

Informacje ogólne o kierunku studiów

Nazwa kierunku studiów	FARMACJA
Poziom kształcenia	jednolite studia magisterskie
Liczba semestrów i liczba punktów ECTS konieczna do ukończenia studiów na danym poziomie	11, 360 ECTS
Profil kształcenia	ogólnoakademicki
Formy studiów	stacjonarne i niestacjonarne
Tytuł zawodowy uzyskany przez absolwenta	magister farmacji
Poziom Polskiej Ramy Kwalifikacji	VII

General information about the field of study

Name of field of study	PHARMACY– English Division
The level of education	Uniform Master's studies
The number of semesters and the number of ECTS points necessary to complete studies at a given level	11, 360 ECTS
Education profile	Generally academic
Forms of study	Full-time
Professional title obtained by the graduate	magister farmacji
Polish Qualifications Framework level	VII

Module / Subject	ECTS	Total number of hours	semester 1						semester 2*						Manner of obtaining credit	Course content	Symbols of learning outcomes
			Number of hours						Number of hours								
			lectures	seminars	exercise	laboratories	practical training	self-study	lectures	seminars	exercise	laboratories	practical training	self-study			
Anatomy	3	32	17		15										Credit with mark	The structure and topography of organs of the human body in the context of their role and belonging to functional systems: skeletal and muscular, circulatory, nervous, respiratory, digestive and urogenital.	1.1.2.,1.2.11.,1.2.8.,1.3.2.,1.3.7.,A.U3 ,A.U4,A.W4,
Basic Polish I	4	60			30					30					Credit	Greeting, introducing, numbers, personal information, nationalities, professions, family members, verbs (hobbies, routines - present forms), food and drinks, transport, days of the week, colours, adjectives (shape, size, quality), time expressions.	1.2.11.,1.3.2.,E.U32,
Biology and genetics	6	60	15		11	34									Exam	The course focuses on cell biology and genetics basics. Students will follow cell organization, interplay between cell structures, basics of biochemical processes mediated by cells and their localization. Basics of parasitology.	1.3.2.,1.3.8.,A.U2,A.W1,A.W2,A.W3,A.W8,A.W9,
Biophysics	2	25								7	18				Credit with mark	Biophysics elements important for pharmacy like measurement of potentials and biomedical signals; density, viscosity and surface tension measurements, refractometry and polarimetric analysis.	A.U9,B.U1,B.U2,B.W1,B.W2,B.W4,
Botany	8	85							19	6	15	45			Exam	The plants histology, morphology , organography - root, stem, leaf, rhizome, systematics of vascular plants.	1.3.2.,1.3.8.,A.U16,A.U17,A.W24,A.W25,A.W26,C.U29,C.U30,

General and inorganic chemistry	9	95	25		14	56									Exam	Structure of matter, elementary particles, chemical laws, properties of elements and chemicals. Basic laboratory techniques, calculations and qualitative analysis.	1.3.8.,B.U4,B.U5,B.W10,B.W5,B.W6,B.W7,B.W8,B.W9,
History of pharmacy	1	15	15												Credit with mark	History of the pharmacy from the antiquity to the present; history of the pharmacist profession, history of the selected drug discoveries.	1.2.9.,1.3.2.,1.3.7.,E.W27,F.U3,
History of philosophy	1	15								15					Credit	Development of philosophical problems, methods of practicing philosophy, philosophical views, trends (currents), schools, systems and philosophical faculties over the centuries.	1.1.1.,1.1.2.,1.1.8.,1.2.8.,1.3.1.,1.3.2.,1.3.3.,1.3.5.,1.3.7.,A.U20,A.W28,E.U31,E.W28,
Hygiene and epidemiology	2	30							10	20					Credit with mark	The aim of the course is to acquaint students with the importance and methodology of epidemiological research in the prevention and control of diseases, and the basics of pharmacoepidemiology.	1.3.6.,1.3.7.,E.U20,E.U29,E.W24,E.W25,E.W26,F.U3,
Information literacy		2	2												Credit	Presentation of the Library regulations and the rules of using Library resources and services, mostly the ways of searching for and ordering literature needed during the studies.	1.3.7.,F.U3,
Latin language classes	4	60			30						30				Credit with mark	Selected topics from botany, pharmacology, chemistry. Latin pharmaceutical terminology, prescriptions, abbreviations. Anatomy, body systems, diseases. Medical wordbuilding using Latin and Greek prefixes and suffixes. Latin proverbs.	1.3.2.,C.U4,
Mathematics	2	30			30										Credit with mark	The student know basic elementary functions, the concept of inverse, complex, diverse, monotonic, even, and odd functions as well as one-to-one function. Elements of differential and integral calculus.	1.2.8.,1.2.9.,1.3.2.,1.3.7.,B.W24,
Physical chemistry	10	95							30	5	12	48			Exam	Thermodynamics; Phase systems; Surface phenomena and dispersion systems; Electrochemistry; Kinetics and pharmacokinetics; Quantum mechanics; Methods in structural chemistry	1.3.7.,1.3.8.,B.U1,B.U8,B.U9,B.W15,B.W16,

Physical education		60			30													Credit	Exercises to strengthen the postural muscles responsible for vertical posture, exercise of varying intensity including strength training, endurance, high-speed, and reducing body fat. Strengthening exercises and stretching various muscle groups.	A.W4,E.W30,	
Propaedeutics of pharmaceutical practice	2	30																	Credit	Anti-inflammatory drugs are used as a background to present pharmacy as a complex and interdisciplinary field of science.	1.1.1.,1.1.3.,1.1.4.,A.W11,A.W19,B.W17,C.W13,C.W25,C.W3,C.W42,D.W13,D.W16,D.W27,D.W35,D.W4,
Information technology	1	15																	Credit with mark	Using the e-learning platform. Word text editor - formatting and editing the document, inserting tables, graphics, formulas. Excel - calculations, charts. Multimedia presentations in Power Point.	B.U12,E.U15,
Safety and Good Work Practice		4	4																Credit	Lectures during safety training, students learn about the risk factors in the environment (biological, chemical, physical) accidents and potentially by accident situations, the issues of fire protection and first aid techniques.	1.3.10.,A.U18,A.W27,
Statistics	2	30																	Credit with mark	Student acquires skills needed to describe real-life natural processes in mathematical and statistical terms; use statistical methods and models in medical sciences.	1.2.11.,1.2.8.,1.2.9.,1.3.2.,1.3.7.,1.3.8.,B.U11,B.U12,B.W25,B.W26,
Elective subjects	3	45																	Credit		

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kierunek - farmacja ED

poziom studiów - jednolite studia magisterskie

forma - studia stacjonarne

cykl kształcenia 2022-2028

rok akademicki 2023/2024

rok 2

Module / Subject	ECTS	Total number of hours	semester 3						semester 4*						Manner of obtaining credit	Course content	Symbols of learning outcomes
			Number of hours						Number of hours								
			lectures	seminars	exercise	laboratories	practical training	self-study	lectures	seminars	exercise	laboratories	practical training	self-study			
Analytical chemistry	10	115	25	10	6	24				10	40				Exam	Characteristics of chemical and instrumental methods of analysis. Stages of analytical procedure. Calibration and validation of analytical methods. Calculations in chemical analysis.	B.U6,B.U7,B.W11,B.W12,B.W13,B.W14,B.W23,B.W7,B.W8,
Basic Polish II	4	60			30					30					Credit with mark	Upgrading communicative skills, vocabulary and grammar to interact effectively in everyday situations (with cultural background). Verbs - present and past forms. Basic medical and pharmaceutical terms (anatomy, hospital setting, medications).	1.2.11.,1.3.2.,E.U32,
Biochemistry	9	100							40	12	48				Exam	Proteins, enzymes, bioenergetics and oxidative phosphorylation, metabolism of carbohydrates, lipids and nitrogen compounds, cholesterol metabolism, detoxification, cell signaling.	1.3.8.,A.U6,A.U7,A.U8,A.W11,A.W8,A.W9,
Immunology	3	35							20	3	12				Credit with mark	Course content will allow students to understand: the body's defenses mechanisms, interaction with the external environment, functional disorders and applications in diagnostics and therapy	1.3.6.,1.3.7.,1.3.8.,A.U13,A.U9,A.W12,A.W13,C.W21,
Psychology and sociology	1	15								15					Credit with mark	The classes will discuss the main psychological trends and the most important sociological concepts in relation to selected health and illness problems.	1.3.1.,A.U19,A.U21,A.W29,A.W30,A.W31

Intellectual property protection	1	15								15						Credit	Intellectual Property Rights and their protection. Copyrights, Author's Moral Rights, Patents, Methods of transferring patents, licenses. Combating Unfair Competition	C.W14,
Microbiology	7	80	20		12	48										Exam	Identification, cultivation of microorganisms, ultrastructure, environmental requirements, life functions, threats and the role in the functioning of the higher organisms, microbiological safety	1.2.11.,1.2.12.,1.3.6.,1.3.7.,1.3.8.,1.3.9.,A.U11,A.U12,A.U13,A.U14,A.U15,A.W18,A.W19,A.W20,A.W21,A.W22,A.W23,
Molecular biology	3	40	10	15	3	12										Credit with mark	The purpose of the course is to provide students with basic knowledge of the molecular basis of life, mechanisms of storage and flow of genetic information genetic information and to introduce students to the basic techniques of molecular biology	1.3.7.,1.3.8.,A.U1,A.U10,A.W10,A.W14,A.W15,A.W16,A.W17,A.W32,
Organic chemistry	12	140	50							15	75					Exam	Student gets acquainted with the main concepts and rules of organic chemistry, organic compounds classification, structure and its correlation with physical and chemical properties, methods of synthesis and analysis.	1.3.8.,B.U10,B.W17,B.W18,B.W19,B.W20,B.W21,B.W22,B.W23,B.W6,B.W8,
Physiology	6	75	30		9	36										Exam	The objective of the course is to make students aware of physiological mechanisms securing normal function of the human organism, especially regulation processes and the involved structures and chemical agents.	A.U4,A.W12,A.W27,A.W4,A.W5,A.W7,B.W1,B.W2,D.W29,
Elective subjects	4	45														Credit		

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Module / Subject	ECTS	Total number of hours	semester 5						semester 6*						Manner of obtaining credit	Course content	Symbols of learning outcomes
			Number of hours						Number of hours								
			lectures	seminars	exercise	laboratories	practical training	self-study	lectures	seminars	exercise	laboratories	practical training	self-study			
Basics of drug design	1	15							15						Credit	The aim of the course is to provide knowledge on the basics of drug design based on molecular modeling methods.	1.3.7.,B.U12,B.W27,C.W13,C.W3,
Basics of radiopharmacy	1	15	15												Credit	Mechanism of action of radiopharmaceuticals, their use in the diagnostics and treatment of diseases. Legal aspects of their marketing, methods of their preparation regarding compliance with security measures.	C.U2,C.W39,C.W4,C.W7,
Qualifield first aid	2	30							15	3	12				Credit with mark	To introduce students to the organization of the emergency medical system in Poland, the principles of resuscitation and first aid.	1.3.4.,1.3.6.,A.U18,A.U19,A.U20,A.W27,
Medical ethics	2	30							15	15					Credit	Discussing issues in the field of medical ethics and law in the profession of pharmacist and selected bioethical issues related to the progress in medicine.	A.U20,A.W28,E.U19,E.U22,E.U30,E.U31, E.W14,E.W23,E.W28,E.W29,
Pathophysiology	5	75	30	45											Exam	Pathophysiology is the study of the causes, mechanisms, and course of diseases with the aim of improving pharmaceutical care and understanding the mechanisms of drug action.	1.2.11.,1.3.1.,1.3.2.,1.3.4.,1.3.5.,1.3.6.,1.3.8.,1.3.9.,A.U4,A.U5,A.U6,A.W4,A.W5,A.W6,A.W7,B.U12,
Pharmaceutical biotechnology	3	40							20	5	15				Exam	The aim of the course is to provide knowledge on the use of microorganisms, tissue cultures, methods of genetic engineering, biotransformation processes for the production of drug substances. Legal aspect of biopharmaceuticals.	1.3.7.,1.3.8.,C.U12,C.U13,C.U34,C.W16, C.W17,C.W18,C.W20,C.W22,C.W23,C.W24,

Pharmaceutical chemistry	16	255	50		20	85				40	15	45			Exam	Therapeutic substances in the ATC system. Structure-activity of drugs (SAR). Analytical quality control of drugs according to the Polish and European Pharmacopoeia. Physicochemical and metabolic stability of drugs.	1.1.3.,1.1.4.,1.2.3.,1.2.4.,1.3.2.,1.3.7.,1.3.8.,C.U1,C.U3,C.U6,C.U7,C.W1,C.W2,C.W3,C.W6,C.W8,C.W9,
Pharmaceutical technology I *	9	150	25							15		110			Credit	The aim of the course is to prepare for the manufacturing/compounding, dispensing and quality control of medicinal products, in particular liquid and semi-solid forms and pharmacy compounded drugs	1.1.3.,1.2.1.,A.U11,B.U5,C.U14,C.U15,C.U16,C.U17,C.U20,C.U23,C.U24,C.U25,C.U26,C.U28,C.U34,C.U4,C.U5,C.U8,C.W25,C.W26,C.W27,C.W28,C.W29,C.W30,C.W31,C.W32,C.W41,C.W5,D.W16,D.W17,E.W17,
Pharmacognosy	10	150	30		9	36				30	9	36			Exam	The student is familiarized with origin, occurrence, conditions of harvesting, drying, storage, chemical composition, activity and application of mainly plant raw materials as well as methods of their standardization and evaluation of their quality.	1.3.8.,C.U15,C.U29,C.U3,C.U30,C.U31,C.U32,C.U33,C.U34,C.U4,C.U5,C.U6,C.U7,C.U8,C.W1,C.W13,C.W16,C.W17,C.W18,C.W19,C.W2,C.W3,C.W4,C.W40,C.W41,C.W42,C.W44,C.W45,
Pharmacy pre-training		5									5				Credit	The aim of the course is to present the basic principles of working in a pharmacy in order to prepare students to undergo an internship in a community pharmacy	1.1.8.,1.2.11.,1.2.2.,1.2.4.,1.3.2.,E.W29,
Elective subjects	5	60													Credit		
One-month summer training at open pharmacy	6	160													Credit	Provides students interns with an overview of the community pharmacy policy, with focus on organization structure, current standards (with emphasis on pharmaceutical compounding), administration procedures, equipment and local requirements.	1.1.3.,1.1.8.,1.2.10.,1.2.11.,1.2.2.,1.2.4.,1.2.8.,1.3.1.,1.3.2.,1.3.3.,1.3.4.,1.3.5.,1.3.6.,1.3.7.,1.3.9.,A.W20,B.W7,C.U14,C.U15,C.U16,C.U17,C.U20,C.U23,C.U34,C.U4,C.W26,C.W27,C.W30,C.W31,C.W32,C.W5,D.U35,E.U12,E.U2,E.U25,E.U26,E.U30,E.U31,E.U4,E.U8,E.W1,E.W11,E.W14,E.W15,E.W17,E.W29,E.W3,E.W6,E.W7,

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Module / Subject	ECTS	Total number of hours	semester 7						semester 8*						Manner of obtaining credit	Course content	Symbols of learning outcomes
			Number of hours						Number of hours								
			lectures	seminars	exercise	laboratories	practical training	self-study	lectures	seminars	exercise	laboratories	practical training	self-study			
Bromatology	6	90	30	10	10	40								Exam	The aim of bromatology: the role of food for the human body, food and dietary supplements quality and safety and methods of their evaluation, basics of rational nutrition and medical dietetics, drug interactions with food and alcohol.	1.3.1.,1.3.2.,1.3.6.,1.3.8.,D.U23,D.U24,D.U25 ,D.U26,D.U27,D.U28,D.U30,D.U31,D.W30,D.W31,D.W32,D.W33,D.W34,D.W35,D.W36,	
Clinical pharmacy	3	45						15	20	2	8			Credit	Diagnostics of selected disease entities in the field of endocrinology, hematology, ch. cancer and emergencies. Clinical case analysis. Monitoring nephro- and hepatotoxicity of xenobiotics. Clinical tests.	1.3.6.,1.3.7.,1.3.9.,D.U12.,E.U10.,E.U16.,E.U17.,E.U18.,E.U24.,E.U7.,E.W10.,E.W11.,	
Introduction to medicine	2	30	20	5			5							Exam	The analysis of symptoms reported by the patient regarding the most common diseases. The knowledge is to help in understanding the pathophysiology of diseases and the basics of their diagnosis and treatment.	1.1.2.,1.1.5.,1.2.10.,1.2.12.,1.2.7.,1.3.1.,1.3.10.,1.3.3.,1.3.4.,1.3.6.,1.3.7.,A.W27,C.W21,C.W4,D.W17,E.U31,E.W13,E.W14,E.W15,	
Basics of entrepreneurship	1	20						20						Credit with mark	The aim of the course is to master the basic skills in the following areas: assessment of the company's competitive situation, setting goals, developing a strategy for their achievement and the ability to control their implementation.	A.U19,E.U3,E.W20,E.W29,	
Nature drugs	2	40	32	8										Credit with mark	The aim of the course is to present products containing herbal substances and herbal preparations used for therapeutic purposes and in the prevention of diseases.	D.W12,D.W13,D.W17,D.W18,D.W19,D.W33,D.W35,D.W36,D.W38,D.W39,D.W40,D.W41,D.W42,D.W43,D.W44,E.W26,E.W28,	
Oncology	2	20						20						Credit	Basic aspects of cancer prevention, etiology, symptomatology and diagnosis. Principles of cancer therapy. Supportive care and nutrition in oncology. Psychological issues related to malignant diseases. Fundamentals of clinical trials.	1.2.12.,1.2.6.,1.3.6.,1.3.7.,C.U2,C.U7,D.U10,D.U11,D.U26,D.U29,D.U5,E.U11,F.U5,	

Pharmaceutical technology II	7	110	30												Credit	The aim of the course is to prepare for the production, dispensing and quality assessment of solid drug forms (tablets, granules, capsules) and parenteral drugs - on an industrial and compendial scale.	1.3.10.,1.3.3.,1.3.7.,1.3.8.,1.3.9.,A.U11,A.U15,A.W20,A.W22,B.U1,B.U4,B.U5,B.W22,B.W7,C.U14,C.U15,C.U19,C.U20,C.U21,C.U23,C.U24,C.U25,C.U26,C.U27,C.U28,C.U34,C.U4,C.U5,C.U7,C.U8,C.W11,C.W15,C.W21,C.W22,C.W25,C.W26,C.W28,C.W29,C.W30,C.W31,C.W32,C.W33,C.W34,C.W35,C.W36,C.W37,C.W5,C.W6,C.W9,D.U15,D.U4,D.U6,D.U9,D.W1,D.W10,D.W16,D.W19,D.W3,E.U16,E.U4,
Pharmacokinetics	2	40						15	5	6	14				Credit with mark	Presentation of pharmacokinetics as a branch of pharmacology that allows to understand the processes of the drug in the body and to learn about the factors that may modify them. Acquainting with the methods of calculation the basic parameters	1.3.7.,1.3.8.,D.U10,D.U3,D.W4,D.W5,D.W6,D.W7,D.W8,
Pharmacology and pharmacodynamics	13	210	40	65				35	70						Exam	The course will cover the exact topics from pharmacology domain that is presented in program's description.	D.U11,
Synthesis and chemical technology of drugs	5	75	16	5	4	32				6	6	6			Exam	The aim of the subject is to gain basic knowledge of the search and synthesis of drugs, design and implementation of chemical unit processes, and good manufacturing practice.	1.3.7.,1.3.8.,B.W27,C.U10,C.U11,C.U34,C.U9,C.W10,C.W11,C.W12,C.W14,C.W24,C.W47,
Toxicology	6	95						30		13	52				Exam	Knowledge of the basics of toxicology, including: mechanisms of toxicity, factors influencing toxicity, methods of testing toxicity, basics of environmental toxicology. The role of toxicology in ensuring the safety of pharmacotherapy.	1.3.6.,1.3.7.,1.3.8.,D.U18,D.U19,D.U20,D.U21,D.U22,D.W21,D.W22,D.W23,D.W24,D.W25,D.W26,D.W27,D.W28,D.W29,
Elective subjects	5	60													Credit		
One-month summer training at hospital pharmacy	6	160													Credit	The aim of the practice is to familiarize a student with the role and tasks of pharmacists working in hospital pharmacies and other institutions (pharmaceutical manufactures and plants, analytical departments or drug agencies)	1.3.1.,1.3.10.,1.3.2.,1.3.3.,1.3.4.,1.3.5.,1.3.7.,1.3.9.,

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rok 5

Module / Subject	ECTS	Total number of hours	semester 9						semester 10*						Manner of obtaining credit	Course content	Symbols of learning outcomes
			Number of hours						Number of hours								
			lectures	seminars	exercise	laboratories	practical training	self-study	lectures	seminars	exercise	laboratories	practical training	self-study			
Biopharmaceutics	4	55	30		5	20									Exam	Physicochemical properties of the active substance and absorption; LADME; Route of drug administration; Patient's characteristics and drug reaction; Influence of food, alcohol and environmental factors on drug action	1.3.5.,1.3.7.,1.3.8.,D.U1,D.U2,D.U4,D.U5,D.U6,D.U7,D.U8,D.U9,D.W1,D.W10,D.W11,D.W2,D.W3,
Clinical Pharmacy	7	70	30	20	4		16								Exam	Clinically important parameters describing PK/PD of drugs. Physiological and genetic determinants affecting drug dosing. Evidence based medicine. Population analysis. Diagnostics and treatment of selected civilization diseases.	D.U12,D.U13,D.U14,D.U29,D.W37,E.U10,E.U11,E.U16,E.U17,E.U18,E.U23,E.U24,E.U7,E.W10,E.W11,E.W14,E.W26,
Pharmacoeconomics	2	30	15	15											Credit with mark	Basic elements and concepts of pharmacoeconomics, including health care economics and health care resources management.	1.3.10.,1.3.2.,1.3.4.,1.3.5.,1.3.6.,1.3.7.,1.3.8.,1.3.9.,C.U34,E.U27,E.U28,E.W19,E.W20,E.W21,
Pharmaceutical care	4	55	10		9		36								Credit with mark	Main tasks of the community pharmacy, daily tasks and responsibilities of a pharmacist. Advanced services in a community pharmacy. Interpersonal communication: medical professionals / patients.	1.1.7.,1.2.10.,1.2.11.,1.2.5.,1.2.6.,1.3.6.,1.3.7.,1.3.9.,C.U34,D.U16,D.U17,E.U11,E.U12,E.U14,E.U15,E.U26,E.U3,E.U5,E.U6,E.U8,E.U9,E.W14,E.W2,E.W26,E.W30,
Pharmaceutical law	2	35	15	20											Credit with mark	Clinical trials rules, drugs registration process, wholesale and retail sale of drugs. Pharmacy Inspection and other agencies. Legal rules in pharmacy practice. Pharmacy self government.	1.3.10.,1.3.4.,1.3.9.,E.U19,E.W1,E.W2,E.W22,E.W23,E.W3,E.W4,E.W5,E.W6,

Pharmaceutical technology III	8	70	20			50									Exam	The aim of the course is to prepare for the production and quality assessment of various pharmaceutical preparations - on an industrial and compendial scale, especially in a hospital pharmacy.	1.3.9.,1.3.10.,1.3.3.,1.3.7.,1.3.8.,A.U11,A.U15,A.W20,A.W22,B.U1,B.U4,B.U5,B.W22,B.W7,C.U14,C.U15,C.U19,C.U20,C.U21,C.U23,C.U24,C.U25,C.U26,C.U27,C.U28,C.U34,C.U4,C.U5,C.U7,C.U8,C.W11,C.W15,C.W21,C.W22,C.W25,C.W26,C.W28,C.W29,C.W30,C.W31,C.W32,C.W33,C.W34,C.W35,C.W36,C.W37,C.W5,C.W6,C.W9,D.U15,D.U4,D.U6,D.U9,D.W1,D.W10,D.W16,D.W19,D.W3,E.U16,E.U4,
Pharmacotherapy and drug information	4	55	35	20											Credit with mark	Pharmacotherapy of most prevalent diseases, internet drug databases, drug safety, adverse drug reactions,	D.U15,D.U16,E.U12,E.U25,E.W12,E.W13,E.W15,E.W16,
Pharmacy practice	7	90	18	25	10										Credit with mark	Main tasks of the community pharmacy, daily tasks and responsibility of a pharmacist. Advanced services in a community pharmacy. Interpersonal communication: medical professionals / patients.	1.2.2.,1.2.4.,1.2.5.,1.3.1.,1.3.10.,1.3.6.,1.3.7.,1.3.9.,C.U34,D.U17,E.U1,E.U11,E.U14,E.U2,E.U25,E.U3,E.U9,E.W14,E.W17,E.W18,E.W2,E.W30,E.W7,
Scientific reasearch methodology	20	377													Credit	The student becomes familiar with research methods and techniques used in scientific research and acquires the skills of planning, conducting, documenting, interpreting and presenting the results of scientific research.	1.3.8.,
Elective subjects	2	30													Credit		

* the number of hours assigned to the summer semester may include classes available throughout the year or in the block system

kierunek - farmacja ED
 poziom studiów - jednolite studia magisterskie
 forma - studia stacjonarne
 cykl kształcenia 2018-2024
 rok akademicki 2023/2024

Module / Subject	ECTS	Total number of hours	semester 11						semester 12*						Manner of obtaining credit	Course content	Symbols of learning outcomes
			Number of hours						Number of hours								
			lectures	seminars	exercise	laboratories	practical training	self-study	lectures	seminars	exercise	laboratories	practical training	self-study			
Six-month training at pharmacy	30	960													Credit	The aim of the internship is to deepen theoretical knowledge and improve practical skills in the field of pharmacy, acquired during pharmacy studies.	A.K1.,A.K2.,A.K3.,B.K1.,B.K3.,C.U10.,C.U11.,C.U12.,C.U13.,C.U19.,C.U27.,C.U28.,C.U29.,C.U30.,D.U13.,D.U15.,D.U18.,D.U38.,D.U43.,D.U44.,D.U46.,D.U47.,D.U51.,D.U52.,D.W44.,E.U1.,E.U13.,E.U14.,E.U15.,E.U2.,E.U25.,E.U26.,E.U27.,E.U28.,E.U29.,E.U3.,E.U30.,E.U31.,E.U32.,E.U33.,E.U34.,E.U35.,E.U36.,E.U4.,E.U41.,E.U42.,E.U5.,E.U50.,E.U52.,E.U53.,E.U54.,E.U55.,E.U7.,E.U8.,E.W1.,E.W10.,E.W11.,E.W12.,E.W13.,E.W14.,E.W15.,E.W16.,E.W18.,E.W19.,E.W2.,E.W20.,E.W21.,E.W24.,E.W26.,E.W27.,E.W3.,E.W32.,E.W33.,E.W34.,E.W36.,E.W4.,E.W43.,E.W44.,E.W46.,E.W5.,E.W50.,E.W54.,E.W55.,E.W6.,E.W7.,E.W8.,E.W9.,

* the number of hours assigned to the summer semester may include classes available throughout the year or in the block system