AKADEMIA HUMANISTYCZNO-EKONOMICZNA
W ŁODZI

DIPLOMA SUPPLEMENT

valid with a diploma no. 96416

1. GRADUATE INFORMATION

1.1. Surname:	Leśniak
1.2. Name(s):	Adrian
1.3. Date of birth (day, month, year):	22.02.1985
1.4. Index number:	154256

2. DIPLOMA INFORMATION [1]:

2.1. Title [2]

Inżynier

2.2. Field and profile of studies:

Field of study: Information technology
Profile: practical

2.3. Name and status of the University issuing the diploma: [2]

Academy of Humanities and Economics in Lodz, A non-public higher education institution established on the basis of permit No. DNS-3-0145/TBM/67/93 of the Minister of National Education dated August 11, 1993; entered on October 5, 1993 in the register under the serial number "30" and under such number is listed in the register of non-public higher education institutions maintained by the Minister of Science and Higher Education. The university operating under the Law of July 20, 2018. Law on Higher Education and Science.

2.4. Name and status of the University conducting the studies 3):
(if different from those listed in point 2.3.):

2.5. Language(s) of lectures/exams

Polish language

3. INFORMATION ON THE LEVEL OF EDUCATION

3.1. Level of education4):

first-cycle studies full qualification at the sixth level of the Polish Qualifications Framework.

3.2. Duration of studies according to the program:

Seven-semester studies 210 ECTS points, including 780 hours of professional practice
(26 ECTS points).

3.3. Admission requirements:

Possession of a secondary school-leaving certificate and positive completion of the qualification procedure.

4. INFORMATION ABOUT THE COTENT OF THE STUDIES AND ACHIEVED RESULTS [1)]

4.1. Form of studies:

Extramural studies

4.2. Learning outcomes:

The graduate followed the study program developed by the University, in accordance with the Law of July 20, 2018. - Law on Higher Education and Science, the Ordinance of the Minister of Science and Higher Education of September 27, 2018 on degree programs.
The curriculum was developed based on the requirements of the Law of December 22, 2015 on the Integrated Qualification System and the Regulation of the Minister of Science and Higher Education of November 14, 2018 on the characteristics of the second level of learning outcomes for qualifications at levels 6-8 of the Polish Qualification Framework and the Regulation of the Minister of Science and Higher Education of September 27, 2018 on studies.

After graduation, the graduate achieves the following learning outcomes:
KNOWLEDGE:

- Knows the basic theory of the considered IT problem
- Knows and understands the methods of analysis of the considered issue
- Knows and understands the complex relationships between the analyzed data
- Knows and understands data analysis tools to an advanced degree
- Knows programming languages and understands which language to use to solve a selected IT problem
- Knows and understands selected issues in the field of knowledge including design methods
- Knows and understands selected issues in the field of knowledge, including methods of problem analysis
- Knows and understands selected issues in the field of knowledge, including methods of problem modelling
- Knows, understands and is able to analyze the choice of research methods
- Knows and understands data analysis tools and languages (including SQL)
- Knows and understands the conditions and context of the planned own activity

SKILLS:

- Can use the acquired knowledge to solve complex IT issues
- Can use knowledge to solve complex, unusual IT issues (not fully predictable conditions)
- Can design and program simple IT problems
- Can choose tests to check the correctness of the project
- Can interpret the obtained test results
- Can analyze the results of research and draw conclusions
- Can plan and carry out experiments (including computer simulations)
- Can analyze the results of various experiments and draw conclusions
- Can assess at a basic level the usefulness of routine methods for solving IT problems
- Can choose the right research method for the analyzed problem
- Can choose the right IT tools to conduct research
- Can use the available literature sources to formulate and solve IT problems
- Is able to solve IT problems using knowledge also from other sources
- Is able to develop documentation regarding the implementation of an IT task and prepare a text containing a discussion of the results of this task

SOCIAL COMPETENCE

- Understands the need and knows the possibilities of continuous improvement of professional, personal and social qualifications
- He understands the need and knows the possibilities of continuous improvement of his own competences
- He is aware of the responsibility for his own work and teamwork
- Is aware of the responsibility for subordinating to the principles of teamwork and taking responsibility for jointly implemented tasks
- Is aware of the importance and understands the non-technical aspects and effects of the activities of an IT engineer
- Is aware and understands responsibility for professional decisions
- Is aware of the importance of behaving in a professional manner, observing the rules of professional ethics
- Is aware of the importance of respecting the diversity of views and cultures
- Is aware of the social role of a graduate of a technical university
- Understands the need to provide information (in an understandable way) regarding the achievements of computer science
- Remains critical in expressing opinions on various aspects of an IT engineer's activity
- Able to act and think in an entrepreneurial way
- Demonstrates responsibility for the performance of the tasks entrusted to him

4.3. Details of the course of studies: components of the study program and individual achievements, grades/ECTS points obtained:

The total number of student working hours is at least 5,250 hours, which consists of classes organized by the university (lectures, classes, laboratories, seminars, seminars, e-learning, workshops, project method) and self-education. This value may be higher depending on the student's individual achievements.

The point system is consistent with the assumptions of the European Points Transfer System. 30 credit points were assigned to the student's workload required to complete the semester. The condition for admission to the diploma exam is to obtain 210 credit points and meet all program requirements.

The study covers the years: 2021 / 2022 – 2024 / 2025
Specialization: Coding Technologies

Year of studies: 1 Semester: 1

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
Algorithms and data structures					4.0	2
Algorithms and data structures	egz.	16	W	4.0		
Algorithms and data structures					3.5	2
Algorithms and data structures	zal.	16	Ć	3.5		
Mathematical analysis and linear algebra					5.0	2
Mathematical analysis and linear algebra	egz.	16	W	5.0		
Mathematical analysis and linear algebra					5.0	3
Mathematical analysis and linear algebra	zal.	24	Ć	5.0		
Computer systems architecture					5.0	2
Computer systems architecture	egz.	16	W	5.0		
Computer systems architecture					5.0	1
Computer systems architecture	zal.	8	L	5.0		
Occupational health and safety with elements of ergonomics					5.0	1
Occupational health and safety with elements of ergonomics	zal.	8	Ć	5.0		
Programming Basics 1					3.0	2
Programming Basics 1	egz.	16	W	3.0		
Programming Basics 1					3.5	2
Programming Basics 1	zal.	24	P	3.5		
Programming Basics 1					3.5	1
Programming Basics 1	zal.	8	Ć	3.5		
Information Technology					5.0	1
Information Technology	zal.	8	Ć	5.0		
Theoretical foundations of computer science					5.0	2
Theoretical foundations of computer science	egz.	16	W	5.0		
Theoretical foundations of computer science	zal.	24	Ć	5.0		
Personal skills: Communication					5.0	1
Personal skills: Communication	zal.	20	WA	5.0		
Zdw: English					5.0	2
Zdw: English	zal.	16	Ć	5.0		
Zdw: Fundamentals of philosophy					5.0	1
Zdw: Fundamentals of philosophy	egz.	8	W	5.0		
Zdw: Fundamentals of philosophy					5.0	2
Zdw: Fundamentals of philosophy	zal.	32	P	5.0		

Year of studies: 1 Semester: 2

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
Discrete mathematics					4.5	2
Discrete mathematics	egz.	16	W	4.5		
Discrete mathematics					4.5	3
Discrete mathematics	zal.	24	P	4.5		
Numerical methods in computer science					3.5	2
Numerical methods in computer science	egz.	16	W	3.5		
Numerical methods in computer science					5.0	2
Numerical methods in computer science	zal.	16	Ć	5.0		

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
Numerical methods in computer science					5.0	2
Numerical methods in computer science	zal.	24	P	5.0		
Intellectual property protection					5.0	1
Intellectual property protection	zal.	8	W	5.0		
Basics of creativity – practical classes					5.0	2
Basics of creativity – practical classes	zal.	16	Ć	5.0		
Basics of creativity – teoretical classes					5.0	1
Basics of creativity – teoretical classes	egz.	8	W	5.0		
Basics of programing 2					4.5	2
Basics of programing 2	egz.	16	W	4.5		
Basics of programing 2					4.5	2
Basics of programing 2	zal.	8	Ć	4.5		
Basics of programing 2					4.5	2
Basics of programing 2	zal.	24	P	4.5		
Operating systems					4.5	2
Operating systems	egz.	16	W	4.5		
Operating systems					5.0	2
Operating systems	zal.	24	L	5.0		
Operating systems					5.0	3
Operating systems	zal.	24	P	5.0		
Zdw: English					5.0	2
Zdw: English	zal.	16	Ć	5.0		

Year of studies: 2 Semester: 3

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
SQL language					5.0	2
SQL language	egz.	16	W	5.0		
SQL language					5.0	1
SQL language	zal.	8	L	5.0		
SQL language					5.0	2
SQL language	zal.	24	P	5.0		
Creative development of the subject					5.0	1
Creative development of the subject	zal.	8	Ć	5.0		
Modelling of business processes					5.0	1
Modelling of business processes	egz.	8	W	5.0		
Modelling of business processes					5.0	1
Modelling of business processes	zal.	8	L	5.0		
Modelling of business processes					5.0	2
Modelling of business processes	zal.	16	P	5.0		
Fundamentals of computer graphics					5.0	1
Fundamentals of computer graphics	egz.	8	W	5.0		
Fundamentals of computer graphics					5.0	2
Fundamentals of computer graphics	zal.	24	L	5.0		
Fundamentals of computer graphics					5.0	3
Fundamentals of computer graphics	zal.	32	P	5.0		
Internships					5.0	5
Internships	zal.		PZ	5.0		
Database systems					3.0	1
Database systems	egz.	8	W	3.0		
Database systems					5.0	3

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
Database systems	zal.	24	P	5.0		
Database systems					5.0	1
Database systems	zal.	8	L	5.0		
Management systems					5.0	1
Management systems	zal.	8	W	5.0		
Management systems					5.0	1
Management systems	zal.	8	P	5.0		
Zdw: English					5.0	2
Zdw: English	zal.	16	Ć	5.0		

Year of studies: 2 Semester: 4

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
System analysis					3.0	2
System analysis	egz.	8	W	3.0		
System analysis					4.5	1
System analysis	zal.	8	L	4.5		
Internet applications					5.0	1
Internet applications	egz.	8	W	5.0		
Internet applications					5.0	2
Internet applications	zal.	16	P	5.0		
Constructive conflict resolution					5.0	1
Constructive conflict resolution	zal.	20	WA	5.0		
Data protection					3.5	1
Data protection	egz.	8	W	3.5		
Data protection					3.5	2
Data protection	zal.	24	P	3.5		
Fundamentals of management information systems					3.5	2
Fundamentals of management information systems	egz.	16	W	3.5		
Fundamentals of management information systems					3.5	2
Fundamentals of management information systems	zal.	24	P	3.5		
Internships					5.0	5
Internships	zal.		PZ	5.0		
Object – oriented programming 1					5.0	1
Object – oriented programming 1	egz.	8	W	5.0		
Object – oriented programming 1					5.0	3
Object – oriented programming 1	zal.	24	P	5.0		
Object – oriented programming 1					5.0	2
Object – oriented programming 1	zal.	24	L	5.0		
Probability and statistics					3.0	1
Probability and statistics	egz.	8	W	3.0		
Probability and statistics					4.0	2
Probability and statistics	zal.	24	L	4.0		
Zdw: English					5.0	2
Zdw: English	egz.	16	Ć	5.0		

Year of studies: 3 Semester: 5

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
Internet databases					5.0	1
Internet databases	egz.	8	W	5.0		
Internet databases					5.0	2
Internet databases	zal.	16	P	5.0		
Software engineering (team engineering project – task)					5.0	2

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
Software engineering (team engineering project – task)	egz.	8	W	5.0		
Software engineering (team engineering project – task)					3.0	2
Software engineering (team engineering project – task)	zal.	24	P	3.0		
Internships					5.0	5
Internships	zal.		PZ	5.0		
Web application programming					5.0	2
Web application programming	egz.	8	W	5.0		
Web application programming					5.0	2
Web application programming	zal.	24	L	5.0		
Web application programming					5.0	2
Web application programming	zal.	24	P	5.0		
Object-oriented programming 2					4.0	2
Object-oriented programming 2	egz.	16	W	4.0		
Object-oriented programming 2					4.0	2
Object-oriented programming 2	zal.	24	L	4.0		
Object-oriented programming 2					4.0	2
Object-oriented programming 2	zal.	8	P	4.0		
Web technologies					4.0	1
Web technologies	egz.	8	L	4.0		
Web technologies					5.0	2
Web technologies	zal.	8	P	5.0		
XML Technologies					5.0	1
XML Technologies	egz.	8	W	5.0		
XML Technologies					5.0	1
XML Technologies	zal.	8	P	5.0		
Social skills: Awareness of values					5.0	1
Social skills: Awareness of values	zal.	20	WA	5.0		

Year of studies: 3 Semester: 6

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
Internships					5.0	5
Internships	zal.		PZ	5.0		
Project of your own enterprise					5.0	3
Project of your own enterprise	zal.	16	P	5.0		
Team project					5.0	3
Team project	zal.	24	W	5.0		
Team project					5.0	3
Team project	zal.	32	P	5.0		
Conducting IT projects					4.5	1
Conducting IT projects	egz.	8	W	4.5		
Conducting IT projects					3.0	1
Conducting IT projects	zal.	8	P	3.0		
Diploma seminar 1					4.0	2
Diploma seminar 1	zal.	24	S	4.0		
Electronic transaction systems					5.0	1
Electronic transaction systems	egz.	8	W	5.0		
Electronic transaction systems					5.0	1
Electronic transaction systems	zal.	8	P	5.0		
Embedded systems					5.0	3
Embedded systems	egz.	24	W	5.0		
Embedded systems					5.0	2
Systemy przeznaczenia	zal.	24	L	5.0		
Embedded systems					5.0	3

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
Embedded systems	zal.	24	P	5.0		
Advanced programming technologies					4.5	1
Advanced programming technologies	egz.	8	W	4.5		
Advanced programming technologies					4.5	1
Advanced programming technologies	zal.	8	P	4.5		

Year of studies: 4 Semester: 7

Module / Subject	Course Credit	Subject Hours	Type of Classes	Grade from each Type of Classes	Final Assessment of the Module	No. of ECTS Credits
Human-computer communication					5.0	1
Human-computer communication	zal.	8	L	5.0		
Human-computer communication					5.0	2
Human-computer communication	zal.	8	P	5.0		
Data warehouse basics					4.0	2
Data warehouse basics	egz.	16	W	4.0		
Data warehouse basics					5.0	2
Data warehouse basics	zal.	16	P	5.0		
Internships					5.0	6
Internships	zal.		PZ	5.0		
Programming of computer games					5.0	2
Programming of computer games	egz.	16	W	5.0		
Programming of computer games					5.0	3
Programming of computer games	zal.	24	P	5.0		
Diploma seminar 2					4.0	3
Diploma seminar 2	zal.	32	S	4.0		
Artificial intelligence					5.0	2
Artificial intelligence	zal.	16	W	5.0		
Artificial intelligence					4.5	3
Artificial intelligence	zal.	24	P	4.5		
Selected problems of marketing and advertising					5.0	2
Selected problems of marketing and advertising	egz.	16	W	5.0		
Selected problems of marketing and advertising					5.0	2
Selected problems of marketing and advertising	zal.	24	P	5.0		

Legend:
zal. – pass
egz. – exam
Ć – practice
W – lecture
P – design method
WA – workshop
eL – eLearning
S – seminar
P – project
PZ – internships

Internships provided for the coures of studes:

In the course of study the student served her/his professional apprenticeship of 780 hours.
Place where the apprenticeship was served:

Zenitel AS Norway , Horten

Information about the thesis and diploma exam:

Diploma dissertation: 'Desktop application - personal assistant AI OFFLINE'.

Result of the diploma examination: Bardzo dobry

4.4. Grading scale and - if possible - how they are awarded:

GRADE	VALUE	ECTS EQUIVALENT
Very good	5.0	A - Excellent performance
Good plus (+)	4.5	B - Very good performance
Good	4.0	C - Good performance
Sufficient plus (+)	3.5	D - Satisfactory performance
Sufficient	3.0	E - Sufficient performance
Insufficient	2.0	F - Fail

As a result of completing the course, the student receives a final grade, taking into account the grades obtained from completing individual forms of classes (classes, laboratories, workshops, etc.) in a given subject and the exam, if it is provided for in the curriculum. The average grade from the course of studies is calculated from the final grades of the subjects. This is the arithmetic mean. When determining the average grade, the last (final) grade obtained in a given subject is taken into account.

The grade on the diploma is the average:
- average from studies (weight 0,5)
- diploma thesis grade pracy dyplomowej (weight 0,25)
- grades from the diploma exam (weight 0,25)

4.5. Overall classification of the qualification[1]: - Bardzo dobry- 5

5. INFORMATION ABOUT GRADUATE PERMISSIONS

5.1. Access to further education:

Opportunity to apply for admission to second- cycle or postgraduate studies.

5.2. Qualifications and professional qualifications (if aplicable)[5]:

NOT applicable

6. ADDITIONAL INFORMATION[1]

6.1. Additional information, including internships completed and awards received:

NOT applicable

6.2. Information sources:

- AHE website: www.ahe.lodz.pl
- Ministry of Education and Science website: www.gov.pl/web/edukacja-i-nauka

- National Agency for Academic Exchange acting as the ENIC-NARIC center in Poland, 40 Polna St., 00 - 635 Warsaw, tel. +48 22 390 35 60, www.nawa.gov.pl
- The website of the Polish Accreditation Commission: www.pka.edu.pl
- Integrated Information System for Science and Higher Education: www.polon.nauka.gov.pl

7. SUPPLEMENT CERTIFICATION

7.1. Date of preparation: 17 April 2025 r.

7.2. Rector's signature and personal stamp6) or an imprint of information corresponding to the data contained on the stamp

PROREKTOR ds. rozwoju
i kształcenia zdalnego
Akademii Humanistyczno-Ekonomicznej w Łodzi
dr Wiesław Przybyła
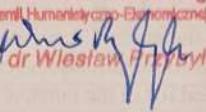
7.3. Official seal of the University:

1) Sections 2.3, 2.4, 4.2-4.4, 6.1 and 6.2 may be extended by an appropriate number of pages as needed.
2) In the case of translation into a foreign language, the name of the University is left in its original wording, and the professional title and the result of graduation - in Polish.
3) Provide the status of the university conducting the studies (public/non-public) and the name of the University or institution conducting joint studies, in the original wording.
4) Provide information on the level of the Polish Qualifications Framework assigned to the qualifications awarded by the diploma
5) In the case of studies preparing for the teaching profession, it is confirmed that the graduate:
a) completed education in accordance with the standard of education preparing for the teaching profession,
b) has obtained preparation for the teaching profession, with an indication of the subject or type of classes that he can conduct
6) Or an authorized person holding a managerial position at the University .

8.1 Criterion for access to higher education

The total time of education until graduation from a school giving the opportunity to take the matriculation exam is 12-15 years. After passing the baccalaureate exam, graduates receive a high school diploma that entitles them to apply for university admission.

8.2 Higher education

The rules of higher education are defined by the Law of July 20, 2018. - Law on Higher Education and Science.

Public universities are established by a state body. Studies at universities are conducted as first-cycle studies, second-cycle studies or unified master's studies. Studies may be conducted as either full-time or part-time studies.

Full-time studies of the first degree last at least 6 semesters, and if the study program includes learning outcomes enabling the acquisition of engineering competencies - at least 7 semesters. Full-time second degree studies last from 3 to 5 semesters. Full-time single master's studies last from 9 to 12 semesters.

Part-time studies may last longer than the corresponding full-time studies.

Qualifications obtained as a result of graduation from higher education are assigned a level of the Polish Qualification Framework as defined in the Act of December 22, 2015 on the Integrated Qualification System and the Ordinance of the Minister of Science and Higher Education of November 14, 2018 on the characteristics of second-level learning outcomes for qualifications at levels 6-8 of the Polish Qualification Framework.

The first degree diploma confirms the award of a full qualification at level 6 of the Polish Qualification Framework.

A diploma of completion of second-cycle studies and a diploma of completion of uniform master's studies confirm the awarding of a full qualification at level 7 of the Polish Qualification Framework.

8.3 Titles awarded to graduates of studies

1) Bachelor's degree, engineer and equivalent titles: architect engineer, fire engineer, bachelor of nursing, bachelor of midwifery - awarded to graduates of the first degree program,

2) Master of Science, Master of Engineering and equivalent titles:

(a) master of architecture, master of fire engineering, master of nursing, master of midwifery - awarded to graduates of second degree studies,

b) doctor, dentist, veterinary surgeon, master of pharmacy, master engineer architect - awarded to graduates of uniform master's degree studies.

8.4 Credits

In order to obtain a diploma for first degree studies, a student is required to obtain at least 180 ECTS credits, for second degree studies - at least 90 ECTS credits, for uniform master's studies - at least 300 ECTS credits if they last 9 or 10 semesters, or at least 360 ECTS credits if they last 11 or 12 semesters.