

19. PL: Polska (Poland)

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19.1. General information

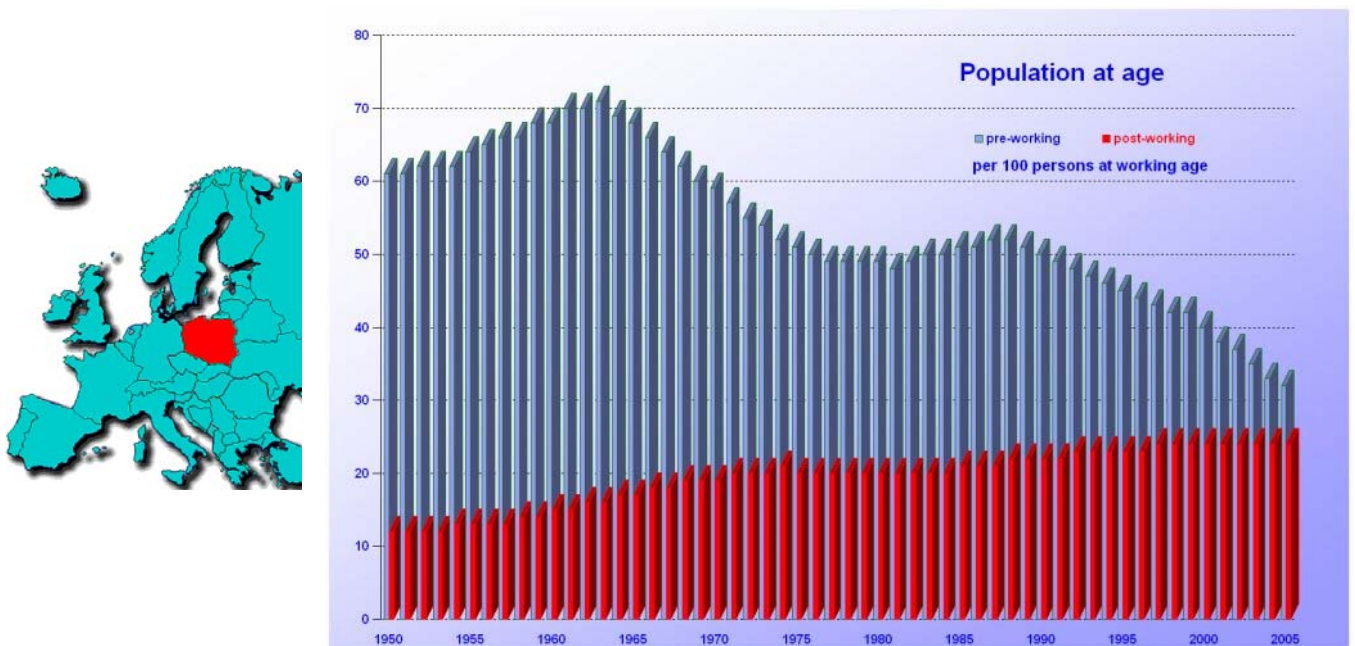


Fig 19.1 Polish population according to age (source: <http://www.stat.gov.pl/gus/>)

In recent years, the number of students in Poland has been constantly growing (2001/02: 1 718 700; 2002/03: 1 800 548; 2003/04: 1 858 700, 2004/05: 1 926 100, 2005/06: 1 953 800) and this tendency can still be observed. This is mostly related to an increase in the number of evening and extramural students enrolled in the public higher education institutions as well as to the development of diversified study systems in non-public higher education institutions. In 2005/06 there were 445 higher education institutions in Poland (including 130 public institutions). In 2005/06, 950 000 students were registered for full-time studies. 100 92 foreigners were registered as regular students in Polish higher education institutions.

In 2003/04 the number of doctoral students was 32 054 in total.

Both **public** and **private** institutions of higher professional technical education exist in Poland. Private institutions acquire a legal status when they get permission and are registered by the Minister of Education and Science.

The basic form of higher education in Poland is full-time studies. Full time studies at public institutions of higher education are free of charge. Polish institutions of higher education also implement part-time, (extramural) which are equivalent to full-time courses, have similar requirements, and lead to the same degrees and diplomas. During the last few years, these forms of study have become more popular as they provide an opportunity to upgrade the qualifications of people who are employed.

The Polish higher technical education system consists of two kinds of institutions:

Universities and Technical Universities, offering scientific oriented education at BSc., M. Sc. and Ph.D. levels,

Professional High Schools, offering job-oriented education at B.Sc. level.

Before 2004 universities and high schools entry was based on results of "*Matura*" examination or competitive examination. Competitive entry examinations were organized by universities.

Since 2005 the rules of admission have been standardized and are based on the final grades of maturity certificate. The ranking of applicants' scores is announced on each faculty. Certain faculties are allowed to organize additional oral exams or competency tests (e.g. predisposition tests in the field of arts or sports).

EDUKACJA WEDŁUG SZCZEBLI KSZTAŁCENIA W ROKU SZKOLNYM 2005/06
 EDUCATION BY EDUCATIONAL LEVEL IN THE SCHOOL YEAR 2005/06

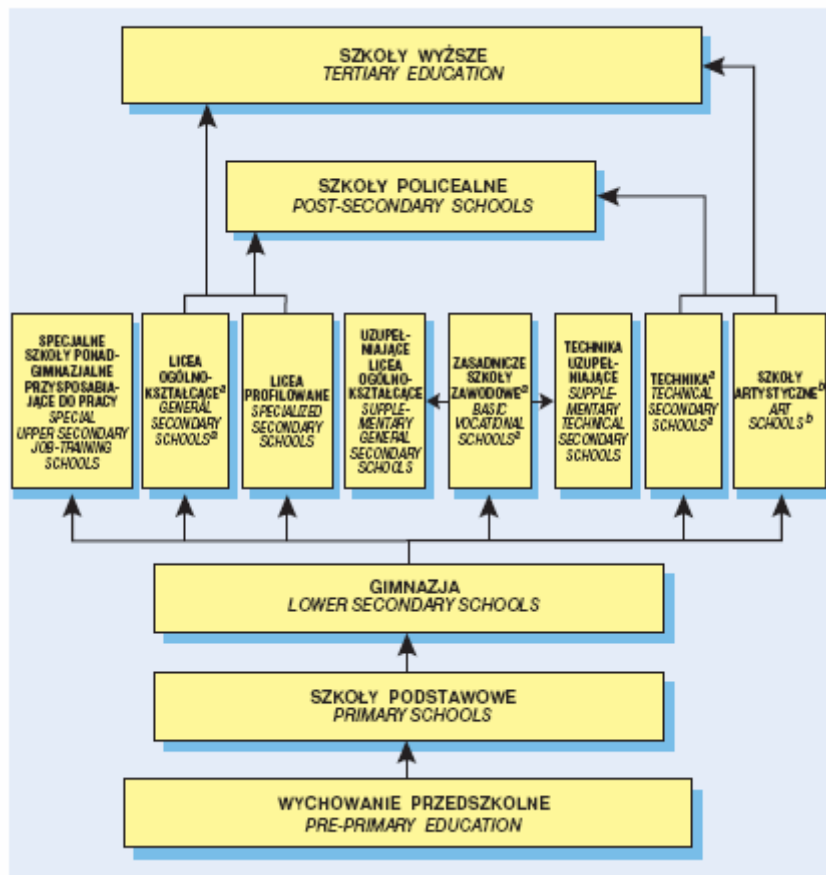


Fig. 19.2 The schema of Polish education system (source: Small Statistical Yearbook 2006)

POLISH HIGHER EDUCATION SYSTEM

The University faculties organize and oversee the educational process within the various study programmes. The institutes and departments are responsible for carrying out study programmes. Students study according to a plan of study and curriculum determined by the authorities of the given educational institution, or they may follow an individual curriculum. They may also follow courses other than their basic fields of study. The language of instruction is Polish; however, at several universities students may often attend lectures given in English, German, or French.

The General Council for Higher Education (*Rada Główna Szkolnictwa Wyższego*) is an elective body of the higher education system. The General Council for Higher Education issues opinions on the proposals of statutes for higher education institutions. It is responsible for the definition of fields of study and the development of standards in education. These standards are implemented in accordance with a separate regulation by the Minister of Science and Higher Education.

The following professional degrees are awarded to graduates of Polish higher education institutions:

At the Bachelor level:

- the professional Bachelor's degree (*licencjat*) is awarded following the completion of 3 or 3.5-year higher professional education courses;
- the professional Bachelor's degree and professional title of engineer (*inżynier*) is awarded following the completion of 3.5 or 4-year higher professional education courses in technical areas but also in agriculture, and economics and related areas.

At the Master level:

- the degree of Master of Science (*magister*) is awarded following the completion of uniform 5 or 6-year magister-level courses in some fields of studies (e.g. law, pharmacy, psychology, veterinary medicine, medicine and medicine and dentistry);
- equivalent degree is Master of Science and professional title of engineer (*magister inżynier*), in the field of Engineering; Since 2007 the degree of *magister inżynier*, may be only obtained following the completion of 1,5 or 2-year complementary magister-level courses, for which holders of the professional degree of *licencjat* or *inżynier* are eligible.

The academic degree of doctor (*doktor*) is awarded to a person who has passed doctoral examinations and submitted and defended a doctoral dissertation. Holding the degree of *magister* or its equivalent is a necessary condition for the doktor's degree.

More detailed arrangements for doctoral programmes at both higher education and other research institutions are included in the 2005 Regulation of the Minister of Science and Higher Education on the requirements and procedures for the organisation of doctoral

programmes and for the award of doctoral scholarships. They must be also are subject to provisions of the 2003 Act on Academic Degrees and Title and Arts Degrees and Title.

Doctoral programmes last between three and four years, but, the predominant model is a four-year programme. Curricula for doctoral programmes, which comprise courses attended by students in parallel to individual research, are adopted by the boards of the educational institutions and are approved by the authorities of the institution.

All Polish educational institutions are required to have a two-tier structure in compliance with the 2006 Regulation of the Minister of Science and Higher Education. In accordance with the regulation, all study programmes in 101 of 118 existing fields of study will be provided only as two-tier study programmes, thus replacing any long-cycle Master's degree programmes still in place.

Programmes in four of the remaining 17 fields (e.g. i.e. Cosmetology, Dentistry Techniques) will be provided only as first-tier programmes. Programmes in 11 fields, including Acting, Art Conservation and Restoration, Canon Law, Dentistry, Law, Medical Analysis, Medicine, Moving Image Production and Photography, Pharmacy, Psychology and Veterinary Medicine, will be provided only as long-cycle Master's programmes. These rules are applicable to programmes commencing in the academic year 2007/08.

At present, two-tier programmes coexist with long-cycle programmes.

Foreigners may study in Poland provided (article 43 of the Higher Education Act of 27th July 2005) they:

- have a permit to settle in Poland; or
- are EU, EEA or EFTA citizens and they are mobile workers who have been employed in Poland (and also the members of their families) if they still resident on the territory of Poland;
- or have an EC long-term residence permit; or
- are EU, EEA or EFTA citizens with sufficient financial support for the duration of their studies in Poland (since they are not entitled to any kind of social scholarship). Special treatment is designed for foreigners who undertake studies on the basis of the bilateral international agreements.

The full list of the institutions is available at: <http://www.eng.nauka.gov.pl/meinen>. The list given in the appendix A includes only government-owned (public) institutions in the field of EIE.

Electrical and Information Engineering in Poland, boundaries of the field of study

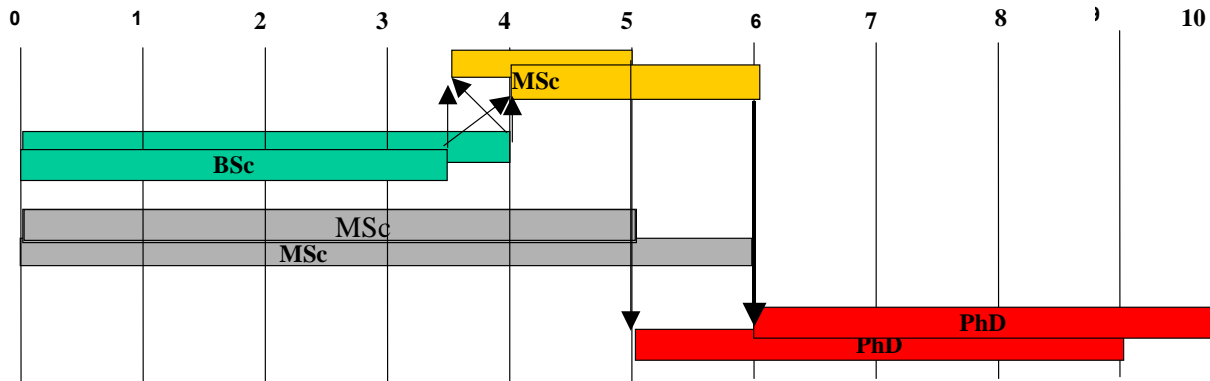


Figure 19.3: Polish Higher Education System in EIE disciplines

EIE in Poland means a curricula leading to the following degrees:

- electrical engineering,
- automatics and robotics,
- computer science,
- applied computer science,
- electronics and telecommunication,
- computer science and econometrics.

The degrees in electrical engineering, automatics and robotics, computer science, electronics and telecommunication and applied computer science, generally are offered at Technical Universities. The degree in computer science is offered at several Polish Universities. The degree in computer science and econometrics is offered at Universities of Economics.

There are several degrees partly related to the EIE, based on the applications of information technologies in engineering (see appendices A and B).

These curricula cover a large spectrum of topics in electrical engineering and information technologies. Details of the curricula are defined by the specialisations (Fig.19.4, 19.5).

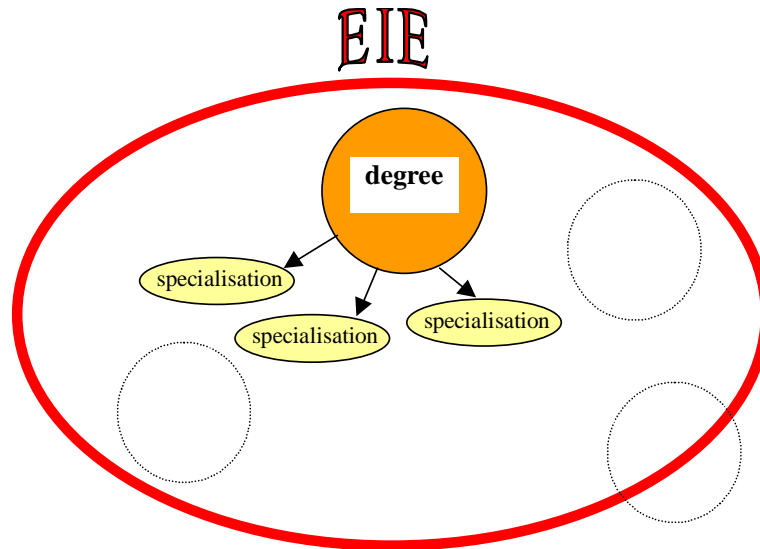


Fig. 19.4 Degrees and specialisations

General comments:

- **EIE** curricula concentrates at the faculties of electrical and computer engineering of **Technical Universities**. Some selected specializations, mainly related to the applied computer science, are implemented at other faculties and in **Professional High Schools**. For example, the degree in *chemical and process engineering* could be received by studying the EIE specialization *computer application in chemical engineering and technology* at Faculty of Chemical Engineering and Technology of the Cracow University of Technology.

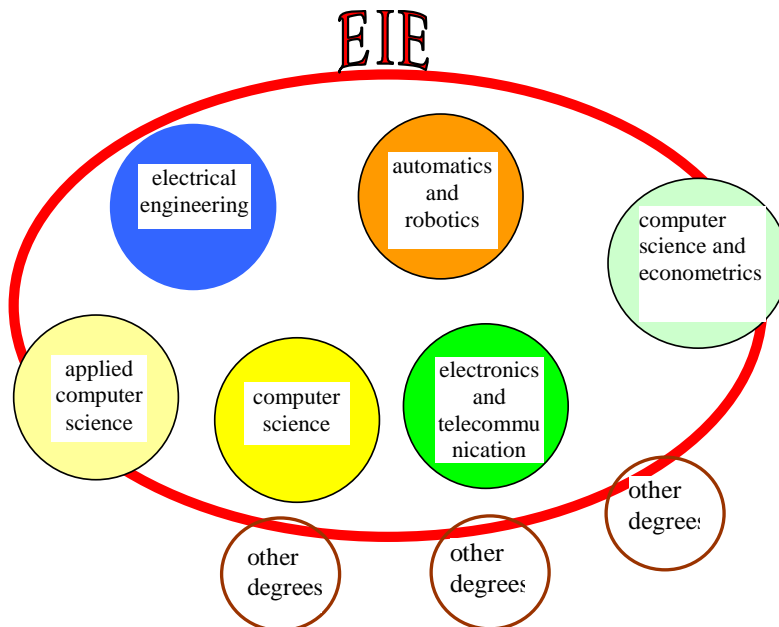


Fig. 19.5 Degrees in EIE at technical universities in Poland

General comments:

- The pedagogical content of the diploma strongly depends on selection of the specialisation. The content of the specialization is proposed by the faculty and decided by the university board. Since 1 January 2002, there have been trials to create a unified national system. General (national level) Council for Higher Education is responsible for the definition of fields of study and the development of

standards in education. These standards are implemented in accordance with a separate regulation by the Polish Ministry of Science and Higher Education.

Implementation of the Bologna-BMD system in Poland

- According to the new Law on Higher Education of 2005 Polish institutions of higher education are developing an uniform three-tier system of Bachelor, Master and Doctoral studies. Since academic year 2007/08 programs in all EIE fields will be provided on a three - tier basis: (3 - 4) + (1.5 - 2) +(3 - 4).
- Implementation of the three - tier systems is illustrated in Fig.19.2.
- At present, two-tier programmes in EIE coexist with long-cycle programmes.

19.2. Figures on the weight of EIE in Poland

In the 2005/2006 academic year 1953 800 students were enrolled in 445 higher-education institutions in Poland (130 between them were public higher education institutions).

EIE programs are offered by the following number of public higher education institutions:

- 20 Technical Universities,
- 16 Universities,
- 4 Pedagogical Universities,
- 4 Economic Universities,
- 1 Maritime High School,
- 15 Higher Vocational Schools

Degrees in EIE in Poland

At the Bachelor level:

- the professional Bachelor's degree in EIE (*licencjat*) is awarded following the completion of 3 or 3.5-year higher professional education courses;
- the professional Bachelor's (BSc) degree and professional title of engineer (*inżynier*) is awarded following the completion of 3.5 or 4-year higher professional education courses in technical areas but also in agriculture, and economics and related areas;

At the Master level:

- degree include Master of Science (MSc) and professional title of engineer (*magister inżynier*), obtained following the completion of 1,5 or 2-year complementary *magister*-level courses, for which holders of the professional degree of *licencjat* or *inżynier* are eligible.

The curricula at BSc and MSc. levels are based on the "teaching standards" published by the Polish Ministry of National Education, based on the opinion issued by The General Council for Higher Education. The teaching standards give the recommended and minimum number of teaching hours required for each degree as well as the pedagogical content of the diplomas. Teaching standards in EIE consist of:

- general courses , like Foreign Languages, Economy and Management,
- basic courses, like Mathematics, Physics, Computer Science,
- degree courses, creating the final professional profile of the graduate,

- practical and industrial training.

19.3. References

[1] <http://www.howtostudyinpoland.pl>

[2] <http://www.eng.nauka.gov.pl/meinen/index.jsp>

[3] Focus on the Structure of Higher Education in Europe 2006/07,
National Trends in the Bologna Process, Edited by European Commission, Directorate-
General for Education and Culture

[4] Polish Small Statistic Yearbook, edited by GUS

[5] Polish Ministry of Science and Higher Education <http://www.eng.nauka.gov.pl/meinen>

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Bachelor level

Town Name	Institution	Faculty or department	Electrical Engineering	Electronics and Telecommunications	Automatics and Robotics	Computer Science	Applied Computer Science	Computer Science and Econometrics
Białystok	Białystok Technical University	Faculty of Computer Science				BSc/MSc		
		Faculty of Electrical Engineering	BSc/MSc /PhD	BSc/MSc				
		Faculty of Mechanical Engineering			BSc			
	University of Białystok	Faculty of Mathematics and Physics				BSc/Msc		BSc
Bielsko-Biala	University of Bielsko-Biala Bielsko University	Faculty of Mechanical Engineering and Computer Science	BSc		BSc	BSc		
Bydgoszcz	Kazimierz Wielki University in Bydgoszcz	Faculty of Mathematics Physics and Technology				BSc		
	University of Technology and Agriculture in Bydgoszcz	Faculty of Telecommunication and Electrical Engineering	BSc/MSc	BSc/MSc				
Częstochowa	Jan Długosz Pedagogical University in Częstochowa	Faculty of Mathematics and Natural Sciences				BSc/MSc		
	Technical University of Częstochowa	Faculty of Electrical Engineering	BSc/MSc	BSc		BSc		
		Faculty of Mechanical Engineering and Computer Science				BSc/MSc		
		Faculty of Management						BSc
Gdańsk	Gdansk University of Technology	Faculty of Electronics, Telecommunication and Computer Science		BSc/MSc	BSc/MSc	BSc/MSc		
		Faculty of Electrical Engineering and Control Engineering	BSc/MSc /PhD		BSc			
	University of Gdańsk	Faculty of Mathematics Physics and Computer Science				BSc/MSc /PhD		
		Faculty of Management						BSc/MSc
Gdynia	Gdynia Maritime University	Faculty of Electrical Engineering	BSc/MSc	BSc/MSc				
Gliwice	The Silesian University of Technology in Gliwice	Faculty of Automatics, and Robotics, Electronics, Telecommunication and, Computer Science		BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD		
		Faculty of Electrical Engineering	BSc/MSc /PhD	BSc/MSc /PhD				

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		Faculty of Mechanics and Technology				MSc				
Katowice	The Karol Adamiecki University of Economics in Katowice	Faculty of Management							BSc/MSc	
	University of Silesia in Katowice	Faculty of Computer and Materials Science					BSc/MSc			
		Faculty of Mathematics, Physics and Chemistry						BSc		
Kielce	Kielce University of Technology	Faculty of Electrical Engineering, Automatics and Computer Science	BSc/MSc					BSc		
		Faculty of Mechatronics and Machine Building					BSc			
	Swietokrzyska Academy in Kielce	Faculty of Mathematics and Natural Science						BSc		
Koszalin	Technical University of Koszalin	Faculty of Electronics and Computer Science			BSc/MSc			BSc/MSc		
Krakow (Cracow)	Cracow University of Technology in Cracow	Faculty of Applied Physics, Mathematics and Applied Computer Modelling Science						BSc/MSc		
		Faculty of Mechanics				BSc/MSc	BSc			
		Faculty of Electrical and Computer Engineering	BSc/MSc					BSc		
	AGH University of Science and Technology	Faculty of Mechanical Engineering and Robotics					BSc/MSc /PhD			
		Faculty of Electrical Engineering, Automatics, Computer Science and Electronics	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc		
		Faculty of Physics and Nuclear Technics Applied Computer Science							BSc/MSc	
		Faculty of Metals Engineering and Industrial Computer Science Faculty of Metallurgy and Materials Science							BSc/MSc	
		Faculty of Geology, Geophysics and Environmental Protection							BSc/MSc	
Faculty of Management								BSc		

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	Cracow University of Economics	Faculty of Management						BSc/MSc
	Pedagogical University in Cracow	Faculty of Mathematics, Physics, and Technical Science				BSc		
	Jagiellonian University in Cracow	Faculty of Mathematics and Computer Science				BSc/MSc /PhD		
		Faculty of Physics, Astronomy and Applied Computer Science				BSc/MSc		
Łódź	Łódź Technical University of Lodz	Faculty of Electrical, Electronic, Computer and Control Engineering	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD		
		Faculty of Mechanical Engineering			BSc/MSc			
		Faculty of Technical Physics, Computer Science and Applied Mathematics				BSc/MSc		
		International Faculty of Engineering		BSc		BSc		
	University of Łódź	Faculty of Economics and Sociology						BSc/MSc
		Faculty of Physics and Chemistry				BSc/MSc		
		Faculty of Mathematics and Computer Science				BSc/MSc /PhD		
Lublin	Lublin University of Technology	Faculty of Electrical Engineering and Computer Science	BSc/MSc /PhD			BSc/MSc		
	Maria Curie-Skłodowska University in Lublin	The Faculty of Mathematics, Physics and Computer Science				BSc/MSc		
	The Catholic University of Lublin	Faculty of Mathematics and Natural Sciences				BSc		
Olsztyn	University of Warmia and Mazury in Olsztyn	Faculty of Mathematics and Computer Science				BSc/MSc		
Opole	Opole University of Technology	Faculty of Electrical Engineering, , and Automatics and Computer Science	BSc/MSc /PhD	BSc	BSc/MSc /PhD	BSc/MSc		
	University of Opole	Faculty of Mathematics, Physics and Chemistry				BSc		
Poznań	Adam Mickiewicz University in Poznań	Faculty of Physics				BSc		
		Faculty of Mathematics and Computer Science				BSc/MSc /PhD		
	Poznań University of Technology	Faculty of Computer Science and Management			BSc/MSc	BSc/MSc		
		Faculty of Electrical Engineering	BSc/MSc /PhD	BSc/MSc	BSc/MSc /PhD	BSc		
The Poznań University of Economics	Faculty of Computer Science and Electronic Economy						BSc/MSc	
Radom	University of Technology in Radom	Faculty of Teaching				BSc		

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Rzeszów	Rzeszów University of Technology	Faculty of Electrical and Computer Engineering	BSc/MSc	BSc/MSc		BSc/MSc		
		Faculty of Machine Building and Aviation			BSc			
Siedlce	University of Podlasie in Siedlce	Faculty of Sciences				BSc/MSc		
Szczecin	Szczecin University of Technology	Faculty of Computer Science				MSc/BSc/Msc/PhD		
		Faculty of Electrical Engineering	BSc/MSc/PhD	BSc/MSc	BSc/MSc/PhD			
Toruń	Nicolaus Copernicus University in Torun	Faculty of Physics, Astronomy and Applied Computer Science			BSc			
		Faculty of Mathematics and Computer Science				Bsc/Msc/PhD		
Warszawa (Warsaw)	Cardinal Stefan Wyszyński University in Warsaw	Faculty of Mathematics and Natural Science						BSc
	Military Academy of Technology in Warsaw	Faculty of Electronics		BSc/MSc/PhD				
		Faculty of cCybernetics				BSc/MSc/PhD		
	Warsaw University	Faculty of Mathematics, Computer Science and Mechanics				BSc/MSc/PhD		
	Warsaw University of Technology	Faculty of Mechatronics			BSc/MSc/PhD			
		Faculty of Electronics and Information Technology		BSc/MSc/PhD	BSc/MSc/PhD	BSc/MSc/PhD		
		Faculty of Production Engineering			BSc/MSc			
		Faculty of Mathematics and Information Sciences				BSc/MSc		
		Faculty of Electrical Engineering	BSc/MSc/PhD		BSc/MSc/PhD	BSc/MSc		
		Faculty of Power and Aeronautical Engineering			BSc/MSc/PhD			
Wrocław	Wrocław University of Economics	Faculty of Computer Science and Finances						BSc/MSc
	Wrocław University	Faculty of Mathematics and Computer Science				BSc/MSc/PhD		
	Wrocław University of Technology	Faculty of Electronics		BSc/MSc/PhD	BSc/MSc/PhD	BSc/MSc/PhD		
		Faculty of Microsystems Electronics and Photonics		BSc/MSc/PhD				
		Faculty of Electrical Engineering	BSc/MSc/PhD		BSc/MSc/PhD			
		Faculty of Computer Science and Management				BSc/MSc/PhD		
		Faculty of Mechanical Engineering			BSc/MSc/PhD			

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		Faculty of Basic Fundamental Problems of Technology				BSc/MSc /PhD		
Zielona Góra	University of Zielona Góra, School of Technical Science	Faculty of Electrical Engineering, Computer Science and Telecommunication	BSc/MSc /PhD	BSc/MSc	BSc	BSc/MSc /PhD		

Higher Vocational Schools level

Town Name	Institution	Computer Science	Applied Computer Science	Electronics engineering and Telecommunication	Electrical Engineering
Biała Podlaska	Państwowa Wyższa Szkoła Zawodowa w Białej Podlaskiej State Higher Vocational School in Biała Podlaska	X	X		
Chełm	Państwowa Wyższa Szkoła Zawodowa w Chełmie State Higher Vocational School in Chełm				X
Elbląg	Państwowa Wyższa Szkoła Zawodowa w Elblągu The State Higher School of Vocational Education in Elbląg	X			X
Gniezno	Państwowa Wyższa Szkoła Zawodowa w Gnieźnie State Higher Vocational School in Gniezno	X			
Jarosław	Państwowa Wyższa Szkoła Zawodowa w Jarosławiu State Higher Vocational School in Jarosław	X	X		
Jelenia Góra	Kolegium Karkonoskie w Jeleniej Górze Karkonosze Collegium in Jelenia Góra			X	
Kalisz	Państwowa Wyższa Szkoła Zawodowa w Kaliszu Higher Vocational State School of President Stanisław Wojciechowski in Kalisz				X
Krosno	Państwowa Wyższa Szkoła Zawodowa w Krośnie State Higher Vocational School in Krosno	X			
Legnica	Państwowa Wyższa Szkoła Zawodowa w Legnicy State Higher Vocational School in Legnica	X			
Leszno	Państwowa Wyższa Szkoła Zawodowa w Lesznie				X

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	Jan Amos Komeński State School of Higher Vocational Education in Leszno				
Łomża	Państwowa Wyższa Szkoła Informatyki i Przedsiębiorczości w Łomży College of Computer Science and Business Administration in Łomża	X			
Nowy Sącz	Państwowa Wyższa Szkoła Zawodowa w Nowym Sączu State Higher Vocational School in Nowy Sacz		X		
Nysa	Państwowa Wyższa Szkoła Zawodowa w Nysie The State Higher Vocational School in Nysa		X		
Piła	Państwowa Wyższa Szkoła Zawodowa w Piłie State Higher Vocational School in Piła				X
Tarnobrzeg	Państwowa Wyższa Szkoła Zawodowa w Tarnobrzegu Higher Vocational School in Tarnobrzeg	X	X		X

Master & Doctorate level

Town Name	Institution	Faculty or department	Electrical Engineering	Electronics and Telecommunications	Automatics and Robotics	Computer Science	Applied Computer Science	Computer Science and Econometrics
Białystok	Białystok Technical University	Faculty of Computer Science				BSc/MSc		
		Faculty of Electrical Engineering	BSc/MSc /PhD	BSc/MSc				
	University of Białystok	Faculty of Mathematics and Physics				BSc/Msc		BSc
Bydgoszcz	University of Technology and Agriculture in Bydgoszcz	Faculty of Telecommunication and Electrical Engineering	BSc/MSc	BSc/MSc				
Częstochowa	Jan Długosz Pedagogical University in Częstochowa	Faculty of Mathematics and Natural Sciences				BSc/MSc		
	Technical University of Częstochowa	Faculty of Electrical Engineering	BSc/MSc	BSc		BSc		
		Faculty of Mechanical Engineering and Computer Science				BSc/MSc		
Gdańsk	Gdańsk University of Technology	Faculty of Electronics, Telecommunication and Computer Science		BSc	BSc	BSc/MSc		
		Faculty of Electrical Engineering and Control Engineering	BSc/MSc		BSc			
	University of Gdańsk	Faculty of Mathematics Physics and Computer Science				BSc/MSc /PhD		

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		Faculty of Management							BSc/MSc	
Gdynia	Gdynia Maritime University	Faculty of Electrical Engineering	BSc/MSc	BSc/MSc						
Gliwice	Silesian University of Technology in Gliwice	Faculty of Automatics, Electronics and Computer Science		BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD				
		Faculty of Electrical Engineering	BSc/MSc /PhD	BSc/MSc						
		Faculty of Mechanics and Technology			MSc					
Katowice	The Karol Adamiecki University of Economics in Katowice	Faculty of Management							BSc/MSc	
	University of Silesia in Katowice	Faculty of Computer and Materials Science					BSc/MSc			
Kielce	Kielce University of Technology	Faculty of Electrical Engineering, Automatics and Computer Science	BSc/MSc				BSc			
Koszalin	Technical University of Koszalin	Faculty of Electronics and Computer Science		BSc/MSc			BSc/MSc			
Krakow	University of Technology in Cracow	Faculty of Physics, Mathematics and Applied Computer Science					BSc/MSc			
		Faculty of Mechanics				BSc/MSc	BSc			
		Faculty of Electrical and Computer Engineering	BSc/MSc				BSc			
	AGH University of Science and Technology	Faculty of Mechanical Engineering and Robotics				BSc/MSc /PhD				
		Faculty of Electrical Engineering, Automatics, Computer Science and Electronics	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc			
	Cracow University of Economics	Faculty of Management							BSc/MSc	
	Jagiellonian University in Cracow	Faculty of Mathematics and Computer Science						BSc/MSc /PhD		
		Faculty of Physics, Astronomy and Applied Computer Science						BSc/MSc		
Łódź	Technical University of Lodz	Faculty of Electrical, Electronic, Computer and Control Engineering	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD				
		Faculty of Mechanical Engineering				BSc/MSc				
		Faculty of Technical Physics, Computer Science and Applied Mathematics					BSc/MSc			
	University of Łódź	Faculty of Economics and Sociology							BSc/MSc	

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		Faculty of Physics and Chemistry				BSc/MSc		
		Faculty of Mathematics and Computer Science				BSc/MSc /PhD		
Lublin	Lublin University of Technology	Faculty of Electrical Engineering and Computer Science	BSc/MSc /PhD			BSc/MSc		
	Maria Curie-Skłodowska University in Lublin	The Faculty of Mathematics, Physics and Computer Science				BSc/MSc		
Olsztyn	University of Warmia and Mazury in Olsztyn	Faculty of Mathematics and Computer Science				BSc/MSc		
Opole	Opole University of Technology	Faculty of Electrical Engineering, Automatics and Computer Science	BSc/MSc /PhD	BSc	BSc/MSc /PhD	BSc/MSc		
Poznań	Adam Mickiewicz University in Poznań	Faculty of Mathematics and Computer Science				BSc/MSc /PhD		
	Poznań University of Technology	Faculty of Computer Science and Management				BSc/MSc		
		Faculty of Electrical Engineering	BSc/MSc /PhD	BSc/MSc	BSc/MSc /PhD	BSc		
	The Poznań University of Economics	Faculty of Computer Science and Electronic Economy						BSc/MSc
Rzeszów	Rzeszów University of Technology	Faculty of Electrical and Computer Engineering	BSc/MSc	BSc/MSc		BSc/MSc		
Siedlce	University of Podlasie in Siedlce	Faculty of Sciences				BSc/MSc		
Szczecin	Szczecin University of Technology	Faculty of Computer Science				BSc/Msc /PhD		
		Faculty of Electrical Engineering	BSc/MSc /PhD	BSc/MSc	BSc/MSc /PhD			
Toruń	Nicolaus Copernicus University in Torun	Faculty of Mathematics and Computer Science				Bsc/Msc /PhD		
Warszawa	Military Academy of Technology in Warsaw	Faculty of Electronics		BSc/MSc /PhD				
		Faculty of Cybernetics				BSc/MSc /PhD		
	Warsaw University	Faculty of Mathematics, Computer Science and Mechanics				BSc/MSc /PhD		
	Warsaw University of Technology	Faculty of Mechatronics			BSc/MSc /PhD			
		Faculty of Electronics and Information Technology		BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD		
		Faculty of Production Engineering			BSc/MSc			
		Faculty of Mathematics and Information Sciences				BSc/MSc		
		Faculty of Electrical Engineering	BSc/MSc /PhD		BSc/MSc /PhD	BSc/MSc		
Faculty of Power and Aeronautical Engineering			BSc/MSc /PhD					
Wrocław	Wrocław University of Economics	Faculty of Computer Science and Finances					BSc/MSc	

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	Wrocław University	Faculty of Mathematics and Computer Science				BSc/MSc /PhD		
	Wrocław University of Technology	Faculty of Electronics		BSc/MSc /PhD	BSc/MSc /PhD	BSc/MSc /PhD		
		Faculty of Microsystems Electronics and Photonics		BSc/MSc /PhD				
		Faculty of Electrical Engineering	BSc/MSc /PhD		BSc/MSc			
		Faculty of Computer Science and Management				BSc/MSc /PhD		
		Faculty of Mechanical Engineering				MSc		
		Faculty of Fundamental Problems of Technology					BSc/MSc	
Zielona Góra	University of Zielona Góra, School of Technical Science	Faculty of Electrical Engineering, Computer Science and Telecommunication	BSc/MSc /PhD	BSc	BSc	BSc/MSc /PhD		

Doctorate level

Region	Name of the University in national language	Name of the University in English	Name of the Doctoral School	Name of the Doctorate (in national language)	Name of the Doctorate (in English)
Poland, Białystok	Politechnika Białostocka	Białystok Technical University	Wydział Elektryczny Faculty of Electrical Engineering	Doktorat w dziedzinie nauk technicznych w dyscyplinie elektrotechnika	Doctorate in Technical Sciences, discipline Electrical Engineering
Poland, Gdańsk	Uniwersytet Gdański	University of Gdańsk	Środowiskowe Studium Doktoranckie z Matematyki i Informatyki – Wydział Matematyki, Fizyki i Informatyki Faculty of Mathematics, Physics and Computer Science	Doktorat w dyscyplinie informatyka	Doctorate in discipline Computer Science
Poland, Gliwice	Politechnika Śląska	Silesian University of Technology in Gliwice	Wydział Elektryczny Faculty of Electrical Engineering	Doktorat w dziedzinie nauk technicznych w dyscyplinie elektrotechnika	Doctorate in Technical Sciences, discipline Electrical Engineering
			Wydział Automatyki, Elektroniki i Informatyki Faculty of Automatics, Electronics and Computer Science	Doktorat w dziedzinie nauk technicznych w dyscyplinach: automatyka i robotyka, elektronika, informatyka	Doctorate in Technical Sciences, disciplines: Automatics and Robotics, Electronics, Computer Science

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Poland, Krakow	Akademia Górnico-Hutnicza w Krakowie	AGH University of Science and Technology	Wydział Elektrotechniki, Automatyki Informatyki i Elektroniki Faculty of Electrical Engineering, Automatics, Computer Science and Electronics	Doktorat w dziedzinie nauk technicznych w dyscyplinach: informatyka, elektronika, elektrotechnika, automatyka i robotyka, telekomunikacja	Doctorate in Technical Sciences, disciplines: Computer Science, Electronics, Electrical Engineering, Automatics and Robotics, Telecommunications
			Wydział Inżynierii Mechanicznej i Robotyki Faculty of Mechanical Engineering and Robotics	Doktorat w dziedzinie nauk technicznych w dyscyplinie automatyka i robotyka	Doctorate in Technical Sciences, discipline Automatics and Robotics
	Uniwersytet Jagielloński w Krakowie	Jagiellonian University in Cracow	Wydział Matematyki i Informatyki Faculty of Mathematics and Computer Science	Doktorat w dziedzinie nauk matematycznych w dyscyplinie informatyka	Doctorate in Mathematics, discipline Computer Science
Poland, Łódź	Politechnika Łódzka	Technical University of Lodz	Wydział Elektrotechniki, Elektroniki, Informatyki i Automatyki Faculty of Electrical Engineering, Electronic, Computer Science and Control Engineering	Doktorat w dziedzinie nauk technicznych w dyscyplinach: elektrotechnika, elektronika, automatyka i robotyka, informatyka	Doctorate in Technical Sciences, disciplines: Electrical Engineering, Electronics, Automatics and Robotics, Computer Science
	Uniwersytet Łódzki	University of Łódź	Wydział Matematyki i Informatyki Faculty of Mathematics and Computer Science	Doktorat w dyscyplinie informatyka	Doctorate in discipline Computer Science
Poland, Lublin	Politechnika Lubelska	Lublin University of Technology	Wydział Elektrotechniki i Informatyki Faculty of Electrical Engineering and Computer Science	Doktorat w dziedzinie nauk technicznych w dyscyplinie elektrotechnika	Doctorate in Technical Sciences, discipline Electrical Engineering
Poland, Opole	Politechnika Opolska	Opole University of Technology	Wydział Elektrotechniki, Automatyki i Informatyki Faculty of Electrical Engineering Automatics and Computer Science	Doktorat w dziedzinie nauk technicznych w dyscyplinach: elektrotechnika, automatyka i robotyka	Doctorate in Technical Sciences, disciplines: Electrical Engineering, Automatics and Robotics
Poland, Poznań	Uniwersytet im. Adama Mickiewicza w Poznaniu	Adam Mickiewicz University in Poznań	Wydział Matematyki i Informatyki Faculty of Mathematics and Computer Science	Doktorat w dziedzinie nauk matematycznych w dyscyplinie informatyka	Doctorate in Mathematics, discipline Computer Science
	Politechnika Poznańska	Poznań University of Technology	Wydział Elektryczny Faculty of Electrical Engineering	Doktorat w dziedzinie nauk technicznych w dyscyplinach: elektrotechnika, automatyka i robotyka	Doctorate in Technical Sciences, disciplines: Electrical Engineering, Automatics and Robotics

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Poland, Szczecin	Politechnika Szczecińska	Szczecin University of Technology	Wydział Elektryczny Faculty of Electrical Engineering	Doktorat w dziedzinie nauk technicznych w dyscyplinach: automatyka i robotyka, elektrotechnika	Doctorate in Technical Sciences, disciplines: Automatics and Robotics, Electrical Engineering
			Wydział Informatyki Faculty of Computer Science	Doktorat w dziedzinie nauk technicznych w dyscyplinie: Informatyka	Doctorate in Technical Sciences, discipline Computer Science
Poland, Toruń	Uniwersytet Mikołaja Kopernika w Toruniu	Nicolaus Copernicus University in Torun	Wydział Matematyki i Informatyki Faculty of Mathematics and Computer Science	Doktorat w dyscyplinie informatyka	Doctorate in discipline Computer Science
Poland, Warszawa	Wojskowa Akademia Techniczna w Warszawie	Military Academy of Technology in Warsaw	Wydział Elektroniki Faculty of Electronics	Doktorat w dziedzinie nauk technicznych w dyscyplinach: elektronika, telekomunikacja	Doctorate in Technical Sciences, disciplines: Electrical Engineering, Electronics, Telecommunications
			Wydział Cybernetyki Faculty of Cybernetics	Doktorat w dziedzinie nauk technicznych w dyscyplinie informatyka	Doctorate in Technical Sciences, discipline Computer Science
	Uniwersytet Warszawski	Warsaw University	Wydział Matematyki, Informatyki i Mechaniki Faculty of Mathematics, Computer Science and Mechanics	Doktorat w dyscyplinie informatyka	Doctorate in discipline Computer Science
	Politechnika Warszawska	Warsaw University of Technology	Wydział Mechatroniki Faculty of Mechatronics	Doktorat w dziedzinie nauk technicznych w dyscyplinie automatyka i robotyka	Doctorate in Technical Sciences, discipline Automatics and Robotics
			Wydział Elektroniki i Technologii Informacyjnych Faculty of Electronics and Information Technology	Doktorat w dziedzinie nauk technicznych w dyscyplinach: automatyka i robotyka, elektronika, informatyka, telekomunikacja	Doctorate in Technical Sciences, disciplines: Automatics and Robotics, Electronics, Computer Science, Telecommunications
			Wydział Elektryczny Faculty of Electrical Engineering	Doktorat w dyscyplinach: automatyka i robotyka, elektrotechnika	Doctorate in disciplines: Automatics and Robotics, Electrical Engineering
			Wydział Mechaniczny Energetyki i Lotnictwa Faculty of Power and Aeronautical Engineering	Doktorat w dziedzinie nauk technicznych w dyscyplinie automatyka i robotyka	Doctorate in Technical Sciences, discipline Automatics and Robotics
	Poland, Wrocław	Uniwersytet Wrocławski	Wrocław University	Wydział Matematyki i Informatyki Faculty of Mathematics and Computer Science	Doktorat w dyscyplinie informatyka

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			Wydział Elektroniki Faculty of Electronics	Doktorat w dziedzinie nauk technicznych w dyscyplinach: elektronika, automatyka i robotyka, informatyka, telekomunikacja	Doctorate in Technical Sciences, disciplines: Electronics, Automatics and Robotics, Computer Science, Telecommunications
	Politechnika Wroclawska	Wroclaw University of Technology	Wydział Elektroniki Mikrosystemów i Fotoniki Faculty of Microsystems Electronics and Photonics	Doktorat w dziedzinie nauk technicznych w dyscyplinie elektronika	Doctorate in Technical Sciences, discipline Electronics
			Wydział Elektryczny Faculty of Electrical Engineering	Doktorat w dziedzinie nauk technicznych w dyscyplinie elektrotechnika	Doctorate in Technical Sciences, discipline Electrical Engineering
			Wydział Informatyki i Zarządzania Faculty of Computer Science and Management	Doktorat w dziedzinie nauk technicznych w dyscyplinie informatyka	Doctorate in Technical Sciences, discipline Computer Science
Poland, Zielona Góra	Uniwersytet Zielonogórski	University of Zielona Góra	Wydział Elektrotechniki, Informatyki i Telekomunikacji Faculty of Electrical Engineering, Computer Science and Telecommunication	Doktorat w dziedzinie nauk technicznych w dyscyplinach: elektrotechnika, informatyka	Doctorate in Technical Sciences, disciplines: Electrical Engineering, Computer Science

Pedagogical content of the diplomas in the field of EIE for the Polish Universities.

(Detailed analysis of the selected Public Universities and Vocational High Schools)

Wrocław University of Technology	Faculty	Degree courses	Type of study	Specialisations
	Faculty of Electronics	automatics and robotics	4 B.Sc. / 6 M.Sc. / 9 Ph.D. and 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • Computer systems in automatics • computer-based control networks • robotics • software engineering of control systems and robotics • computer management systems of production processes
		computer science and engineering	4 B.Sc. / 6 M.Sc. / 9 Ph.D. and 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • computer systems and networks • microprocessor and microcomputer systems • applied computer science in medicine and engineering • Internet engineering • data processing system engineering
		electronics and telecommunication	4 B.Sc. / 6 M.Sc. / 9 Ph.D. and 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • acoustics • electronic equipment • • distributing teleinformation systems • wide bandwidth telecommunication network • systems of mobile telecommunication • signals in digital telecommunication • sound engineering • applied electronics and optocommunication • optoelectronics and fibre technology • telecommunication systems • • applied computer engineering •
		teleinformatics	4 B.Sc. / 6 M.Sc. / 9 Ph.D. and 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • teleinformation systems design • teleinformation systems maintenance
	Faculty of Microsystems Electronics and Photonics	electronics and telecommunication	4 B.Sc. / 6 M.Sc. / 9 Ph.D. and 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • microelectronic • microsystems • optronics and optical waveguide technology • electronics devices • photonics
	Faculty of Electrical Engineering	automatics and robotics	4 B.Sc. / 6 M.Sc. / 9 Ph.D. and 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • automation of machines, vehicles and apparatus • control in electrical power systems
		electrical engineering	4 B.Sc. / 6 M.Sc. / 9 Ph.D. and 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • electrical power engineering • electrical engineering • Control in Electrical Power Engineering (eng)

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	Faculty of Computer Science and Management	computer science	4 B.Sc. / 6 M.Sc. / 9 Ph.D. and 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> software engineering information systems and networks information systems computer control systems brak nowych danych
	Faculty of Mechanical Engineering	automatics and robotics	4 B.Sc. / 6 M.Sc. / 9 Ph.D. and 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> engineering machine and process automation manufacturing systems biomedical engineering
	Faculty of Basic Problems of Technology	computer science	4 B.Sc. / 6 M.Sc. / 9 Ph.D. and 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> algorithm and informatics systems computing security numerical method and computer graphics information systems computational statistics

Radom University of	Faculty	Degree courses	Type of study	Specialisations
	Faculty of Teaching	technical education	5 M.Sc.	<ul style="list-style-type: none"> computing and information systems
		Computer science		<ul style="list-style-type: none"> Computer science
	Faculty of Transportation	electrical engineering	5 M.Sc.	<ul style="list-style-type: none"> automatics and computer science electrical power engineering
transportation		3,5 B.Sc. / 5,5 M.Sc.	<ul style="list-style-type: none"> automatics in railway transportation ← B.Sc. electronics and telecommunication in transportation ← B.Sc. power electronics traction ← B.Sc. telecommunication in transportation ← M.Sc. 	

Kielce University of technology	Faculty	Degree courses	Type of study	Specialisations
	Faculty of Electrical Engineering Computer Science and Automation	electrical engineering	3,5 B.Sc. / 5 M.Sc. lub 4 B.Sc. / 2 M.Sc.	<ul style="list-style-type: none"> automatics industrial electronics and power electronics technical computer science computer measurement systems processing and using of power energy telecommunication
		computer science	3,5 B.Sc. lub 4 B.Sc.	<ul style="list-style-type: none"> information systems
Faculty of Mechanics and Machine Building	automatics and robotics	3,5 B.Sc. / 5 M.Sc.	<ul style="list-style-type: none"> industrial automatics 	

Gdansk University of	Faculty	Degree courses	Type of study	Specialisations
	Faculty of Electronics, Telecommunication and Computer Science	automatics and robotics	4 B.Sc.	<ul style="list-style-type: none"> computer control systems
			5 M.Sc.	<ul style="list-style-type: none"> computer control systems intelligent decision systems mobile control systems
	electronics and telecommunication	4 B.Sc.	Electro-nics <ul style="list-style-type: none"> wireless communication engineering electronic instrumentation optoelectronics microelectronics systems komputer electronic systems 	

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				Telecommunication	<ul style="list-style-type: none"> • teleinformation systems • radiocommunication systems and services • marine electronic systems • sound and image engineering
			5 M.Sc.	Electronics	<ul style="list-style-type: none"> • electronic instrumentation and computer hardware • computer electronic systems • microelectronic instrument design • medical and ecological electronics
				Telecommunication	<ul style="list-style-type: none"> • tele-information systems • sound and image engineering • environmental monitoring • telecommunication systems and networks • radiocommunication systems • microwave telecommunication devices
		computer science	3 B.Sc.	<ul style="list-style-type: none"> • computer Science 	
			5 M.Sc.	<ul style="list-style-type: none"> • distributed applications and internet systems • system engineering and databases • computer networks • document engineering • modeling and computer system programming • geoinformation systems 	
				<ul style="list-style-type: none"> • optoelectronics • digital signal processing 	
	Faculty of Electrical Engineering and Control Engineering	electrical engineering	3,5 B.Sc. / 5 M.Sc./ 9 Ph.D.	<ul style="list-style-type: none"> • power electronics • electrical machines • electrical drives and power electronics • electrical engineering in transportation • electrical devices • technical computer science 	
		automatics and robotics	3,5 B.Sc. / 5 M.Sc./ 9 Ph.D.	<ul style="list-style-type: none"> • automatics • technical computer science • robotics (soon) 	
	Faculty of Mechanical Engineering	mechatronics	3,5 B.Sc. / 5 M.Sc./ 9 Ph.D.	<ul style="list-style-type: none"> • applied mechatronics 	

Rzeszów University of Technology	Faculty	Degree courses	Type of study	Specialisations
	Faculty of Mechanical Engineering and Aeronautics	automatics and robotics	I stopien	<ul style="list-style-type: none"> • computer science and robotics • computer science in machine design
	Faculty of Electrical and Computer Engineering	electrical engineering	4 B.Sc. and 5 M.Sc.	<ul style="list-style-type: none"> • control and computer engineering • electronic devices • conversion and use of electric energy • electrical engineering • computer information and measure systems • telecommunication
		computer science	5 M.Sc.	<ul style="list-style-type: none"> • computer engineering • computer networks and systems
electronics and telecommunication		5 M.Sc.	<ul style="list-style-type: none"> • electronic devices 	

Poznań University of Technology	Faculty	Degree courses	Type of study	Specialisations
	Faculty of Computer Science and Management	computer science	3 B. Sc. / 5 M. Sc.	<ul style="list-style-type: none"> • computer networks and distributed systems • design and exploitation of data processing systems • integrated systems of manufacturing and management • data processing supporting systems • software engineering • electronic economy • computer science in business processes • intelligent systems for decision supporting • software engineering • design and exploitation information systems • computer networks and distributed systems • information systems in management • software creation technology

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		automatics and management	3,5 B. Sc. / .	<ul style="list-style-type: none"> • automatics • intelligent systems of production engineering • multimedia • reprogramming control systems • microcomputer control systems • work security engineering
Faculty of Electrical Engineering		electrical engineering	3,5 B. Sc.	<ul style="list-style-type: none"> • electroenergetics • microprocessor and actuator control systems • electrical and information systems in industry and vehicles
		Computer science	3,5 B. Sc.	<ul style="list-style-type: none"> • security of computer networks • mathematical methods of applied computer science • teleinformation systems
		automatics and robotics	3,5 B. Sc.	<ul style="list-style-type: none"> • automatics • robotics
Faculty of Electronics and Telecommunication		Electronics and Telecommunication	3,5 B. Sc.	<ul style="list-style-type: none"> • integration of information technics • computer measure systems • multimedia and electronics of common use • computer networks • networks of information transfer • radiocommunication systems • telecommunication systems

Warsaw University of Technology	Faculty	Degree courses	Type of study	Specialisations
	Faculty of Mechatronics	automatics and robotics	3,5 B.Sc. / 5 M.Sc./ 9 Ph.D	<ul style="list-style-type: none"> • automatics • robotics
		automatics and robotics	5 M.Sc. / 9 Ph.D. and 4 B.Sc. / 6 M.Sc. / 10 Ph.D.	<ul style="list-style-type: none"> • automatics • biocybernetics and biomedical engineering • sensors and measure systems • robotics • fotonical engineering • multimedial technics
		mechatronics	3,5 B.Sc. / 5 M.Sc./ 9 Ph.D	<ul style="list-style-type: none"> • fotonical engineering • quality engineering • engineering of making mechatronical products • micromechanics • sensors and measure systems • multimedial technics • electromedical devices
	Faculty of Electronics and Information Technology	computer science ,automatics adn robotics, electronics and telecommunication	5 M.Sc. / 8 Ph.D. and 4 B.Sc. / 6 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • biomedical engineering • electronics and computer engineering • radiocommunication and multimedia technics • telecommunication systems and networks • teleinformation technology and management in telecommunication
		computer science	5 M.Sc. / 8 Ph.D. and 4 B.Sc. / 6 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • engineering of information systems • information-decision systems
	Faculty of Electrical Engineering	electrical engineering (eng)	4 B.Sc. / 6 M.Sc./	
		electrical engineering	3,5 B.Sc. / 5 M.Sc./ 9 Ph.D	<ul style="list-style-type: none"> • data processing and measurement systems • electrical power engineering • mechatronics and electrical equipment of vehicles • applied electrical engineering • automatics and computer engineering • electrical power engineering • applied enectrical engineering • electrical mechatronics
		automatics and robotics		<ul style="list-style-type: none"> • automatics
		computer science		<ul style="list-style-type: none"> • computer engineering • computer science in electrical power engineering
Faculty of Production Engineering	automatics and robotics ¹²	3,5 B.Sc. / 5 M.Sc.	<ul style="list-style-type: none"> • automation of manufacturing processes • flexible manufacturing systems 	

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	Faculty of Mathematics and Information Sciences	computer science	3,5 B.Sc. / 5,5 M.Sc.	<ul style="list-style-type: none"> • applied computer science • CAD/CAM <p style="text-align: right;">without specialisation</p>
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University of Zielona Góra, School of Technical Science	Faculty	Degree courses	Type of study	Specialisations
	Faculty of Electrical Engineering, Computer Science and Telecommunication	electrical engineering	3,5 B.Sc. / 5 M.Sc.	<ul style="list-style-type: none"> • digital measurement systems • power engineering electronics in power engineering • computer control systems processing systems • engineering of microcomputer systems
		computer science	3,5 B.Sc. / 5 M.Sc.	<ul style="list-style-type: none"> • software engineering • software engineering • industrial data processing systems
		electronics and telecommunication	3,5 B.Sc. / 5 M.Sc.	<ul style="list-style-type: none"> • electronic hardware • industrial electronics • teleinformation technology
	Faculty of Mathematics, computer science and econometrics	computer science and econometrics	5 M.Sc.	<ul style="list-style-type: none"> • information systems • statistics and econometrics •

Cracow University of Technology	Faculty	Degree courses	Type of study	Specialisations
	Faculty of Electrical and Computer Engineering	electrical engineering	3,5 B.Sc.	<ul style="list-style-type: none"> • automatics in electrical systems • electrical systems engineering and control in transport • engineering of electrical systems •
			5 M.Sc.	<ul style="list-style-type: none"> • control and diagnostics of electrical systems • energoelectronics • computer engineering in electrical engineering • metrological computer systems • computer control systems • electromechanical and drive systems • modern systems of electrical traction
		computer science	3,5 B.Sc.	
			5 M.Sc.	
	Faculty of Mechanical Engineering	automatics and robotics	5 M.Sc.	<ul style="list-style-type: none"> • automation of manufacturing • multimedia in industrial systems
		computer science	5 M.Sc.	<ul style="list-style-type: none"> • applied computer science
	Faculty of Physics, Mathematics and Computer Modelling	computer science	3,5 B.Sc. / 5 M.Sc.	<ul style="list-style-type: none"> • applied computer science
	Faculty of Civil Engineering	computer science	3,5 B.Sc. / 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • computer science in civil engineering • computer mechanics of constructions and materials

Warsaw Military	Faculty	Degree courses	Type of study	Specialisations
	Faculty of Electronics	electronics and telecommunication	4 B.Sc. ; 5 M.Sc.	<ul style="list-style-type: none"> • telecommunication systems • teleinformation systems • teledetection systems • radioelectronic systems • information and measure systems • digital systems • security systems engineering • optoelectronics

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	Faculty of Cybernetics	computer science	5 M.Sc. 9 Ph.D	<ul style="list-style-type: none"> • information systems • management information systems • computer engineering • cryptology • multimedia systems
	Faculty of Mechatronics	mechatronics	5 M.Sc. 9 Ph.D	<ul style="list-style-type: none"> • automatics and control • identification and diagnostics of technical systems • security systems engineering • armament technics and detonation materials • computer technics in mechatronics • classical armament and battle means • rocket armament

AGH University of Science and Technology	Faculty	Degree courses	Type of study	Specialisation
	Faculty of Mechanical Engineering and Robotics	automatics and robotics	4 B.Sc. / 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • robotics and mechatronics • automatics and metrology
		mechanics and machine building	4 B.Sc. / 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • Structural and Biomedical Acoustics • Machines and Vehicles Engineering • Computer Methods in Mechanical Engineering • Minerals Production and Processing Machines • Earth Moving for Materials Handling Machines • Manufacturing Machines and Facilities • Power Systems, Machines and Facilities • Cable Transport • Environmental Protection Facilities • Vibroacoustics and Sound Engineering
	Faculty of Metals Engineering and Industrial Computer Science	Applied computer science	5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • Computer Science in Industry (without specialization)
	Faculty of Geology and Mining Engineering	Applied computer science	5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • Modelling and computer systems in geophysics • Software and databases in geology
	Faculty of Physics and Applied Computer Science	Applied computer science	5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • Computer Techniques in Science and Technology
	Faculty of Management	management and marketing	4 B.Sc. / 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • information systems of management
	Faculty of Electrical Engineering, Automatics, Computer Science and Electronics	automatics and robotics	5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • computer control systems • computer science in control and management
		electronics and telecommunication	3,5 B.Sc. / 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • electronic equipment • microelectronics and biomedical equipment • telecommunication networks and services • teleinformation devices and systems
		computer science	5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • information system and database engineering • distributed systems and computer networks
applied computer science		3,5 B.Sc. / 5 M.Sc. /	<ul style="list-style-type: none"> • computer science in medicine and multimedia • computer science in industrial processes • computer science in control systems • information systems in production and administration 	
electrical engineering		3,5 B.Sc. / 5 M.Sc. / 9 Ph.D.	<ul style="list-style-type: none"> • automatics and measurement and instrumentation • automatics of drive and technological devices • electrical power • power engineering electronics • computer engineering in industry • industry electrical power engineering 	

	Faculty	Degree courses	Type of study	Specialisations
University of Bielsko-Biala	Faculty of Mechanical Engineering and Computer Science			
		electrical engineering	3,5 B.Sc. / and 4,5 B.Sc. /	Converting and Usage of Electric Energy Industrial Automation and Measurement Systems
		computer science	3,5 B.Sc. / and 3,5 M.Sc.	<ul style="list-style-type: none"> • Application of Computer Science for Machine Design • Application of Computer Science for Management • Telecommunication and computer networks • Software Engineering • Database nad networks administration
		automatics and robotics	3,5 B.Sc. / and 4,5 B.Sc. /	<ul style="list-style-type: none"> • Mechatronics • Automation and Control Systems of Vehicles • Designing of Work Stand Equipped in Robots • Electrical engineering control and information-measurement systems

19.4. References

The information given in this section are based on the following sources:

Small Statistic Yearbook, edited by GUS

Polish Ministry of Education and Sport:

<http://www.men.waw.pl/>

http://www.msz.gov.pl/mszpromo/en/1_3.htm

http://elt.britcoun.org.pl/e_poland.jpg



19.5. Doctoral Studies in Poland

19.5.1. Supervision

Scientific Board or Supervisor

The Scientific board consists of a minimum of 8 professors (with the voting rights) plus other members. The student, in most cases, has the same personal supervisor during its thesis work on an active research area of the supervisor.

Subject Assignment

Subject assigned after a specified period of coursework, by agreement between student and supervisor.

Who can be a Supervisor

1. Any professor or Doctoral of Science title holder in the department.
2. Any external professor or Doctoral of Science title holder, but with an obligatory internal supervisor.

Tasks of Scientific Board/Supervisor

- | | | |
|----|------------------------------------|-----|
| 1. | General management | NO |
| 2. | Deciding/advising layout of course | YES |
| 3. | Assigning a thesis subject | YES |

Duration

Four years.

19.5.2. Development

Courseware?

Yes.

Course Work

1. The students have to take course work during their doctoral degree preparation. The course work is assessed by examinations. The coursework is offered as specialist graduate course units.
2. Extension: 240 hours in the first year, 120 hours in the second year, 120 hours in the third year and 60 hours in the fourth year.
3. Credit system: ECTS (0-15 credits for MSC studies). No credit system for PhD studies at the moment.
4. Monitoring of the doctoral student. In case of failure the student must retake the exam.

Contribution to Teaching

Supervision of undergraduate laboratory work.

Presentation of Work

1. In the department.
2. At national conferences.
3. At international conferences.

19.5.3. Thesis Work

Submission of Doctoral Written Thesis

1. Language: Polish. Alternative language: English.
2. No credits allocated to the doctoral thesis at the moment.
3. The doctoral thesis is a previously unpublished substantial written report.

Oral Presentation of Thesis Work

1. Language normally used: Polish. Alternative language: English.
2. Oral presentation for an open audience with oral examination at open doors.
3. Duration: typical duration of 2 hours including discussion with no upper time limit.

19.5.4. Examination

Thesis Examination Board

1. Composition: five internal examiners and one external examiner (six members).
2. Selection by the Scientific Board.

Evaluation

1. Result based on the reading of the thesis and the oral presentation of the thesis work, with a grading system: passed or outstanding passed.
2. If the student fails, he/she may resubmit a revised thesis.

19.6. Questionnaires

Poland

3 – ACTIVITIES DURING DOCTORAL STUDIES

3.1- SUPERVISION OF DOCTORAL STUDIES

3.1.1	Are the doctoral studies supervised by a Scientific Board/supervisor? If no, please proceed to 3.1.5.	YES
3.1.2	How many members are in the Scientific Board?	58
3.1.3	How are the members of the Scientific Board chosen?	
3.1.3.1	Elected by the Faculty, Department?	N
3.1.3.2	Chosen by the student?	N
3.1.3.3	Chosen in another way? Please specify:	Y
	Professors and DSc title holders are members of SB.	
3.1.4	Which are the main tasks of the Scientific Board/ Supervisor?	
3.1.4.1	General management of the doctoral studies.	N
3.1.4.2	Deciding the layout of the course, advising the students on their coursework.	Y
3.1.4.4	Assigning the thesis subject.	Y
3.1.4.5	Other. Please specify:	
3.1.5	Does the student need a personal supervisor during her/his studies?	Y
3.1.5.1	Does the same person supervise her/his thesis work?	Y/N
	In most cases, but not obligatory.	
3.1.6	Must the subject of the doctoral thesis be an active research area in the department?	N
	Must be active research area of the thesis supervisor.	

3.1- SUPERVISION OF DOCTORAL STUDIES

3.1.7 The doctoral thesis subject is normally assigned:

- 3.1.7.1 At the beginning of the doctoral studies? N
- 3.1.7.2 After a specified period of coursework? Y
- 3.1.7.3 Other. Please specify: N

3.1.8 The thesis supervisor of a doctoral student can be:

- 3.1.8.1 Any professor or lecturer in the department? Y¹
- 3.1.8.2 Any researcher in the department? N
- 3.1.8.2.1 In this case, is there a need for a second supervisor who is a professor or lecturer in the department?
- 3.1.8.3 Any researcher in another institution? Y²
- 3.1.8.3.1 In the latter case, is there a need for an internal supervisor? Y
- 3.1.8.4 Other methods. Please specify: N

¹ Any professor or DSc title holder in the department.

² Any professor or DSc title holder in another institution.

3.1.9 The thesis subject is assigned by:

- 3.1.9.1 Agreement between the student and the proposed supervisor? Y
- 3.1.9.2 Other methods. Please specify: N

3.2- COURSE WORK

3.2.1 Do the students have to take coursework during their doctoral degree preparation? If no, please proceed to 3.3. Y

3.2.2 **Extension and assessment.**

3.2.2.1	What is the number of contact hours spent in coursework in each year?	Year 1	Year 2	Year 3	Year 4
		240 hrs	120 hrs	120 hrs	60 hrs

3.2- COURSE WORK

3.2.2.2 In which form is this coursework offered?

- **As specialist graduate course units.** Y
- As course units taken from the undergraduate programme.
- Other. Please specify.

3.2.2.3 Is the coursework assessed by examinations?
If not, please give details: Y

3.2.3 Credit system

3.2.3.1 Is the coursework in your institution described by a credit system? Y³

3.2.3.2 Is it the ECTS system? Y
If not, what is the relationship with ECTS?

3.2.3.3 How many credits are allocated to coursework? 0-15*
credits
³ **But not applied for PhD studies!** * (for MSc studies).

3.2.4 Monitoring

3.2.4.1 Do you monitor the performance of the doctoral student taking coursework? Y

3.2.4.2 What regulations apply in case of failure in one or more course units?

- **Retake the exam.** Y
- Take a different course unit.

3.3- PRESENTATION OF WORK RESULTS:

3.3.1 In the department.

3.3.2 At national conferences.

3.3.3 At international conferences.

3.4- CONTRIBUTION TO TEACHING:

3.4.1 **Supervision of undergraduate laboratory.** Y

3.4.2 Teaching undergraduate courses.

4 - AWARDING OF DOCTORAL DEGREE

4.1- SUBMISSION OF DOCTORAL THESIS

4.1.1	Which language is normally used for the thesis?	Polish
4.1.2	Are alternative languages used for the thesis? Please Specify: English.	Y
4.1.3	Which language is normally used for the oral presentation and/or examination?	Polish
4.1.4	Are alternative languages used in the oral presentation and examination? Please Specify: English.	YES
4.1.5	Are credits allocated to the doctoral thesis?	N
4.1.6	The doctoral thesis is:	
4.1.6.1	<u>A previously unpublished substantial written report.</u>	Y
4.1.6.2	A collection of individual or co-authored scientific papers with an introduction and/or commentary.	
4.1.6.3	Other. Please specify:	

4.2- THESIS EXAMINATION AND DEGREE AWARDING

4.2.1	Is there an oral presentation of the thesis work for an open audience as part of the evaluation procedure?	YES
4.2.2	Composition of the thesis examination board. Please, give the typical number of:	
4.2.2.1	Internal examiners.	5
4.2.2.2	<u>External examiners.</u>	1
4.2.2.3	TOTAL.	6

4.2- THESIS EXAMINATION AND DEGREE AWARDING

4.2.3	How is the examination board chosen?	
4.2.3.1	By the supervisor.	
4.2.3.2	<u>By the scientific committee of the institution.</u>	Y
4.2.3.3	By the rector or equivalent.	
4.2.3.4	By the national ministry.	
4.2.3.5	Other. Please specify:	
4.2.4	Do the examiners base their evaluation mark on:	
4.2.4.1	Reading the thesis.	Y
4.2.4.2	The oral presentation of the thesis work.	Y
4.2.4.3	<u>Both.</u>	
4.2.4.4	What is the typical duration of the oral part of the thesis examination, if applicable?	1.5 h ⁴
4.2.4.5	Is there an upper limit to the duration of the thesis examination?	N
	⁴ 1.5 h including discussion.	
4.2.5	Is the oral part of the examination taken behind closed doors?	N
4.2.6	What happens if the student fails?	
4.2.6.1	May not resubmit for doctorate.	N
4.2.6.2	May resubmit revised thesis.	Y
4.2.6.3	May do further work as specified by examination board.	N
4.2.6.4	If the thesis is to be re-submitted is there a time limit for this to occur? Please specify:	N
4.2.7	Is there a grading system for the doctoral degree based on the quality of the work? Two-state grading: passed or outstanding passed.	Y

PL: Polska (Poland)

This is the full list of Polish **public** educational institutions in the field of EIE, offering in 2006/07 BSc, MSc and PhD degrees and professional title of Engineer. This is the full list of Polish state- owned institutions in the field of EIE.

Technical Universities

CityTown Name	Name of the institution (national language)	Name of the institution (English)	http HTTP address
Białystok	Politechnika Białostocka	Białystok Technical University	http://www.pb.bialystok.pl http://www.dpreview.com/
Bielsko-Biała	Akademia Techniczno-Humanistyczna w Bielsku-Białej	University of Bielsko--Biała	http://www.ath.bielsko.pl
Bydgoszcz	Uniwersytet Technologiczno-Przyrodniczy im. Jana i Jędrzeja Śniadeckich w Bydgoszczy	University of Technology and Agriculture in Bydgoszcz	http://www.atr.bydgoszcz.pl
Częstochowska	Politechnika Częstochowska	Technical University of Częstochowa	http://www.pcz.pl http://adm.pcz.czyst.pl/
Gdańsk	Politechnika Gdańska	Gdansk University of Technology	http://www.pg.gda.pl
Gliwice	Politechnika Śląska w (Gliwiceach)	Silesian University of Technology in Gliwice	http://www.polsl.gliwice.pl http://www.polsl.pl
Kielce	Politechnika Świętokrzyska w (Kielce)ach	Kielce University of Technology	http://www.tu.kielce.pl
Koszalin	Politechnika Koszalińska	Technical University of Koszalin	http://www.tu.koszalin.pl
Kraków	Politechnika Krakowska	Cracow University of Technology University of Technology in Cracow	http://www.pk.edu.pl
Kraków	Akademia Górniczo-Hutnicza im. Stanisława Staszica w Krakowie	AGH University of Science and Technology	http://www.agh.edu.pl
Lublin	Politechnika Lubelska	Technical University of Lublin Lublin University of Technology	http://rekt.pol.lublin.pl/ http://www.pol.lublin.pl
Łódź	Politechnika Łódzka	Łódź Technical University Technical University	http://www.p.lodz.pl

		of Lodz	
Opole	Politechnika Opolska	Technical University of Opole Opole University of Technology	http://www.po.opole.pl
Poznań	Politechnika Poznańska	Poznań University of Technology	http://www.put.poznan.pl
Radom	Politechnika Radomska im. Kazimierza Pułaskiego	Radom University of Technology University of Technology in Radom	http://www.man.radom.pl / http://www.pr.radom.pl
Rzeszów	Politechnika Rzeszowska im. Ignacego Łukasiewicza	Rzeszów University of Technology	http://www.prz.rzeszow.pl
Szczecin	Politechnika Szczecińska	Technical University of Szczecin Szczecin University of Technology	http://www.ps.pl
Warszawa	Politechnika Warszawska	Warsaw University of Technology	http://www.pw.edu.pl
Warszawa	Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego w Warszawie	Military Academy of Technology in Warsaw	http://www.wat.edu.pl
Wrocław	Politechnika Wroclawska	Wroclaw University of Technology	http://www.pwr.wroc.pl

Universities

Town NameCity	Name of the institution (national language)	Name of the institution (English)	http HTTP address
Białystok	Uniwersytet w Białymstoku	University of Białystok	http://www.uwb.edu.pl
Bydgoszcz	Uniwersytet Kazimierza Wielkiego w Bydgoszczy	Kazimierz Wielki University in Bydgoszcz	http://www.ab.edu.pl
Gdańsk	Uniwersytet Gdański	University of Gdańsk	http://www.univ.gda.pl
Katowice	Uniwersytet Śląski w Katowicach w Katowicach	University of Silesia in Katowice	http://www.us.edu.pl
Kraków	Uniwersytet Jagielloński w Krakowie	Jagiellonian University in KrakówCracow	http://www.uj.edu.pl
Łódź	Uniwersytet Łódzki	University of Łódź	http://www.uni.lodz.pl
Lublin	Uniwersytet Marii Curie-Skłodowskiej w Lublinie	Maria Curie-Skłodowska University in Lublin	http://www.umcs.lublin.pl

Lublin	Katolicki Uniwersytet Lubelski	The Catholic University of Lublin	http://www.kul.lublin.pl
Olsztyn	Uniwersytet Warmińsko--Mazurski w Olsztynie	University of Warmia and Mazury in Olsztyn	http://www.uwm.edu.pl
Opole	Uniwersytet Opolski	University of Opole	http://www.uni.opole.pl
Poznań	Uniwersytet im. Adama Mickiewicza w Poznaniu	Adam Mickiewicz University in Poznań	http://www.amu.edu.pl
Torunń	Uniwersytet Mikołaja Kopernika w Toruniu	Nicolaus Copernicus University in Torun	http://www.uni.torun.pl
Warszawa	Uniwersytet Warszawski	Warsaw University	http://www.uw.edu.pl
Warszawa	Uniwersytet Kardynała Stefana Wyszyńskiego w Warszawie	Cardinal Stefan Wyszyński University in Warsaw	http://www.uksw.edu.pl
Wrocław	Uniwersytet Wrocławski	Wrocław University	http://www.uni.wroc.pl
Zielona Góra	Uniwersytet Zielonogórski	University of Zielona Góra	http://www.uz.zgora.pl

Pedagogical Universities

Town NameCity	Name of the institution (national language)	Name of the institution (English)	httpHTTP address
Częstochowa	Akademia im. Jana Długosza w Częstochowie	Jan Długosz Pedagogical University in Częstochowa	http://www.wsp.czyst.pl http://www.ajd.czyst.pl
Kielce	Akademia Świętokrzyska w Kielcach	Swietokrzyska Academy in Kielce	http://www.pu.kielce.pl
Kraków	Akademia Pedagogiczna im. Komisji Edukacji Narodowej w Krakowie	Pedagogical University in Cracow	http://www.ap.krakow.pl
Siedlce	Akademia Podlaska	University of Podlasie in Siedlce	http://www.ap.siedlce.pl

Universities of Economics

Town NameCity	Name of the institution (national language)	Name of the institution (English)	http HTTP address
Katowice	Akademia Ekonomiczna im. Karola Adameckiego w Katowicach	The Karol Adamecki University of Economics in	http://www.ae.katowice.pl

		Katowice	
Kraków	Akademia Ekonomiczna w Krakowie	Cracow University of Economics	http://www.ae.krakow.pl
Poznań	Akademia Ekonomiczna w Poznaniu	The Poznań University of Economics	http://www.ae.poznan.pl
Wrocław	Akademia Ekonomiczna im. Oskara Langego we Wrocławiu	Wrocław University of Economics	http://www.ae.wroc.pl

Maritime and Military Higher Schools

Town Name	Name of the institution (national language)	Name of the institution (English)	HTTP address
Gdynia	Akademia Morska w Gdyni	Gdynia Maritime University	http://www.am.gdynia.pl

Public Higher Vocational Schools

Town Name	Name of the institution (national language)	Name of the institution (English)	HTTP address
Biała Ppodlaska	Państwowa Wyższa Szkoła Zawodowa im. Papieża Jana Pawła II w Białej Podlaskiej <i>Specialisation: applied computer science</i>	State Higher Vocational School in Biała Podlaska	http://www.pwsz.biala.podlaska.pl
Chełmie	Państwowa Wyższa Szkoła Zawodowa w Chełmie <i>Specialisation: mathematics and computer science</i>	State Higher Vocational School in Chełm	http://www.pwsz.chem.pl
Elbląg	Państwowa Wyższa Szkoła Zawodowa w Gorzowie Elblągu Wielkopolskim <i>Specialisation: computer science in management</i>	The State Higher School of Vocational Education in Elbląg	http://www.pwsz.elblag.pl
Gniezno	Państwowa Wyższa Szkoła Zawodowa w Gnieźnie	State Higher Vocational School in Gniezno	http://www.pwsz-gniezno.edu.pl
Jarosław	Państwowa Wyższa Szkoła Zawodowa w Jarosławiu <i>Specialisation, applied computer science</i>	State Higher Vocational School in Jarosław	http://www.pwszjar.edu.pl
Jelenia Góra	Kolegium Karkonoskie w Jeleniej Górze <i>Specialisation: electrical engineering and telecommunication</i>	Karkonosze Collegium in Jelenia Góra Kolegium Karkonoskie	http://www.kk.jgora.pl

Kalisz	Państwowa Wyższa Szkoła Zawodowa im. Prezydenta Stanisława Wojciechowskiego w Kaliszu <i>Specialisation: electrical power systems</i>	Higher Vocational State School of President Stanisław Wojciechowski in Kalisz Higher Vocational State School in Kalisz	http://www.pwsz.kalisz.pl
Krosno	Państwowa Wyższa Szkoła Zawodowa w Krośnie: <i>Specialisation: networked information systems</i>	State Higher Vocational School in Krosno	http://www.pwsz.krosno.edu.pl
Legnica	Państwowa Wyższa Szkoła Zawodowa im. Witelona w Legnicy: <i>Specialisation: computer engineering</i>	The Higher Vocational State School in Legnica State Higher Vocational School in Legnica	http://www.pwsz.legnica.edu.pl
Leszno	Państwowa Wyższa Szkoła Zawodowa w Lesznie: <i>Specialisations: electrical engineering and technical computer science</i>	Jan Amos Komeński State School of Higher Vocational Education in Leszno	http://www.pwsz.edu.pl
Łomża	Państwowa Wyższa Szkoła Informatyki i Przedsiębiorczości w Łomży	College of Computer Science and Business Administration in Łomża	http://www.pwsip.edu.pl
Nowy Sącz	Państwowa Wyższa Szkoła Zawodowa w Nowym Sączu <i>Specialisation: applied computer science</i>	Nowy Sącz School of Professional and Vocational Studies State Higher Vocational School in Nowy Sącz	http://www.pwsz-ns.edu.pl
Nysa	Państwowa Wyższa Szkoła Zawodowa w Nysie: <i>Specialisation: applied computer science</i>	The State Higher Vocational School in Nysa	http://www.pwsz.nysa.pl
Piła	Państwowa Wyższa Szkoła Zawodowa im. Stanisława Staszica w Pile	State Higher Vocational School in Piła	http://www.pwsz.pila.pl

	<i>Specialisation:</i> , electrical and electronic engineering		
Tarnów	Państwowa Wyższa Szkoła Zawodowa w Tarnowie <i>Specialisation:</i> electrical and electronic engineering, applied computer science	Higher Vocational School in Tarnow	http://www.wsz.tarnow.pl