LANDSCAPE – NATIONAL HIGHER EDUCATION (HE), RESEARCH AND QA CONTEXT (WITH FOCUS ON DOCTORATE LEVEL)

- Brief presentation of the HE and research system (including general relevant information about Spain HE cycle studies)

Poland is one of the current 28 countries composing the European Union. Its area is 312,679 km². The current population is 38,422,346 of people. The Polish capital is Warsaw, located in the center of the country. The GDP (PPP) in 2018 (estimate) is \$30,827 per capita.

The current population pyramid for Poland is the following.



PopulationPyramid.net

Poland - 2017
Population: **38,563,573**

In Poland the higher education institutions by type of school (academic year 2015/2016) are the following:

SPECIFICATION o – total p – public n – non-public		Grand total	Of which females	Of grand total – forms of studies			
				full-time programmes		part-time programmes	
				total	of which females	total	of which females
	o	1348 822	776 464	895 725	520 672	453 097	255 792
TOTAL	p	1034 161	587 284	813 596	473 258	220 565	114 026
	n	314 661	189 180	82 129	47 414	232 532	141 766
	o	403 690	271 251	324 677	217 852	79 013	53 399
<i>Universities</i>	p	393 252	264 334	314 891	211 424	78 361	52 910
	n	10 438	6 917	9 786	6 428	652	489
	o	285 165	104 222	220 433	87 670	64 732	16 552
<i>Technical universities</i>	p	272 767	99 750	216 277	86 021	56 490	13 729
	n	12 398	4 472	4 156	1 649	8 242	2 823
	o	68 031	40 078	50 041	31 804	17 990	8 274
<i>Agricultural academies</i>	p	67 179	39 803	49 845	31 725	17 334	8 078
	n	852	275	196	79	656	196
	o	174 603	104 370	69 867	40 612	104 736	63 758
<i>Academies of economics</i>	p	66 563	40 473	46 861	28 457	19 702	12 016
	n	108 040	63 897	23 006	12 155	85 034	51 742
	o	43 751	33 500	25 705	19 631	18 046	13 869
<i>Higher teacher education schools</i>	p	34 540	26 390	23 635	18 034	10 905	8 356
	n	9 211	7 110	2 070	1 597	7 141	5 513
<i>Medical universities</i>	o=p	62 270	44 991	52 755	38 817	9 515	6 174
<i>Maritime universities</i>	o=p	8 911	2 762	6 397	1 972	2 514	790
<i>Physical academies</i>	o=p	24 754	13 070	20 960	11 169	3 794	1 901
	o	17 082	11 436	14 683	9 892	2 399	1 544
<i>Fine arts academies</i>	p	16 055	10 882	14 131	9 589	1 924	1 293
	n	1 027	554	552	303	475	251
	o	5 656	2 536	3 394	1 333	2 262	1 203

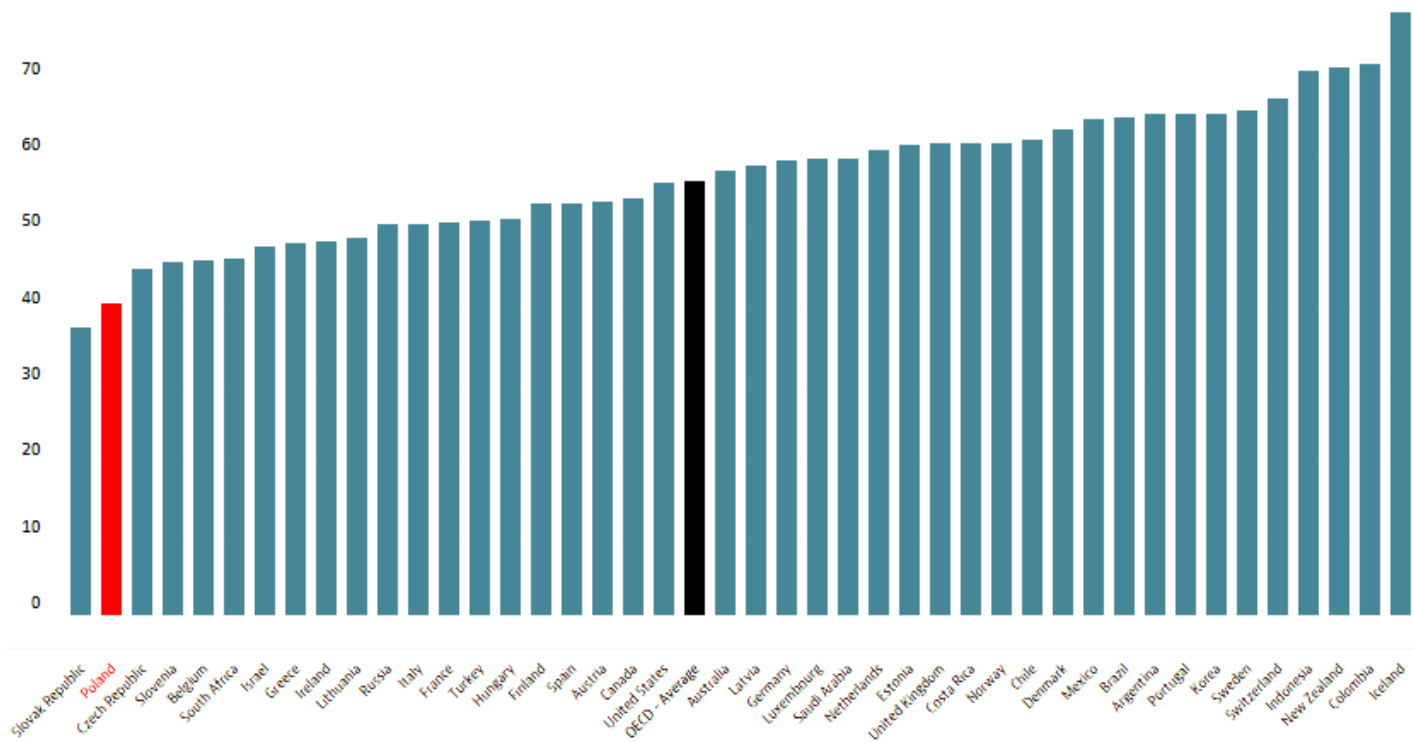
<i>Theological academies</i>	p	389	233	389	233	–	–
	n	5 267	2 303	3 005	1 100	2 262	1 203
	o	227 176	138 958	86 916	52 851	140 260	86 107
<i>Other higher education institutions</i>	p	59 748	35 306	47 558	28 748	12 190	6 558
	n	167 428	103 652	39 358	24 103	128 070	79 549
	o=p	22 759	8 147	17 461	6 300	5 298	1 847
<i>Academies of the Ministry of National Defence</i>							
<i>Academies of the Ministry of Interior and Administration</i>	o=p	4 974	1 143	2 436	769	2 538	374

The statistics of the academic year 2015/2016 about the graduates of higher education institutions by type of school (including foreigners) are the following:

SPECIFICATION		Grand total	Of which females	Of grand total - forms of studies			
				full-time programmes		part-time programmes	
				total	of which females	total	of which females
o – grand total	o	364 619	233 202	231 734	147 605	132 885	85 597
p – public	p	274 763	173 223	214 129	136 137	60 634	37 086
n – non-public	n	89 856	59 979	17 605	11 468	72 251	48 511
	o	104 290	76 992	80 850	59 373	23 440	17 619
Universities	p	100 954	74 637	77 860	57 264	23 094	17 373
	n	3 336	2 355	2 990	2 109	346	246
	o	77 195	33 441	61 755	28 200	15 440	5 241
Technical universities	p	74 815	32 269	61 134	27 878	13 681	4 391
	n	2 380	1 172	621	322	1 759	850
	o	18 209	11 820	13 994	9 599	4 215	2 221

Agricultural academies	p	17 987	11 708	13 955	9 582	4 032	2 126
	n	222	112	39	17	183	95
	o	50 314	33 276	18 613	12 059	31 701	21 217
Academies of economies	p	20 051	13 645	13 937	9 285	6 114	4 360
	n	30 263	19 631	4 676	2 774	25 587	16 857
	o	14 473	11 523	7 479	6 063	6 994	5 460
Higher teacher education schools	p	11 080	8 942	7 017	5 685	4 063	3 257
	n	3 393	2 581	462	378	2 931	2 203
Medical universities	o=p	13 252	10 431	11 527	9 146	1 725	1 285
Maritime universities	o=p	1 791	819	1 168	514	623	305
Physical academies	o=p	6 622	3 871	5 504	3 225	1 118	646
	o	4 588	3 073	3 844	2 572	744	501
Fine arts academies	p	4 387	2 945	3 760	2 514	627	431
	n	201	128	84	58	117	70
	o	1 071	590	625	301	446	289
Theological academies	p	64	36	63	36	1	–
	n	1 007	554	562	265	445	289
	o	65 372	44 270	20 878	14 208	44 494	30 062
Other higher education institutions	p	16 318	10 824	12 707	8 663	3 611	2 161
	n	49 054	33 446	8 171	5 545	40 883	27 901
Academies of the Ministry of National Defence	o=p	6 236	2 727	4 821	2102	1 415	625
Academies of the Ministry of Interior and Administration	o=p	1 206	369	676	243	530	126

Employment by education level (in 2016) was not enough high:



2. NATIONAL REGULATIONS CONCERNING POLISH HIGHER STUDIES.

In 2005 the Law on Higher Education undoubtedly contributed to solving many problems affecting the functioning of the Polish higher education system.

- Higher Education Institutions

The Higher Education Institutions (HEIs) in Poland are divided into state (*public*) and private (*non-public*) institutions. There are two main categories of higher education institutions: *university-type* and *non-university institutions*. In the university-type HEIs, at least one unit is authorized to confer the academic degree of Doctor (*PhD*), i.e. offers at least one doctoral programme.

Public universities in Poland

Name in English	Location	Established in
University of Białystok	Białystok	1997
Casimir the Great University	Bydgoszcz	1969
University of Gdańsk	Gdańsk	1970
Jagiellonian University	Kraków	1364
John Paul II Catholic University	Lublin	1918
Maria Curie-Skłodowska University	Lublin	1944

University of Łódź	Łódź	1945
University of Warmia and Mazury	Olsztyn	1999
Opole University	Opole	1994
Adam Mickiewicz University	Poznań	1919
University of Rzeszów	Rzeszów	2001
University of Silesia	Katowice	1968
University of Szczecin	Szczecin	1945
Nicolaus Copernicus University	Toruń	1945
University of Warsaw	Warsaw	1816
Cardinal Stefan Wyszyński University	Warsaw	1954
University of Wrocław	Wrocław	1702
University of Zielona Góra	Zielona Góra	2001
Jan Kochanowski University	Kielce	1969

- Structure of studies in Poland

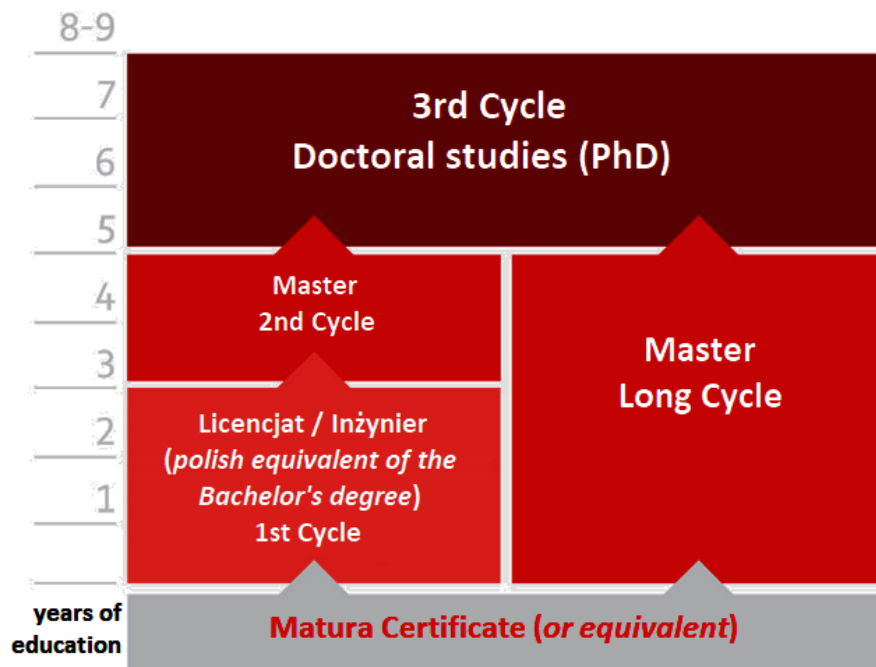
The higher education institutions run full-time, extramural, evening and external courses. The full-time courses are defined as the basic type of studies.

Poland conforms to the guidelines from the Bologna Process in European higher education. The degree system based on the three-cycle structure has been successfully implemented together with the European Credit Transfer and Accumulation System (ECTS). The European standard in higher education makes it easier for students to obtain recognition of their qualifications in other countries.

1st Cycle	First-cycle studies (3 to 4 years) leading to the professional title of a <i>licencjat</i> or <i>inżynier</i> (Engineer, in the field of engineering, agriculture or economics). This is the Polish equivalent of the Bachelor's degree. It is focused on preparing students for future employment or for continued education within the Master's degree programmes. To obtain this degree, students must earn 180-240 ECTS credits.
2nd Cycle	Second-cycle studies – <i>Master's degree programme</i> (1.5 to 2 years) following the first cycle studies and leading to

	<p>the professional title of Master (<i>magister</i>, or an equivalent degree depending on the study course profile). It is focused on theoretical knowledge as well as application and development of creative skills. In artistic disciplines, the focus is on the development of creativity and talents. Master's degree holders may enter a doctoral programme (third-cycle studies). To obtain the degree, students must earn 90-120 ECTS credits.</p>
<p>Long-cycle studies</p>	<p>In addition to the general structure, 11 fields of study including acting, art conservation and restoration, canon law, dentistry, law, medical analysis, medicine, production and photography, pharmacy, psychology and veterinary medicine, offer long-cycle programmes only.</p> <p>Long-cycle studies – <i>Master's degree programme</i> (4.5 to 6 years) leading to the professional title of Master (<i>magister</i>, or an equivalent degree depending on the study course profile). To obtain this degree, students must earn 270-360 ECTS credits. Such single long-cycle studies are based on an integrated study programme which contains both basic studies and in-depth specialisation. Completion of this degree will provide a qualification corresponding to the Master's degree at the second-cycle studies.</p>
<p>3rd Cycle</p>	<p>Third-cycle studies – <i>Doctoral degree programmes</i> (normally 3 to 4 years) accessible for graduates of Master's degree programme, leading to a PhD degree, offered by the university type schools as well as some research institutions (departments of the Polish Academy of Sciences as well as research and development institutions). The PhD degree is awarded to candidates who submit and successfully defend a doctoral dissertation before the thesis committee and pass the doctoral examination.</p>

Graphically we have the following:



go-poland.pl/ru/structure-studies-poland

- Examinations

All higher education institutions are required to end their courses with examinations. There may be several independent examinations or tests in separate parts of a subject. Usually, oral and written examinations are held at the end of each semester during the examination session. Students sit examinations on each subject separately. The performance assessment period covers either one semester or one academic year. To successfully complete a semester (or a year), a student must attain the pass mark (at least “satisfactory”) for all assessments and examinations in the subjects covered by the curriculum and obtain performance assessment credits for all integrated placements.

Grading: Each HEI identifies its grading scale in its Study Rules. The most common scale comprises the following marks:

- **5 very good** (bardzo dobry)
- **4 good** (dobry)
- **3 satisfactory** (dostateczny)
- **2 unsatisfactory / fail** (niedostateczny)
- **credit / pass** (zaliczenie)

Sometimes the plus symbol or decimal is used to modify the numerical grades.

It must be pointed out at this time that grades awarded according to the scale are not directly transferable to the ECTS credits.

- ECTS credits

In addition to the grading scale, there are HEIs in the European Credit Transfer System (ECTS) under which a certain number of credits is allocated to a given subject, independently of marks awarded. To complete a year successfully, the student has to collect 60 credits (30 per semester).

The ECTS (European Credit Transfer System) is the standard adopted by all universities in the European Higher Education Area (EHEA) in the process of convergence between Europe's higher education systems. Since 2007, all Polish higher education institutions have been required to use ECTS for both credit transfer and accumulation within their degree programmes. The ECTS credits allow foreign students' periods of study at HEIs in Poland to be recognized.

- Diploma

In order to graduate, students are required to:

- pass a performance assessment for all subjects, integrated placements and practical work sessions, and pass all examinations covered by the study programme set for a given field of study;
- present, at an appointed date, a diploma project and attain a pass mark for that project;
- pass the diploma examination.

Upon graduation, the student receives a diploma of completion of studies in a specific field of study together with a *Diploma Supplement* (copy of the diploma translated into a foreign language, describing the degree, level and specialisation).

3. INTERNATIONAL COOPERATION

The obligatory elements of internationalization are the obligatory requirement to speak a foreign language (mainly English) at level B2 during recruitment, publications in international ranking lists, participation in international and foreign conferences, and publications in international languages. In addition, the following steps are planned for international doctoral studies: participation in international exchange programs, publication of at least one scientific article in a journal from the Journal Citation Reports

list, ERIH lists and SCOPUS database; submission of an application for funding of scientific research to an international agency providing funding for research, at least one-month academic internship at a foreign scientific unit, implementation of part of the classes in English, participation in projects financed under international grants. So,

- degree programmes or individual courses can „normally” be taught in foreign languages,
- degree programmes can be offered jointly by two or more HEIs, including international HEIs,
- there are joint diplomas (left for regulation by the High Education Minister),
- Polish HEIs can establish their units abroad & foreign HEIs can establish their units in Poland etc.

The Act of March 18, 2011 on the amendment to the Act of Higher Education Law, the Act on Academic Degrees and the Academic Title and on the Degrees and Title in the field of Art and on the amendment of some other Acts was the finale of the work carried out since 2008 under the “Plan of the National Strategy for the Development of the Country” approved by the resolution of the Council of Ministers on 24 November 2009 and the Polish Rectors’ Foundation in 2009 and 2010. The same amendment Act amended 12 other laws.

The reform of the higher education system has not ended in 2011. Among the amending laws, the Act of July 11, 2014 is of particular importance. First of all, the issue of commercialization (direct and indirect) of research results has been normalized, with a view to increasing the material motivation for conducting innovative research programs. The attempt to organize the definitions of concepts that have been settled for some time in higher education, eg. learning outcomes, has been addressed in the issue of regulating the functioning of the Integrated Information System on Science and Higher Education, intensified the methods of combating plagiarism of diploma, introducing (among others) the legal basis of the nationwide repository of written thesis papers and extending the basis of disciplinary responsibility of students and staff of science and academics / didactics. There are also provisions that give doctoral students a lot of privileges, while emphasizing the legal status of them and the rules governing the monitoring of graduates.

4. INSTITUTIONS MANAGING THE HIGHER EDUCATION

Universities in Poland are autonomous in all areas of their activity on the principles set

out in the Act on Higher Education. The Ministry of Science and Higher Education is the appropriate Ministry for the supervision of higher education in Poland.

The Minister of Science and Higher Education determines the National Qualifications Framework (and the Polish Qualifications Framework), including a description of learning outcomes for the areas of education, including levels and profiles of education.

A representative body of higher education, which cooperates with the Minister for Science and Higher Education and other authorities and public administration in determining the state education policy in the field of higher education, is the Main Council of Higher Education.

The evaluation of the quality of education is made by the Polish Accreditation Commission.

The Polish Accreditation Committee is an independent expert body working to improve the quality of education in all public and non-public higher education institutions operating in the Polish higher education system.

PKA (Accreditation Committee) performs program and institutional evaluations and presents the results of these assessments to the minister of higher education, opinions on the establishment of the university and the university or its basic organizational unit entitles to conduct studies in a specific field, level and profile of education, opinions on the restoration of suspended permission to conduct studies in a specific field, level and profile of education, as well as opinions on the establishment of a university or branch in Poland by a foreign university.

5. ASSESSMENT OF THE QUALITY OF HIGHER EDUCATION

Different quality aspects of HEIs are evaluated. This evaluation has among its objectives at least the following ones: the measurement of the performance of the public service of the HEIs university, the comparison and transparency among universities and improving teacher quality. Additionally, these quality effects will serve as a point of information for public administrations for decision making and promote mobility and excellence of teachers and students.

The objectives set out in the preceding paragraph are fulfilled through the evaluation, certification and accreditation of:

- Studies aimed at obtaining national or international certificates of validity,

including that of a Doctor and the qualifications of universities and higher education centers;

- Teaching, research and teacher-management activities, as well as higher education centers;
- Other activities and programs that may be carried out as a result of the promotion of the quality of teaching and research by public administrations.

The external bodies responsible for improving the quality of education, the assessment of which determines the grade and quality of education are:

- Polish Accreditation Commission,
- the Accreditation Commission for Academic Medical Schools (ACAMS),
- the National Accreditation Council for Nurses and Midwifery Schools
- the University Accreditation Commission are

Jan Kochanowski University in Kielce recognizes the strategic goal of ensuring the highest quality of education. The University take into account:

- the provisions of the Bologna Declaration,
- the Act of Higher Education,
- European Qualifications Framework
- Polish Qualifications Framework etc.

In terms of UJK, the “quality” includes:

- the improvement of the “quality management”
- the enlightening of “institutional quality” by measuring the performance of key internal and external stakeholders
- the implementation of mechanisms that minimize deviations between expectations and actual outcomes.

In order to improve the quality of education, UJK implements also the quality improvement in the field of university resources management, ie:

- finance,
- didactic-science and ICT infrastructure,
- knowledge and human resources.

The quality assurance system for doctoral education (as well as first and second cycle of studies and postgraduate studies) in Poland is on several levels. It takes place at:

- classes in individual subjects resulting from the study plan (responsible: tutors, doctoral studies supervisor);
- Faculty of Graduate Studies (Faculty Commission of Quality Education);
- University (Rector's Plenipotentiary Representative for Quality Assurance of Training, University Commission for Quality of Education).

6. CATEGORIES OF TEACHERS OF HIGHER SCHOOLS

- Academic teachers

Academic teacher - teacher working at the university. Academic teachers based on the Act of 27 July 2005 Law on Higher Education are employed as:

- research and teaching staff,
- teaching staff,
- research staff,
- certified librarians and certified documentation and scientific information employees.

- Research and teaching staff

Scientific employees devote themselves entirely to scientific and research work.

Academic and didactic staff can be employed in the following positions:

- full professor,
- Associate Professor,
- visiting professor,
- Assistant Professor,
- assistant.

- Duties of research and teaching staff

Pursuant to the law on higher education, research and teaching staff are obliged to:

- educate and educate students,
- conduct scientific research and development work; develop scientific or artistic creativity;
- participate in the organizational work of the university.

- Researchers from Polish universities in accordance with the law are required to:

- conduct scientific research and development work; develop scientific or artistic creativity,
- participate in the organizational work of the university.

- **Teaching staff**

The teaching staff are exempt from conducting scientific and research work, they devote their working time entirely to didactics (classes with students) and related organizational matters. Teaching staff can be employed in the following positions:

- senior lecturer / senior instructor.
- lecturer,
- lector / instructor.
- **In vocational high schools, teaching staff may also be employed in positions of:**
 - full professor,
 - Associate Professor,
 - visiting professor,
 - assistant.

- **Duties of teaching staff**

Pursuant to the Act on Higher Education, teaching staff are obliged to:

- educate and educate students,
- improve their professional qualifications,
- participate in the organizational work of the university.

The teaching staff in tertiary education by level and sex – in 2015 (in thousands), in statistics are the following in EU and Poland:

	Tertiary total			Short-cycle tertiary			Other tertiary		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
EU-28 (*)	1 448.5	843.9	604.6	93.7	47.1	46.6	1 291.5	764.4	527.1
Belgium	28.6	14.7	13.9	-	-	-	-	-	-
Bulgaria	23.7	12.3	11.4	-	-	-	23.7	12.3	11.4
Czech Republic	16.5	9.9	6.6	0.1	0.0	0.1	16.4	9.9	6.6
Denmark	37.1	21.2	15.9	1.7	1.0	0.7	35.4	20.2	15.2
Germany	396.2	244.8	151.4	0.0	0.0	0.0	396.2	244.8	151.4
Estonia	4.8	2.5	2.4	-	-	-	4.8	2.5	2.4
Ireland (*)	9.2	5.2	4.1	-	-	-	9.3	5.2	4.1
Greece (*)	15.2	10.2	5.0	-	-	-	15.2	10.2	5.0
Spain	157.0	90.3	66.7	33.0	17.1	15.9	124.0	73.2	50.8
France (*)	109.2	67.8	41.4	20.9	14.4	6.5	88.3	53.4	34.8
Croatia	16.1	8.4	7.7	-	-	-	16.1	8.4	7.7
Italy	90.0	56.4	33.5	-	-	-	90.0	56.4	33.5
Cyprus	2.9	1.7	1.2	0.6	0.3	0.3	2.3	1.4	0.9
Latvia	6.8	3.0	3.8	1.1	0.4	0.7	5.7	2.6	3.1
Lithuania	13.1	5.7	7.3	-	-	-	13.1	5.7	7.3
Luxembourg	0.8	0.5	0.3	0.1	0.0	0.0	0.7	0.5	0.3
Hungary	21.0	12.2	8.9	0.8	0.5	0.3	20.2	11.7	8.6
Malta	1.6	1.1	0.6	0.2	0.2	0.1	1.4	0.9	0.5
Netherlands	62.6	34.8	27.8	1.1	0.6	0.5	61.4	34.2	27.3
Austria	60.9	34.9	26.0	9.3	4.5	4.8	51.6	30.4	21.2
Poland	97.4	54.2	43.3	0.6	0.2	0.5	96.8	54.0	42.8
Portugal (*)	32.3	18.0	14.4	-	-	-	33.5	18.8	14.7
Romania	27.8	14.0	13.7	-	-	-	27.8	14.0	13.7
Slovenia	7.1	4.2	2.9	1.4	0.7	0.7	5.7	3.5	2.3
Slovakia	12.8	7.0	5.8	0.5	0.2	0.3	12.3	6.8	5.5
Finland	14.9	7.3	7.6	-	-	-	14.9	7.3	7.6
Sweden	34.1	19.0	15.1	0.5	0.3	0.2	33.6	18.7	14.9
United Kingdom (*)	148.5	82.6	65.9	22.8	10.9	11.8	128.8	73.5	55.4
Liechtenstein	0.1	0.1	0.0	-	-	-	0.1	0.1	0.0
Norway	27.7	15.1	12.6	0.7	0.3	0.4	27.0	14.8	12.3
Switzerland	33.3	21.9	11.4	-	-	-	33.3	21.9	11.4
FYR of Macedonia (*)	3.4	1.7	1.7	-	-	-	3.4	1.7	1.7
Serbia	10.7	5.9	4.8	-	-	-	10.7	5.9	4.8
Turkey (*)	142.4	81.5	60.9	16.6	10.1	6.5	125.8	71.4	54.4

(*) Short-cycle and other tertiary: 2014.

(*) Independent private institutions: excluded. Other tertiary education: includes short-cycle tertiary education; 2014. Academic staff in government dependent private institutions: excluded.

(*) 2014.

(*) Independent private institutions: excluded. Short-cycle tertiary education: includes post-secondary non-tertiary personnel.

(*) Other tertiary education and total tertiary education: includes post-secondary non-tertiary personnel giving courses in higher education institutions. Other tertiary education: 2014.

Source: Eurostat (online data codes: educ_uoe_perp01)

7. DESCRIPTION OF NATIONAL QUALIFICATION FRAMEWORK

- Internal Quality Assurance System:

1. refers to all stages and aspects of the didactic process,
2. includes the activities for the improvement of higher education, doctoral and postgraduate programs,
3. takes into account: the way of verifying the effects of education on all faculties and levels of higher education, doctoral studies and postgraduate studies; assessment of achievement of the assumed learning outcomes; assessments by students, doctoral students and postgraduate students after the end of each education cycle; conclusions from the monitoring of the professional careers of university graduates and conclusions from the study of employers' expectations and the compatibility of learning outcomes with the needs of the labor market.

- The aim of the Internal Quality Assurance System is to:

1. take care of fulfilling the mission and strategy of the University in the area of improvement and quality assurance,

2. increase the attractiveness and competitiveness of UJK towards other universities,
3. continue the improvement of the quality of education in the UJK and building quality culture,
4. create and promote pro-quality activities and involve the entire academic community in this process,
5. improve the quality of education of teaching staff, infrastructure and didactic offer,
6. create the clear and open standards for monitoring and evaluation of the teaching process.

In order to carry out the tasks of the Internal Quality Assurance System for Higher Education, we set up the University Commission of Quality of the Education. It consists of the University Education Quality Assurance Team and University Quality Assessment Team. Within the latter, there are two subassemblies:

- **Teachers Training Subcommittee** – Subcommittee on Doctorate and Postgraduate Studies (PSDiP):

According to the Order No. 78/2015 of the Rector of the University of Jan Kochanowski in Kielce (19 October 2015) the tasks of the Subcommittee on Doctorate and Postgraduate Studies are:

1. supporting, monitoring and analyzing the quality of education at doctoral and postgraduate studies,
2. analysis of the compliance of doctoral and postgraduate studies with the applicable internal and external regulations,
3. giving opinions on the programs of doctoral and postgraduate studies,
4. proposing changes to the doctoral and postgraduate education programs aimed at improving the quality of education,
5. analysis of the adequacy of methods of verification of attainment of the assumed effects of education at doctoral and postgraduate studies.

At the level of the faculties of the university there are Faculty Quality Assurance Training Committees which have established:

- Departmental Quality Assurance Teams,
- Faculties for Quality Assessment of Education,
- Directional Learning Programs Teams.

The effects of doctoral education (and how they are verified and documented) determine the organizational unit running doctoral studies. In the case of UJK, such unit is the department.

The provision of high quality doctoral education is, inter alia, a way of constructing plans for these studies, which ensure the participation of doctoral students in:

- compulsory courses in subjects closely related to the field of study
- optional subjects developing professional skills, preparing the doctoral student for research or research and development work,
- optional classes, developing teaching skills, preparing the doctorate to practice to the profession as a teacher,
- professional practice.

An important part of the Internal Quality Assurance System is the research¹ conducted as pools at the university, faculties and field surveys among:

1. students, doctoral students, postgraduate students and graduates of particular levels and forms of studies,
2. academic teachers,
3. non-academic staff serving the education process.

The internal quality assurance system is an important part of the quality system of university-wide procedures and on departmental level - faculty procedures. They are constantly reviewed and updated. At present, among the general-purpose procedures at UJK, there are:

1. The procedure for the creation, modification and abolition of higher education courses / doctoral and postgraduate studies,
2. The procedure for assessing the effectiveness of achievement of assumed learning outcomes,
3. The procedure for assessing the internal quality assurance system for education,
4. The procedure of providing students with didactic, scientific and material support,
5. The procedure for handling the course of studies,
6. Dissemination procedure,
7. The procedure of the general university survey,

¹ These researches are conducted with the principals of voluntary, confidentiality and openness of the results. Doctoral students, as well as first- and second-degree students, and postgraduate students, may complete surveys from their individual accounts at the Virtual University.

The surveys assessing the academic teachers for the fulfillment of their didactic duties are carried out each time after the completion of classes in the given year and in the field of studies; the questionnaires evaluating the classes are conducted after each course of the subject in the given year and the course of study. The results obtained in these surveys serve to improve the quality of education.

8. Assessment procedure for an academic teacher,
9. The procedure for monitoring the professional careers of graduates,
10. The procedure of dissertation,
11. The procedure for holding and documenting student internships,
12. The procedure of class attendance,
13. The procedure of mode and method of conducting certification exams from foreign languages,
14. Student participation in elective courses,
15. The procedure for the introduction of grades to the Virtual University,
16. The procedure for dealing with complaints and conclusions and resolving conflicts.

The detailed description of the internal quality assurance system (presented here) concerns Jan Kochanowski University in Kielce. Solutions in individual Polish universities may differ, but it is important that in each institution - both public and non-public – the system works:

- The systematic work to improve the quality of education is conducted by the Polish Accreditation Commission (PAC). It is created by a panel of experts working to improve the quality of education in all public and non-public HEIs, is qualified to evaluate the fulfillment of conditions for teaching and quality assessment at I, II and III degrees of studies and postgraduate studies, and to evaluate the activities of core organizational units in the universities.
- PAC was created on January 1, 2002 (under the name the State Accreditation Commission) under the Act of 20 July 2001 amending the Act on Higher Education Act at that time and the scope of its tasks and competences was redefined and expanded by the current Act of 27 July 2005 about the Higher Education, as well as the Act of 23 June 2016 on amending the Act on Higher Education and some other acts.
- Passing the assessment of the Polish Accreditation Commission is obligatory and its negative rating may result in the decision of the minister responsible for higher education to revoke or suspend the right of education in the given field of study and the level of education (also for doctoral studies).
- The Polish Accreditation Commission conducts a program of evaluation based on the evaluation of the quality of education in the fields of study, the levels and the profile of higher education.

- The amended Act on Higher Education and related regulations allow PAC a less formal and more substantive approach to assessing the quality of education in Polish higher education institutions.

While preparing the detailed criteria for program evaluation, the Commission adopts solutions based on current legislation but also takes into account “Quality Assurance Standards and Guidance in the European Higher Education Area” according to which the program evaluation criteria consist of:

- the concept and curriculum, its consistency with the mission and strategy of the institution, and the ability to achieve learning outcomes;
- the education staff;
- the cooperation with the socio-economic environment;
- the didactic and scientific infrastructure and educational resources;
- caring for students and supporting learning and achieving outcomes.

By assessing the quality of education in the fields of general-studies, PAC analyzes primarily:

- the interrelationship of research activities with the learning and teaching process in a particular direction,
- the impact of researches on the achievement of learning outcomes,
- the ability of students to participate in research.

In the case of a practical profile, the focus of the Commission is on how to provide students with the opportunity to acquire:

- knowledge,
- practical skills,
- social competence in conditions as close as possible to actual jobs².

The general approach of the PAC is based on the principle that the most important impact on the quality of education is a well-thought-out, modern education program that responds to the challenges of the present day, carried out by appropriately selected teaching staff in the conditions necessary to achieve the goals set. The Commission also takes into consideration:

- the clearly defined effects to be achieved by the graduate;

² In assessing the educational programs at the different levels of education, the Commission takes into account the characteristics of the education levels included in the Polish Qualifications Framework and adjust the programs to the appropriate level of the Framework.

- the fact of ensuring the application of effective, diverse and aptly chosen and tailored student learning approaches to learning outcomes, with particular emphasis on the degree of diplomacy;
- the confirmation of achievement by graduates of all assumed learning outcomes.

The amendment of the Act on Higher Education took into consideration the process of education (and especially the system of regulations concerning quality assurance and evaluation of education) in Polish universities which were very bureaucratic. Universities have developed extensive internal procedures to document in detail their efforts for a good quality of education. This in mainly concerned the functioning of the formal internal structure of the quality assurance system. Meanwhile, the measure of quality culture should be the efficiency of this system, and the Polish Accreditation Commission should evaluate its effectiveness rather than the formal description.

When making changes to the quality assessment system, it was assumed that the quality assessment of PAC in education should be of a substantive nature and should be based on a clear set of criteria. Changes in the Act of Higher Education Law consist in departing from the need to verify the PAC's compliance with numerous formal conditions for conducting studies in a particular direction, level and profile of education. The process of checking the legality of teaching will be separated from the process of substantive evaluation of the quality of education. In order to minimize bureaucratic burdens for study units, the formal verification will be based on the data collected by the reporting system, including the POL-on system.

The PAC's quality assessment process (or, at least, in the assumptions made by the authors of the last amendment of the Act) was supposed to have the character of a dispute concerning all general evaluation criteria defined in the ordinance of the Minister of Science and Higher Education. Its participants are the evaluation team and the academic community - academic teachers, students and staff supporting the learning process, which participates in the delivery of education on the assessed direction. As the result of such a dispute, in addition to the evaluation by the evaluation team, recommendations should be made, the implementation of which will guarantee the improvement of the learning process.

The amendment of the Law on higher education abolished PAC's institutional assessment, which consisted in evaluating the core activity of the organizational unit of the institution and was carried out in the unit where the program evaluation had been conducted in most

of its courses. There are voices, especially among PAC experts, that this type of assessment should be reintroduced. PAC's opinions and conclusions are presented to the minister competent for higher education.

- **The Polish Accreditation Commission has the status of full member in:**

- 1) Central and East European Network for Quality Assurance Agencies in Higher Education (CEENQA) – since January 2002
- 2) European Consortium for Accreditation (ECA) – since December 2005,
- 3) International Network for Quality Assurance Agencies in Higher Education (INQAAHE) – since 2007,
- 4) European Association for Quality Assurance in Higher Education (ENQA) – since January 2009.

Since 15.01.2009, the Commission is in the European Quality Assurance Register for Higher Education (EQAR), a register of agencies operating under the European Standards and Guidelines for Quality Assurance.

In 2012, the American National Committee on Foreign Medical Education and Accreditation (NCFMEA) assessed that the procedures and standards used by the Polish Accreditation Commission in the accreditation process of medical schools are comparable to those of the US.

Pursuant to the provisions of the PAC's Statute, the Commission's activities are the subject to external review (once every 5 years). The first such assessment was carried out by the International Panel of Experts in 2008, and its result allowed the inclusion of the Polish Commission in the European Registry of Quality Assurance Agencies (EQAR). As a result of the next review at the turn of 2013 and 2014, the full membership of PAC in ENQA has been confirmed.

Qualifications obtained through doctoral studies completing by the doctoral degree in a specific field have been entered into the Integrated Qualification System (Act of 22 December 2015 on the Integrated Qualification System) - corresponding to 8th level of Polish Qualification Framework.

- **An integral part of the Integrated Qualification System is the Polish Qualification Framework.**

The Polish Qualifications Framework is a modern, coherent European Qualifications Framework (EQF), a way of determining, organizing and describing qualifications, including the effects of education obtained through:

- 1) formal education (schools, higher education)
- 2) non-formal education - outside the general education,
- 3) vocational and higher education system (eg. qualification, language, specialist - certified)
- 4) courses,
- 5) learning outcomes in non-formal education (eg. professional experience and practice, internships, student internships, independent learning).

Schematically we can present the matter as followed (including the Polish National Qualification Framework - PQF):

Qualifications awarded in the Polish higher education system

Type of studies:	Name of qualification	ECTS credits	Planned qualification level in the PQF
first cycle studies (Bologna first cycle)	diploma certifying the professional title of <i>licencjat</i> / <i>inżynier</i> or equivalent title	at least 180	6
second cycle studies (Bologna second cycle) or long cycle studies	diploma certifying the professional title of <i>magister</i> / <i>magister inżynier</i> or equivalent title (e.g. physician)	second cycle studies – at least 90 long cycle master degree studies: at least 300 (5 year studies), 360 (six year studies)	7
third cycle studies (Bologna third cycle)	– diploma certifying the academic degree of <i>doktor</i> in a specific discipline	45-60	8
<i>additionally:</i>			
postgraduate non-degree studies	certificates of completion of postgraduate non-degree studies	at least 60; (the studies should not be less than two semesters)	depending on the programme

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8. HOW IS A DOCTORATE IN POLAND ORGANIZED? (CHARACTERISTICS OF DOCTORAL STUDIES, METHODOLOGY, ECTS etc)

Doctoral studies are conducted in Poland in units with the appropriate powers conferred by the Central Commission on Degrees and Titles at the request of the organizational unit.

The Central Commission:

- 1) takes into account the level of scientific or artistic activity of the unit and the number of people employed in it who hold the title of professor or the degree of habilitated doctor.
- 2) confers this right after consultation with the Central Council for Science and Higher Education.
- 3) influences the process of quality assurance in the sense that it controls the level of scientific and didactic staff employed in the doctoral student body and has the power to revoke the assigned powers if the organizational unit ceases to meet the required conditions set forth in the Act.
- 4) makes a periodic assessment of the fulfillment of the conditions for awarding a Ph.D.
- 5) is also the body to which an applicant for a doctorate can appeal against a resolution of a refusal (after reviewing the appeal, within no more than six months, the Central Commission either upholds the contested resolution or, by repealing it, refers the case to the board of the same or another organizational unit for reconsideration).
- 6) keeps, updates and publishes on its website:
 - the information about the organizational units authorized to assign degrees along with a list of these degrees;
 - the information about organizational units that the Central Commission has restricted, revoked or suspended the right to assign degrees, the date it was suspended, and the reason for the restriction, withdrawal or suspension of entitlement;
 - the information about organizational units conducting doctoral studies;
 - the summaries of doctoral dissertations and reviews submitted to the doctoral degree.

The internal evaluation process consists, among others, in determining the effectiveness of achievement of the assumed learning outcomes by assessing the students' achievements of the assumed learning outcomes and verification of the methods of assessment and

evaluation. Responsible persons are:

- lead teachers,
- supervisors,
- reviewers (of doctoral dissertation),
- tutors,
- curricular teams for curricula,
- Faculty Unit for Assessing the Quality of Education
- the University Team for Assessing the Quality of Education.

The verification of effectiveness of achievement of the assumed learning outcomes is realized by:

- the assessment of the subject card (curriculum) and verification of the assumed learning outcomes in the area of knowledge, skills and social competences;
- the diploma process - through the diploma thesis the assumed effects of education are verified. They are evaluated by the promoter and reviewer (diplomas at the various faculties and the diploma procedure);
- student practice (doctoral) - the learning outcomes gained during student internships are complementary to the concept of education;
- the international exchange of students - obtaining information from students about their knowledge, skills and social competences in the context of staying in a partner university;
- the achievement of scientific circles - feedback through external reviews (scientific publications, speeches at conferences, awarded by the Rector and the Minister's scholarship);
- investigating the fate of graduates - by providing feedback on the acquired knowledge, skills and competences and their relevance to the labor market;
- the survey of employers' opinions - opinions of employers on educational programs, including the expected learning outcomes and methods of their verification, especially concerning practical training;
- monitoring the activities that prepare students to acquire in-depth knowledge and skills in conducting research and practical work-related training.

Verification of the quality of education during doctoral studies is inter alia:

- 1) the staged works - performed by a doctoral student during studies: colloquium, tests, final papers, presentations, case studies;

- 2) the exams on the subject - questions prepared for the exam should not go beyond the content included in the course card delivered during lectures / exercises. Student has the right to justify by the instructor received on the assessment exam; the form of the examination: oral / written, practical is determined by the teacher and included in the card of the subject;
- 3) the credit and the credit with the grade - the teacher defines the assessment criteria, gives the student the marks and justifies the assessment received by the student on the credit. Criteria for assessment and its components are defined in the course card;
- 4) the report on the implementation of scientific research and progress in the preparation of the dissertation, provided by the scientific supervisor or promoter - at the end of each year of study;
- 5) the parameterization of scientific achievements – doctoral students of UJK are obliged to introduce their own scientific achievements (for the academic year) through individual profile to the Scientific Research module.

The verification of the achievement of directional learning's outcomes is also a positive credit for doctoral dissertations, writing a dissertation, positively reviewed and defended. According to the recent amendment of the Act on Higher Education, the Minister of Science and Higher Education "conducts the Unified Anti-plagiarism System, which cooperates with the national repository of written diploma theses, and assures the free use of this system by universities" - according to this provision since the academic year 2018/19 every university's obligation will be to verify diploma theses in the central system run by the Ministry of Science and Higher Education. The anti-plagiarism procedure will cover all bachelor's, master's, and doctoral theses. So far, universities in Poland have used different anti-plagiarism systems (eg Plagiat.pl or Open Anti-plagiarism Systems) - the obligation to carry out the anti-plagiarism procedure has introduced (since the academic year 2015/16) by the amendment of the Higher Education Act of 1.10.2014

According to this amendment the rectors of the universities until 31.12.2018 must submit to the national repository of written thesis papers data on works which defense was successful after 30 September 2009.

Transition of the anti-plagiarism procedure is a condition of admission the work for the diploma / defense dissertation. If the assessment shows that the work does not meet the criteria of the anti-plagiarism procedure and at the same time contains a prerequisite for

plagiarism, then such work is not admitted to the dissertation examination / submission of the dissertation and is not added to the anti-plagiarist database.

A work that does not meet the criteria of the anti-plagiarism procedure and also contains the premises for plagiarism is a subject to additional evaluation by the commission appointed by the dean. The commission consists of a dean or an assistant dean, a promoter and other specialist in the subject matter of a given thesis with a doctoral degree or a scientific title. It makes a final judgment on whether a job is plagiarized.

Of course, the problem is the degree of digitization not only of diploma and doctoral studies, but also - and perhaps above all – the literature of the subject. If a student / doctoral student uses foreign language work not in the database, the anti-plagiarist systems are unable to detect unauthorized / unreported borrowings.

On the Internet you can find lots of tips / guides telling people what to do to avoid the anti-plagiarism program and “do not get caught” on plagiarism. So, this is still a problem that is not completely resolved. Many people stress that there is still a huge role to play here to fulfill the thesis supervisor. The effectiveness of the anti-plagiarism systems used by the Polish universities has been negatively assessed by the Supreme Chamber of Control in 2014, accusing them of being unprofitable and ineffective - they can easily be deceived, they do not even detect the primitive borrowings of popular portals, and the results of their work are incomparable between colleges / universities. Professor Tadeusz Grabiński, after analyzing the anti-plagiarist programs used by Polish universities (Plagiat.pl, Open Antipollution System, Podkarpackie Anti-Plagiarism Platform and Genoa), thinks that instead of wondering how much borrowing already means plagiarism, one should show (for each field separately) how much original work is in a given work. The universities define the relevant ECTS regulations and standards. The faculty council / doctoral program manager will individually set up an education plan and program for a doctoral student undertaking studies at another university or research institute in accordance with ECTS. The number of ECTS credits is attributed to all subjects from which the doctoral student has obtained a credit according to the study plan and the ECTS standards.

9. DIVERSIFICATION OF DOCTORAL STUDIES

It is planned to introduce three paths of doctoralisation in Poland: in doctoral schools that will operate at research and research and teaching universities, through doctoral grant and "free foot" grant.

In addition, as part of the diversification of doctoral studies, the identification of doctoral and professional doctorates as well as the diversification of doctoral environmental and interdisciplinary studies is considered.

As part of the implementation by the Ministry of Science and Higher Education of the project "Education at doctoral studies: Development of doctoral programs with different profiles", implemented under the priority axis III Operational Program Knowledge Education Development in 2017, 6 framework programs of doctoral studies with different profiles were developed. They include the following criteria: profile (academic vs. application), type of cooperation with the project partner (intersectoral, interdisciplinary or ordinary, ie implemented independently by the unit), coverage (national vs. international) and area of knowledge (according to the National Science Center classification). These are the programs: academic, international (ST), application, intersectoral. national (HS), academic, interdisciplinary, international (HS), application, interdisciplinary and intersectoral, national (ST), academic, interdisciplinary, international (NZ) and application, intersectoral, national (NZ).

10. THESIS

The procedure of defense of the doctoral dissertation provides for the following preliminary steps to be carried out:

- a) submitting a PhD student's work to the promoter,
- b) analysis of work by the anti-plagiarism system,
- c) accepting work by a supervisor and an appropriate scientific council,
- d) appointment of two external reviewers in the rank of habilitated doctors,
- e) handing over the work for a review.
- f) After receiving positive reviews, the appropriate scientific council sets the date of defense and the composition of the commission.
- g) Directly the defense procedure consists of two parts - public and closed. The first part contains:
 - h) presentation of the PhD student's profile by the promoter,
 - i) presentation of dissertations by a doctoral student,
 - j) presentation of the review by reviewers,
 - k) questions to the doctoral student of members of the commission and present on the public defense,
 - l) PhD student's answers for reviewers' comments and questions,

m) evaluation of doctoral student's response by reviewers and asking questions.

In the closed part, the committee discusses the work and course of the defense and makes a secret ballot on the defense and (possibly) honoring the work.

After the public announcement of the results and the positive approval of the defense by the doctoral committee, the appropriate scientific council in a secret ballot gives the PhD student a doctorate.

11. COHERENCE BETWEEN THE MASTER'S AND DOCTORAL LEVEL (POSSIBLE STATISTICS AT THE LEVEL OF STUDIES AND FIELD OF STUDY, ETC.)

The coherence between the master's and doctoral level was introduced in 2016 by adopting the Integrated Qualification System and the 8-stage Polish Qualifications Framework.

Master's studies are covered by level 7 framework, doctoral studies - level 8.

The frameworks contain the unification of 8 areas of knowledge along with specific fields and disciplines of science and art.

In Poland, it is possible to write a doctorate from a different field of science than a completed master's degree.

The Act on Higher Education in art. 196 stipulates that a person who possesses the second degree qualifications, ie a master's degree, may be admitted to doctoral studies.

The special conditions for recruitment for doctoral studies are defined by the university senate, and in the case of a scientific unit - by the individual scientific council.

- **Various options for access to PhD students (third degree studies, "freelancer" etc.)**

In Poland, the PhD degree of doctoral degree is given to a person who has a master's degree, a master's degree, a doctor or equivalent, passed doctoral examinations and defended his doctoral dissertation (dissertation).

The doctoral degree is awarded by those faculties of higher education institutions or scientific institutions that have the power to broadcast.

The preparation of the doctoral dissertation can be carried out either as part of the work at the university as an assistant (valid for 8 years from taking up the post), or by studying at doctoral studies (third degree studies) operating at individual universities or "free rate"

within the framework of independent cooperation in a scientific supervisor.

- **National statistics on research and the role of higher education institutions in the research system**

In 2016, general expenditure on research and development in Poland amounted to 17943044,600 thousand PLN (4059512,3 thousand euros), of which 5630383,9 thousand PLN (1273842,5 thousand euros) are expenditures of higher education, and 419683.9 thousands PLN (949511 thousand euros) - outlays directly from higher education institutions. At the same time 394265 thousand PLN (89,200,2 thousand euros) are own funds of higher education institutions.

It is worth mentioning that the majority of this amount is for higher public schools - 389764.2 thousand PLN (881819.5 thousand euros).

If we combine the engagement in research and development of the staff, from 213971 people in Poland 123786 have worked in the higher education system, and 108817 - directly in higher education institutions (including 99870 in higher public schools).

The Number of tertiary education students by level and sex - 2015 (thousands), statistically is the following (in EU and Poland):

	Tertiary total			Short-cycle tertiary			Bachelor's or equivalent			Master's or equivalent			Doctoral or equivalent		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
EU-28	19 530.6	8 969.2	10 561.3	1 397.5	668.8	728.7	11 984.4	5 597.4	6 387.0	5 423.1	2 324.0	3 099.1	725.5	379.0	346.5
Belgium	504.7	222.7	282.0	24.4	9.0	15.4	365.9	160.0	205.9	97.9	44.8	53.1	16.5	8.9	7.6
Bulgaria	279.0	126.8	152.2	-	-	-	186.7	88.4	98.3	85.6	35.1	50.5	6.6	3.2	3.4
Czech Republic	395.5	168.9	226.6	1.0	0.4	0.6	236.9	101.2	135.7	133.1	53.6	79.5	24.6	13.7	10.9
Denmark	313.8	134.7	179.1	35.0	17.7	17.2	195.1	80.2	114.8	73.8	31.9	41.9	9.9	4.9	5.1
Germany	2 977.8	1 550.1	1 427.6	0.4	0.1	0.3	1 792.4	981.5	811.0	988.8	459.5	529.3	196.2	109.1	87.1
Estonia	55.2	22.7	32.5	-	-	-	36.3	15.4	20.9	16.0	6.1	10.0	2.9	1.2	1.7
Ireland	214.6	105.4	109.3	16.5	7.6	8.9	161.3	80.6	80.7	28.6	13.1	15.5	8.2	4.1	4.1
Greece	677.4	347.7	329.7	-	-	-	599.0	312.3	286.7	54.6	22.8	31.8	23.9	12.6	11.2
Spain	1 963.9	920.2	1 043.7	372.4	193.0	179.4	1 204.4	553.6	650.8	355.1	157.5	197.6	32.1	16.1	15.9
France	2 424.2	1 102.9	1 321.2	495.5	250.7	244.8	991.2	412.6	578.5	868.9	403.2	465.7	68.6	36.4	32.2
Croatia	162.0	70.5	91.5	0.1	0.0	0.1	100.9	47.1	53.8	57.9	22.0	35.9	3.1	1.3	1.8
Italy	1 826.5	797.6	1 028.9	6.5	4.9	1.6	1 076.7	491.4	585.3	710.5	285.2	425.2	32.8	16.1	16.7
Cyprus	37.2	16.1	21.1	3.1	1.5	1.6	20.0	9.5	10.5	12.9	4.5	8.4	1.1	0.5	0.6
Latvia	85.9	34.7	51.2	16.1	6.4	9.7	50.6	21.8	28.9	16.9	5.7	11.3	2.2	0.9	1.3
Lithuania	140.6	59.7	81.0	-	-	-	108.1	48.2	59.9	29.9	10.4	19.5	2.6	1.1	1.6
Luxembourg	6.9	3.4	3.5	0.6	0.3	0.3	3.2	1.6	1.6	2.5	1.2	1.3	0.6	0.3	0.3
Hungary	307.7	139.9	167.8	11.7	4.3	7.3	214.7	100.3	114.5	74.1	31.7	42.4	7.2	3.6	3.6
Malta	13.2	5.8	7.4	2.5	1.1	1.4	7.0	3.0	4.0	3.5	1.6	2.0	0.1	0.1	0.0
Netherlands	842.6	401.9	440.7	18.7	8.1	10.6	646.9	311.0	335.8	162.6	75.5	87.1	14.5	7.3	7.2
Austria	426.0	199.2	226.7	77.9	36.0	41.8	183.8	87.0	96.8	140.3	63.3	76.9	24.1	12.9	11.2
Poland	1 665.3	682.1	983.2	2.7	0.5	2.2	1 104.4	483.8	620.6	514.8	178.0	336.8	43.4	19.9	23.5
Portugal	337.5	157.7	179.8	0.4	0.3	0.1	203.8	94.1	109.8	114.0	54.3	59.7	19.3	9.0	10.3
Romania	541.7	251.0	290.7	-	-	-	354.2	172.5	181.7	168.2	68.4	99.7	19.3	10.0	9.3
Slovenia	85.6	35.8	49.8	11.5	6.6	4.9	48.9	20.0	28.9	22.6	8.0	14.6	2.6	1.2	1.4
Slovakia	184.4	74.5	109.9	2.8	1.0	1.8	102.4	42.2	60.3	70.0	26.6	43.4	9.1	4.7	4.3
Finland	302.5	140.4	162.1	-	-	-	219.4	105.2	114.2	63.2	25.8	37.4	19.9	9.4	10.5
Sweden	428.6	174.9	253.7	25.2	12.7	12.5	246.4	91.2	155.2	135.6	59.8	75.7	21.4	11.1	10.2
United Kingdom	2 330.3	1 021.9	1 308.4	272.5	106.5	166.0	1 523.9	681.7	842.2	421.1	174.3	246.8	112.8	59.4	53.5
Iceland	18.9	7.0	11.9	0.5	0.2	0.2	13.4	5.2	8.2	4.5	1.4	3.1	0.5	0.2	0.3
Liechtenstein	0.8	0.5	0.2	-	-	-	0.4	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.0
Norway	268.2	113.0	155.2	9.8	8.2	1.6	188.8	74.0	114.8	62.1	27.2	34.9	7.5	3.6	3.8
Switzerland	294.5	147.8	146.6	10.3	4.2	6.1	195.4	99.3	96.1	65.0	31.5	33.5	23.7	12.8	10.9
FYR of Macedonia	63.5	29.0	34.5	-	-	-	59.4	27.2	32.2	3.9	1.7	2.2	0.3	0.1	0.2
Serbia	241.1	106.6	134.5	-	-	-	194.7	88.4	106.3	37.8	14.6	23.2	8.6	3.6	4.9
Turkey	6 062.9	3 276.7	2 786.2	2 013.8	1 062.8	950.9	3 527.6	1 915.9	1 611.7	443.3	252.4	190.9	78.2	45.5	32.7

Source: Eurostat (online data code: educ_uoe_enr01)

12. RESEARCH STRUCTURE AT UNIVERSITIES

Research at universities in Poland is conducted as part of:

- 1) professional development (work on doctoral and postdoctoral dissertations); each researcher has the right to paid scientific leave for the finalization of research works,
- 2) so-called statutory research (as part of the obligation to conduct research and annual reports on scientific work), statutory research most often consists of working in research groups, statutory research is financed from the pool of university budgetary resources,
- 3) so-called own (personal) research, own research is also financed from the pool of university budgetary resources earmarked for research activity,
- 4) funds obtained in various types of competitions, primarily the National Science Center and the National Center for Research and Development (Preludium, Etiuda, Sonata, Maestro, Symphony, and Horizon);
- 5) projects and grants for new researchers (Diamond grant, Mobility Plus, Iuventus Plus)
- 6) research grants,
- 7) orders of business entities.

13. RELATIONS BETWEEN HIGHER EDUCATION AND ENTERPRISES: INTERNSHIPS, INTERNSHIPS, ETC.

Since 2014 in the plans for higher studies of all three levels, an obligatory subject is the apprenticeship (from 100 to 350 hours at the general academic profile and three months at the practical profile studies), carried out in institutions and enterprises corresponding to the profile and field of study. From 2014, the possibilities of employers' influence on studies have also significantly expanded.

Employers can co-create study programs, jointly with the university to organize internships, conduct theoretical and practical classes for students, sit at a university convention, and give an opinion on its development direction for the future.

Academic Career Offices (ABK) have been created at universities, where employers submit internship offers. ABK operate at the interface of higher education with the labor market. They provide students with information about job offers, internships and apprenticeships, advise and organize training on the labor market.

More and more often, there are ordered courses directed at the labor market in Polish universities.

The dissemination of this phenomenon is served by the governmental project "Competence Development Program 2014-2020". Labor offices, academic career offices and student organizations organize the so-called Job fairs, aimed at creating opportunities to meet jobseekers with companies seeking employees.

Internships may be co-financed by universities as part of grants from the Ministry of Science and Higher Education and additionally from European funds. Since 2009, the National Center for Research and Development has allocated almost 2 million PLN (454545 euro) for internships and apprenticeships.

The employer concludes a contract on professional program practice directly with the university. It defines in it the program, didactic and organizational supervision as well as undertakes to provide a position and tools for work.

Such an agreement is to help in defining the objectives of good practice - from the point of view of the employer (career goals) as well as the university (educational goals).

Employment rates by detailed tertiary educational attainment level, 25-44 years-old, for 2015 (in %) are the following:

	Total Tertiary	Women				Total Tertiary	Men			
		ISCED 5	ISCED 6	ISCED 7	ISCED 8		ISCED 5	ISCED 6	ISCED 7	ISCED 8
EU	82.4	80.1	82.0	83.4	88.5	90.3	89.3	89.1	91.4	95.3
Belgium	88.0	87.8	88.5	87.3	88.0	90.8	85.4u	90.6	90.9	94.2
Bulgaria	85.0	N/A	80.1	87.9	:u	90.9	N/A	87.6	92.5	:u
Czech Republic	73.1	55.6u	71.4	74.0	82.3	94.6	100.0u	87.4	96.9	99.4
Denmark	85.0	86.2	84.8	84.8	90.9	90.2	92.1	87.2	92.2	97.1
Germany	85.0	89.9	85.0	84.4	90.2	93.8	95.7	93.9	93.3	96.5
Estonia	80.4	79.1	82.0	79.2	75.5u	94.9	93.4	95.0	94.9	100.0u
Ireland	81.0	76.0	82.2	84.7	86.2	89.0	88.7	88.2	90.8	96.0
Greece	68.4	N/A	67.6	74.5	87.8	76.1	N/A	74.9	82.4	94.2
Spain	76.2	70.7	78.9	77.7	89.0	84.4	83.0	84.0	85.5	92.6
France	84.8	85.1	84.4	85.1	79.9	89.7	90.5	86.0	91.1	94.8
Croatia	83.1	81.6	74.3	85.4	100.0u	84.6	87.7	76.1	86.4	87.8u
Italy	70.8	:u	63.0	73.4	84.8	80.1	:c	66.2	84.7	89.4
Cyprus	79.8	78.1	79.7	80.6	94.3u	87.0	89.5	83.6	89.2	98.0u
Latvia	83.4	77.5	82.1	87.5	:u	94.6	94.3	93.4	96.7	100.0u
Lithuania	90.3	N/A	88.6	93.6	:u	94.5	N/A	93.4	96.9	:u
Luxembourg	85.7	85.5	85.7	86.0	84.0u	93.1	95.6	91.8	93.4	92.0
Hungary	78.3	72.5	78.0	79.5	83.4	95.7	94.0	95.6	95.9	100.0
Malta	92.1	93.1	92.6	91.1	:u	96.6	97.3	96.2	97.4	:u
Netherlands	88.8	89.6	87.8	90.1	95.4	93.4	91.1	92.6	94.9	97.7
Austria	85.5	87.2	75.9	87.0	88.3	90.4	90.7	78.3	93.8	89.2
Poland	86.4	:u	77.5	88.4	92.3	93.9	:u	91.3	94.8	100.0
Portugal	84.4	N/A	77.8	86.2	84.5	85.9	N/A	75.3	89.9	93.5
Romania	87.9	91.6	82.9	90.3	:u	93.5	96.6u	88.6	95.5	:u
Slovenia	85.1	77.4	84.4	86.7	90.0	92.2	96.1	88.5	92.0	93.2
Slovakia	71.9	67.2u	62.1	73.8	78.0	92.4	85.6u	81.7	94.3	100.0
Finland	81.3	85.9	80.2	81.4	83.7	89.4	91.0	88.9	89.5	92.4
Sweden	88.6	78.5	90.3	91.7	92.2	91.0	87.6	89.7	94.5	95.3
United Kingdom	85.2	79.1	88.4	87.0	93.8	93.8	92.5	95.1	92.9	94.8

Source: Eurostat (EU-LFS special extraction, 2015). Note: N/A: not applicable, u: low reliability. ISCED 5: short-cycle tertiary, ISCED 6: bachelor, ISCED 7: master and ISCED 8: doctorate.

14. NATIONAL STATISTICS ON DOCTORAL STUDIES

The consequence of the recognition of doctoral studies for third-cycle studies (after undergraduate and graduate studies) was their massification.

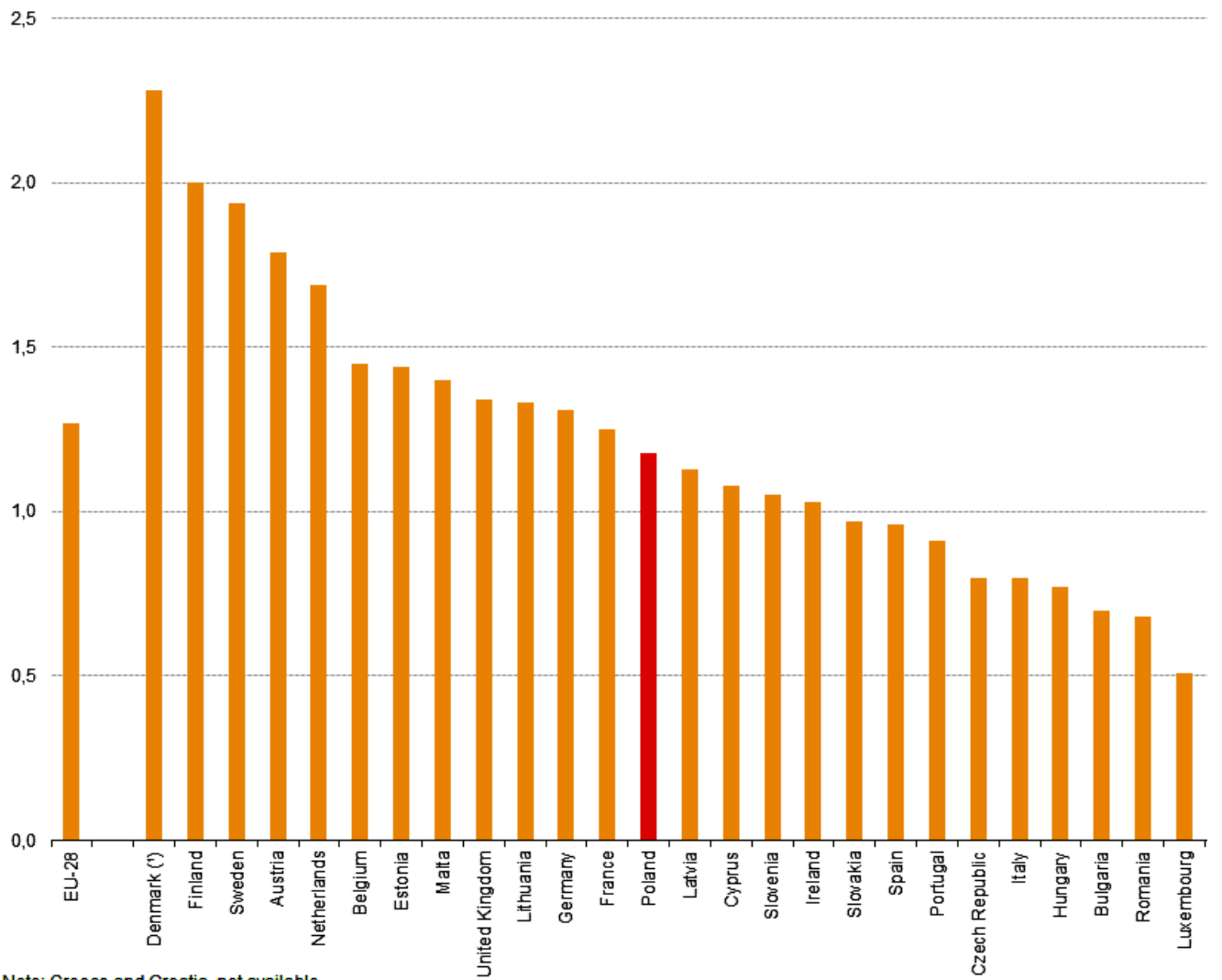
In the years 2006-2013, the number of doctoral students in Poland increased by 40%. In the academic year 2011/2012, the number reached 40,000 and has not fallen below this level since then. In 2015, 43 177 people were educated in third degree studies in Poland. The participation rate of doctoral students in the population of all students in Poland is 2 percent (this is slightly lower than the average for countries in the European Higher Education Area - 3%.) There is a drop in the number of men in doctoral studies by 8% compared to 2000, the share of women for 5 years has remained stable at 52-53 %.

In the academic years 2008/2009 - 2012/2013 the number of assistants decreased by almost two thousand (from 11,844 to 9,914). At the same time, the number of doctoral students at public universities increased from 27 743 to 36 340 people. Thus, the structure of doctoralisation has changed qualitatively. The functions of assistants are often performed by doctoral students.

Of the 261 graduates of PhD studies from 2013-2014, only 108 (41.4%) obtained such a degree. Units conducting doctoral studies in the field of exact and medical sciences achieved higher effectiveness of education - 66 percent. their graduates obtained a PhD title than units carrying out humanities and social studies - there the title was obtained by approx. 27 percent. graduates.

The percentage of graduates of full-time doctoral studies from 2013 - 2014 who have defended doctoral theses was the highest in art (57.5%), medical (56%) and technical (48.6%) colleges, and the lowest in pedagogical colleges (20.7%).

Public expenditure on tertiary education relative to GDP (in % in 2014) in EU and Poland are the following:



Note: Greece and Croatia, not available.

(*) 2013.

Source: Eurostat (online data code: educ_uoe_fine06)