Załącznik nr 5 do zarządzenia nr 189/2025

COURSE SPECIFICATION

Course code: 0912-7LEK-C-IM

Course title in Polish: Choroby wewnętrzne
Course title in English: Internal medicine

1. Placement of the course within the study programme

1.1. Field of study	Medicine
1.2. Mode of study	Full-time
1.3. Level of study	Uniform Master's study
1.4. Profile of study	General academic
1.5. Course specification author	dr hab. med. Janusz Sielski, prof UJK
1.6. Contact	janusz.sielski@ujk.edu.pl

2. Generał characteristics of the course

2.1. Language of instruction	English
2.2. Entry requirements	Knowledge of modules: morphological science and scientific basis of medicine

3. Detailed characteristics of the course

3.1. Type of classes	LECTURE: 60 (including 6 hours of e-learning), CLASSES: 50 (including 5 hours of e-learning), PRACTICAL CLASSES: 70
3.2. Place of course delivery	Lectures and classes – teaching rooms of the JKU; Practical classes – hospitals, out-patient departments
3.3. Form of assessment	Semesters VI, VII, VIII and X Lecture – credit with grade (test) Classes – credit with grade (test) Practical classes – credit (oral and practical skills) Final exam with grade after completing "Internal medicine - clinical teaching and practice" after semester XI (test, oral) Presence during lectures is obligatory
3.4. Teaching methods	Conversational lecture, discussion, a case study in natural condition
3.5.a. Basic reading list	1. Harrison's Principles of Internal Medicine, Vol. 1 & Vol. 2; 22nd Edition. Authors: Longo, Dan; Fauci, Anthony; Jameson, J.; Hauser, Stephen; Kasper, Dennis; Loscalzo, Joseph;
3.5.b. Supplementary reading list	1. Bates' Guide to Physical Examination and History-Taking by Lynn Bickley, Wolters Kluwer Health 2023 2. Podstawy badania klinicznego / Basics and Clinical Examination. Piotr Zaborowski. Medipage 2016 3. ESC clinical practice guidelines published at https://www.escardio.org/Guidelines

4. Objectives, content and learning outcomes

4.1. Course objectives (taking into account the form of classes)

Lectures

- **CO1.** Introduction of students to the specific nature of work in a hospital setting and specialist outpatient clinics; principles of collaboration with other physicians, nursing and allied health professionals, as well as administrative staff.
- **CO2.** Discussion of the physician–patient relationship in the context of internal medicine, with emphasis on the role of patient and family support, and on special circumstances (e.g. legally incapacitated patients).

  Development of professional attitudes:
  - ✓ in physician–patient and physician–therapeutic team relations,
  - ✓ in accordance with medical ethics and professional standards.
- **CO3.** Provision of theoretical knowledge in internal medicine, including cardiology.

  Preparation of the student for:
  - ✓ independent planning of diagnostic procedures and interpretation of results,
  - ✓ conducting differential diagnosis,
  - ✓ planning therapeutic management and anticipating consequences of proposed interventions in both inpatient and outpatient settings.
- **CO4.** Development of practical skills in conducting medical interviews, performing physical examination, recognizing symptomatology of internal diseases, and performing basic diagnostic procedures in compliance with legal regulations, with particular emphasis on cardiology.
- **C05.** Acquisition of competence in assessing indications and contraindications for various stages of diagnostic and therapeutic processes, including knowledge of drug interactions.

Classes

- **CO1.** Training in conducting comprehensive and focused medical interviews with patients and their families in the context of internal medicine.
- **CO2.** Training in proper performance of physical examination.
- **CO3.** Training in accurate interpretation of laboratory tests, imaging, ECG, and other diagnostic findings.
- **CO4.** Development of competence in differential diagnosis of internal diseases.
- **CO5.** Acquisition of skills in planning an optimal diagnostic and therapeutic strategy for internal medicine patients, with consideration of comorbidities and contraindications for specific diagnostic and therapeutic procedures.

- **CO6.** Ability to plan further patient education in the context of secondary prevention, with particular emphasis on cardiovascular diseases.
- **CO7.** Ability to Use and Critically Analyze Artificial Intelligence (AI)

Practical Classes

- **CO1.** Ability to perform and interpret basic diagnostic procedures (ECG, spirometry, urine dipstick tests, arterial blood gas analysis, swabs, measurement of surface and core body temperature, blood pressure measurement).
- **CO2.** Ability to perform peripheral venous cannulation.
- **CO3.** Ability to conduct cardiopulmonary resuscitation, including defibrillation and chest compressions.
- **CO4.** Competence in conducting comprehensive and focused medical interviews with patients and their families in the context of internal medicine.
- **CO5.** Ability to insert a gastric tube

4.2. Course content (taking into count the form of classes)

YEAR III

Lectures – semester VI

1. Chronic Coronary Syndromes
2. Acute Coronary Syndromes
3. Congenital and Acquired Heart Defects
4. Chronic Heart Failure
5. Primary and Secondary Arterial Hypertension

Classes – semester VI

1. Dyslipidemias with emphasis on familial hypercholesterolemia
2. Primary and secondary arterial hypertension
3. Atrial fibrillation
4. Pulmonary embolism
5. Infective endocarditis, myocarditis
6. Pulmonary hypertension
7. Pericarditis
8. Hypertrophic cardiomyopathy
9. Indications for implantation of pacemakers and CRT/ICD devices in primary and secondary prevention
10. Indications for coronary revascularization in chronic coronary syndromes
11. Medical communication:

Ethical standards in the planning and implementation of the therapeutic process; methods of communicating with a patient appropriate to the situation, including the use of open and closed-ended questions, paraphrasing, clarification, internal and final summaries, signaling, active listening, and the application of verbal and non-verbal techniques. Adapting verbal communication to the patient's needs by using clear, accessible language and avoiding medical jargon; communicating in a foreign language at the B2+ level according to the Common European Framework of Reference for Languages (CEFR). Describing and critically evaluating one's own behaviors and communication styles

Practical classes – semester VI

Application of knowledge and skills in internal medicine acquired in the previous semester:

1. Cardiovascular disease prevention
2. Diabetes mellitus in cardiology patients – treatment principles
3. Cardiovascular disorders in pregnancy
4. Principles of antiplatelet and anticoagulant therapy, considering comorbidities
5. Management of supraventricular and ventricular tachycardias
6. Peripheral arterial disease of the lower extremities – diagnosis and treatment
7. Diagnosis of syncope
8. Maintaining medical records (with particular emphasis on electronic health records)

Year IV

Lectures – semester VII

1. Respiratory diseases: airway diseases, chronic obstructive pulmonary disease (COPD), bronchial asthma, bronchiectasis, pneumonia, tuberculosis, interstitial lung diseases, pleural and mediastinal disorders, obstructive and central sleep apnea, acute and chronic respiratory failure, lung neoplasms, tobacco dependence.
2. Renal and urinary tract diseases: acute and chronic renal failure, glomerular and interstitial kidney diseases, renal cysts, urolithiasis, urinary tract infections, urinary tract malignancies (bladder cancer, renal cancer).
3. Hematological diseases: aplastic anemia, anemias, granulocytopenia and agranulocytosis, thrombocytopenia, acute leukemias, myeloproliferative and myelodysplastic-myeloproliferative neoplasms, myelodysplastic syndromes, mature B-cell and T-cell neoplasms.

(including classes conducted with the use of distance learning methods and techniques)

1. Hematological disorders: bleeding diatheses (plasma, platelet, vascular), thrombophilias, life-threatening conditions in hematology, hematological abnormalities secondary to other organ diseases.

Classes – semester VII

1. Conducting a focused medical interview.
2. Performing a targeted physical examination in relation to respiratory, renal/urinary tract, and hematological diseases.
3. Assessment and description of somatic status.
4. Planning diagnostic, therapeutic, and preventive management.
5. Differential diagnosis of the most common cardiovascular and respiratory diseases.
6. Qualification of patients for outpatient versus inpatient treatment.
7. Planning specialist consultations.
8. Principles of transfusion of blood and blood products.
9. Dialysis therapy.

(including classes conducted with the use of distance learning methods and techniques)

1. Acute and chronic kidney disease, glomerular diseases.

Practical classes – semester VII

Application of previously acquired internal medicine knowledge and skills during clinical training:

1. Measurement of temperature, respiratory rate, pulse, and blood pressure.
2. Monitoring of vital parameters using a cardiac monitor and pulse oximeter.
3. Initiation and supervision of passive and active oxygen therapy.
4. Insertion of an oropharyngeal airway.
5. Administration of medications (intravenous, intramuscular, subcutaneous), peripheral vein cannulation, blood culture collection, arterial blood sampling, arterialized capillary blood sampling.
6. Collection of nasal, throat, and skin swabs; pleural puncture.
7. Assisting with transfusion of blood and blood products.
8. Assisting with dialysis therapy.
9. Maintaining medical records (with particular emphasis on electronic health records).

Lectures – semester VIII

1. Endocrine diseases: disorders of the hypothalamus and pituitary gland, thyroid gland, parathyroid glands, adrenal cortex and medulla, ovaries and testes, neuroendocrine tumors, multiple endocrine syndromes.
2. Diabetes and metabolic syndrome: hypoglycemia, obesity, dyslipidemia.

(including classes conducted with the use of distance learning methods and techniques)

1. Water-electrolyte and acid–base disorders: dehydration, fluid overload, electrolyte imbalance, acidosis, alkalosis.

Classes – semester VIII

1. Performing targeted physical examinations in relation to water–electrolyte and acid–base disorders as well as endocrine diseases and diabetes.
2. Conducting differential diagnosis.
3. Assessment and description of somatic status within recognized disease entities.
4. Planning diagnostic, therapeutic, and preventive management.
5. Insulin therapy in acute states and in chronic diabetes management.
6. Principles of correction of electrolyte disturbances and acid–base imbalance.

(including classes conducted with the use of distance learning methods and techniques)

1. Conducting differential diagnosis in endocrine disorders.

Practical classes – semester VIII

1. Application of previously acquired internal medicine knowledge and skills during clinical training:
2. Performing urine dipstick tests and blood glucose measurement.
3. Measurement of temperature, respiratory rate, pulse, and blood pressure.
4. Monitoring of vital parameters using a cardiac monitor and pulse oximeter.
5. Initiation and supervision of passive and active oxygen therapy.
6. Insertion of an oropharyngeal airway.
7. Administration of medications (intravenous, intramuscular, subcutaneous), peripheral vein cannulation, blood culture collection, arterial blood sampling, arterialized capillary blood sampling.
8. Collection of nasal, throat, and skin swabs; pleural puncture.
9. Maintaining medical records (with particular emphasis on electronic health records).

Year V

Classes – semester X

1. Conducting a focused medical interview.
2. Performing a targeted physical examination in relation to gastroenterological, rheumatological, and allergic diseases.
3. Conducting differential diagnosis.
4. Assessment and description of somatic status within recognized disease entities.
5. Planning diagnostic, therapeutic, and preventive management.
6. Qualification of patients for outpatient versus inpatient treatment.
7. Planning specialist consultations.
8. Proposing individualized therapeutic strategies and implementing alternative treatment methods in cases of standard therapy ineffectiveness or contraindications.

9. Proposing nutritional treatment (including enteral and parenteral nutrition).

Practical classes – semester X

1. Application of previously acquired internal medicine knowledge and skills during clinical training:
2. Assisting in skin prick testing, intradermal testing, and scarification tests, and interpreting results.
3. Performing gastric intubation, gastric lavage, and enemas.
4. Assisting in paracentesis and fine-needle biopsy.
5. Maintaining medical records (with particular emphasis on electronic health records).

4.3. Course learning outcomes

Course learning outcomes (code)	Upon completion of the course, the student	Alignment with programme learning outcomes
	in the area of knowledge knows and understands:	
W01	1. Cardiovascular diseases, including ischemic heart disease, heart defects, diseases of the endocardium, heart muscle, pericardium, heart failure (acute and chronic), diseases of arterial and venous vessels, primary and secondary arterial hypertension, pulmonary hypertension; 2. Respiratory diseases, including diseases of the respiratory tract, chronic obstructive pulmonary disease, asthma, bronchiectasis, cystic fibrosis, respiratory infections, tuberculosis, interstitial lung diseases, pleural diseases, mediastinal diseases, obstructive and central sleep apnea, respiratory failure (acute and chronic), respiratory system tumors; 3. Gastrointestinal diseases, including diseases of the oral cavity, esophagus, stomach and duodenum, intestines, pancreas, liver, biliary tract and gallbladder; 4. Endocrine diseases, including diseases of the hypothalamus and pituitary gland, thyroid, parathyroid, adrenal cortex and medulla, ovaries and testes, as well as neuroendocrine tumors, multiple endocrine neoplasia syndromes, various types of diabetes, metabolic syndrome, obesity, dyslipidemia, and hypoglycemia; 5. Renal and urinary tract diseases, including acute kidney injury and chronic kidney disease in all stages and their complications, primary and secondary glomerular diseases (including diabetic nephropathy and systemic diseases), interstitial kidney diseases, renovascular hypertension, kidney cysts, kidney stones, urinary tract infections (upper and lower tract), pregnancy-related kidney diseases, and urinary system tumors; 6. Hematopoietic system diseases, including bone marrow aplasia, anemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute leukemias, myelo- and lymphoproliferative neoplasms, myelodysplastic syndromes, bleeding disorders, thrombophilia, and blood disorders in other organ diseases. 7. Rheumatic diseases, including systemic connective tissue diseases (rheumatoid arthritis, early arthritis, systemic lupus erythematosus, Sjögren's syndrome, systemic sclerosis, idiopathic inflammatory myopathies), spondyloarthropathies, crystal-induced arthropathies, erythema nodosum, arthritis associated with infectious factors, vasculitis, and non-inflammatory joint and bone diseases (degenerative diseases, soft tissue rheumatism, osteoporosis, fibromyalgia); 8. Allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema;	E.W8.

	9. Water-electrolyte and acid-base disorders (states of dehydration, states of fluid overload, electrolyte imbalances, acidosis, and alkalosis).	

in the area of skills knows how to:

U01	Collect a medical history from an adult, including an elderly person, utilizing skills related to content, process, and perception of communication, considering both biomedical and patient perspectives;	E.U1.
U02	Collect a medical history in a health and life-threatening situation using the SAMPLE scheme (S – Symptoms, A – Allergies, M – Medications, P – Past medical history, L – Last meal, E – Events prior to injury/illness);	E.U3.
U03	Conduct a targeted physical examination of an adult in the area of the breast and prostate gland;	E.U4.
U04	Conduct a comprehensive and targeted physical examination of an adult adapted to a specific clinical situation, including: 1. General internal examination; 2. Neurological examination; 3. Gynecological examination; 4. Musculoskeletal system examination; 5. Ophthalmological examination; 6. Otolaryngological (ENT) examination; 7. Geriatric examination;	E.U5.
U05	Recognize the most common symptoms of illness in adults, apply diagnostic tests and interpret their results, conduct differential diagnosis, implement therapy, monitor treatment effects, and assess indications for specialist consultation, especially in cases of symptoms such as: 1. Fever; 2. Weakness; 3. Loss of appetite; 4. Weight loss; 5. Shock; 6. Cardiac arrest; 7. Altered consciousness, including fainting; 8. Swelling; 9. Rash. 10. Cough and expectoration; 11. Hemoptysis; 12. Dyspnea; 13. Nasal and aural discharge; 14. Thoracic pain; 15. Cardiac palpitations; 16. Cyanosis; 17. Nausea and vomiting; 18. Dysphagia; 19. Abdominal pain; 20. Hematochezia; 21. Constipation and diarrhea; 22. Jaundice; 23. Abdominal bloating and resistance; 24. Anemia; 25. Lymphadenopathy; 26. Urinary retention and incontinence; 27. Hematuria and proteinuria; 28. Menstrual irregularities; 29. Depressed mood and anxiety states; 30. Memory impairment and cognitive dysfunction; 31. Cephalalgia; 32. Vertigo;	E.U9.

	33. Paresis; 34. Seizures; 35. Dorsalgia; 36. Arthralgia; 37. Trauma or burn; 38. Dehydration and fluid overload.	
U06	Identify conditions requiring hospital treatment;	E.U12.
U07	Qualify patients for protective vaccinations;	E.U13.
U08	Perform medical procedures and treatments, including: 1. Measurement and assessment of basic life functions (temperature, pulse, blood pressure) and monitoring them using a cardiac monitor and pulse oximeter; 2. Various forms of inhalation therapy and selecting an inhaler appropriate for the patient's clinical condition; 3. Measurement of peak expiratory flow; 4. Oxygen therapy using non-invasive methods; 5. Instrumental and non-instrumental airway clearance 6. Intravenous, intramuscular, and subcutaneous drug administration; 7. Collection and securing of blood for laboratory and microbiological testing; 8. Collection of arterial and arterialized capillary blood; 9. Collection of swabs for microbiological and cytological examinations; 10. Urinary catheterization in both females and males; 11. Placement of a nasogastric tube; 12. Administration of an enema; 13. Performing a standard resting electrocardiogram and interpreting its results; 14. Defibrillation, electrical cardioversion, and external pacing; 15. Strip tests, including measuring glucose levels using a glucometer; 16. Pleural procedures: thoracentesis and pneumothorax decompression; 17. Anterior nasal packing; 18. Ultrasound examination in life-threatening situations according to the FAST protocol (Focused Assessment with Sonography in Trauma) or its equivalent, and interpreting its results;	E.U14.
U09	Use of appropriate personal protective equipment according to the clinical situation;	E.U15.
U10	Participate in the process of dignified dying of a patient, utilizing the potential of palliative care;	E.U17.
U11	Maintain patient medical records, including electronic formats, in compliance with legal regulations;	E.U18.
U12	Conduct patient conversations following a structured dialogue framework (initiating the conversation, gathering information, explaining and planning, concluding the conversation), while structuring such discussions and developing relationships with patients using selected models (e.g., Calgary-Cambridge guidelines, Segue framework, Kalamazoo Consensus, Maastricht Maas Global), including through electronic communication means;	E.U23.
U13	Collect patient history with a focus on the presence of suicidal thoughts, when it is justified;	E.U24.
U14	Communicate information to patients, tailoring the amount and content to the patient's needs and capabilities, and supplement verbal information with models and written materials, including diagrams and instructions, and apply them appropriately;	E.U25.
U15	Jointly make diagnostic and therapeutic decisions with patients (assess the patient's level of involvement, their needs and capabilities in this regard,	E.U26.

	encourage the patient to take an active part in the decision-making process, discuss the advantages, disadvantages, expected outcomes, and consequences of decisions) and obtain informed consent from the patient;	
U16	Communicate with patients from economically or socially marginalized groups, respecting their dignity;	E.U27.
U17	Identify social determinants of health, indicators of unhealthy and self-destructive behaviors, discuss these with the patient, and make a note in the medical documentation;	E.U28.
U18	Identify potential indicators of violence, collect history to verify if there is a risk of the patient experiencing violence, and make a note in the medical documentation;	E.U29.
U19	Apply principles of providing feedback (constructive, non-judgmental, descriptive) within team collaboration;	E.U30.
U20	Accept, clarify, and analyze one's own role and scope of responsibility in the team, and recognize one's role as a doctor in the team;	E.U31.
U21	Obtain information from team members respecting their diverse opinions and specialized competencies, and incorporate this information into the patient's diagnostic and therapeutic plan;	E.U32.
U22	Discuss patient situations in the team without subjective judgments, respecting patient dignity	E.U33.
U23	The following protocols should be applied (e.g., during the handover of patient care, ordering a patient consultation, or providing one): 1. ATMIST (A (Age), T (Time of injury), M (Mechanism of injury), I (Injury suspected), S (Symptoms/Signs), T (Treatment/Time to arrival)); 2. RSVP/ISBAR (R (Reason for the call), S (Story of the patient), V (Vital signs), P (Plan for the patient)/I (Introduction), S (Situation), B (Background), A (Assessment), R (Recommendation))."	E.U34.
U24	Perform surgical handwashing, apply sterile gloves, dress for surgery or a procedure requiring asepsis, prepare the surgical field in accordance with the principles of asepsis, and participate in a surgical procedure;	F.U1.

in the area of social competences is able to:

K01	Establish and maintain deep and respectful contact with the patient and show understanding towards ideological and cultural differences;	K.S1.
K02	Do what is right for the patient;	K.S2.
K03	Respect medical confidentiality and patient's rights;	K.S3.
K04	Take actions concerning the patient on the basis of ethical principles, being aware of social conditions and restrictions resulting from illness;	K.S4.
K05	Recognize his/her own limitations and self-evaluate educational deficiencies and needs;	K.S5
K06	Promote healthy lifestyle;	K.S6.
K07	Use reliable information sources;	K.S7.
K08	Conclude on the basis of own surveys and observations;	K.S8.
K09	Introduce rules of social conduct and teamwork to the group of specialists, including specialists form other medical professions also in the multicultural and multinational environment;	K.S9.
K10	Give opinions concerning various aspects of professional activity;	K.S10.
K11	Take responsibility for own decisions made during professional activities including own safety and safety of other people.	K.S11.

4.4. Assessment methods for learning outcomes

Assessment method (+/-)

Course learning outcomes (code)	Oral/written/ practical examinaion /other (specify)*	Test*	Project*	In-class activity*	Independent study*	Group work*	Other Observation

Type of classes

1: / 2:	L	C	PC	L	C	PC	L	C	PC	L	C	PC	L	C	PC	L	C	PC	L	C	PC
W01	+	+											+	+	+						
U01-U24		+			+						+	+	+	+	+			+			
K01-K11					+							+	+	+	+			+			

Annotation. 1: form of classes; 2: learning outcomes

4.5. Assessment criteria for learning outcomes

Type of classes:

LECTURE (L) (including classes conducted with the use of distance learning methods and techniques)

Grade	Assessment criteria
3,0	61% -68% correct answers
3,5	69% - 76% correct answers
4,0	77% - 84% correct answers
4,5	85 % -92% correct answers
5,0	93% - 100% correct answers

Type of classes:

CLASSES (C) (including classes conducted with the use of distance learning methods and techniques)

Grade	Assessment criteria
3,0	61% -68% correct answers
3,5	69% - 76% correct answers
4,0	77% - 84% correct answers
4,5	85 % -92% correct answers
5,0	93% - 100% correct answers

Type of classes:

PRACTICAL (PC) (including classes conducted with the use of distance learning methods and techniques)

Grade	Assessment criteria
3,0	Independently conducts focused patient interviews but requires instructor assistance during physical examinations. Provides an imprecise description of the patient's somatic condition and is able to solve basic diagnostic and therapeutic tasks independently. However, when performing practical skills, requires guidance from the instructor. Demonstrates appropriate ethical conduct in interactions with patients but experiences difficulties in establishing effective relationships within the therapeutic team. The decisions made indicate limited knowledge of legal regulations.
3,5	Independently conducts focused patient interviews and requires only minimal assistance from the instructor during physical examinations. Provides a precise description of the patient's somatic condition and is able to solve basic diagnostic and therapeutic tasks independently,

	including differentiating between common clinical conditions. However, when performing practical skills, requires guidance from the instructor. Demonstrates appropriate ethical conduct in interactions with patients but experiences difficulties in establishing effective relationships within the therapeutic team. The decisions made indicate gaps in the knowledge of legal regulations.
4,0	Independently conducts focused patient interviews and physical examinations, providing a precise description of the patient's somatic condition. Effectively solves basic diagnostic and therapeutic tasks and is capable of differentiating between common clinical conditions. Performs practical skills independently and demonstrates appropriate ethical conduct in interactions with both patients and medical staff. However, the decisions made indicate gaps in the knowledge of legal regulations.
4,5	Independently conducts focused patient interviews and physical examinations, providing a precise description of the patient's somatic condition. Demonstrates the ability to independently solve both basic and complex diagnostic and therapeutic tasks and is capable of differentiating between various clinical conditions. Performs practical skills independently and consistently demonstrates appropriate ethical conduct in interactions with both patients and medical staff. The decisions made confirm a solid understanding of relevant legal regulations.
5,0	Independently conducts focused patient interviews and physical examinations, providing a precise and accurate description of the patient's somatic condition. Demonstrates the ability to independently solve complex and challenging diagnostic and therapeutic tasks and is proficient in differentiating between various clinical conditions. Performs practical skills independently and consistently demonstrates impeccable ethical conduct in interactions with both patients and medical staff. The decisions made confirm a thorough understanding of relevant legal regulations.

5. ECTS credit allocation – student workload

Category	Student workload (full-time mode)	Student workload (part-time mode)
NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER (CONTACT HOURS)	**180**	
Participation in lectures*	54	
Participation in seminars/laboratories*	115	
Other (specify) - classes conducted with the use of distance learning methods and techniques*	11	
INDEPENDENT STUDY (NON-CONTACT HOURS)	**70**	
Preparation for lectures*	50	
Preparation for seminars/laboratories*	20	
Preparation for examination/test*		
Gathering materials for project, online research*		
Preparation of a multimedia presentation*		
Other (specify)*		
TOTAL HOURS	**275**	
ECTS CREDITS for the course	**11**	

*** delete as appropriate**

Approved for implementation (date and legible signatures of course instructors in the given academic year):

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