

DESCRIPTION OF THE COURSE OF STUDY

Course code	0912-7LEK-C5.2-IW	
Name of the course in	Polish	Choroby wewnętrzne
	English	Internal medicine

1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

1.1. Field of study	Medicine
1.2. Mode of study	Full-time
1.3. Level of study	Uniform Masters' study
1.4. Profile of study*	Practical
1.5. Specialization*	lack
1.6. Unit running the course of study	Faculty of Medicine and Health Sciences, Department of Internal Medicine and Cardiology
1.7. Person/s preparing the course description	dr hab. prof. UJK Zbigniew Siudak
1.8. Person responsible for the course of study	dr hab. prof. UJK Zbigniew Siudak
1.9. Contact	zbigniew.siudak@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

2.1. Affiliation with the module	Non surgical clinical sciences
2.2. Language of instruction	English
2.3. Semesters in which the course of study is offered	5 th – 9 th semester
2.4. Prerequisites*	Knowledge of modules: morphological science and scientific basis of medicine

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Form of classes	Lectures: 60, classes- 60; practical classes: 105	
3.2. Place of classes	Lectures – Courses in the teaching rooms of the JKU	
3.3. Form of assessment	Lectures semest. 5 - 8 Zo (credit with grade) , sem. 10 – exam Classes- credit with grade	
3.4. Teaching methods	Conversational lecture, discussion, a case study in natural condition	
3.5. Bibliography	Required reading	<ol style="list-style-type: none"> Harrison's Principles of Internal Medicine, Vol. 1 & Vol. 2; 19th Edition. Authors: Longo, Dan; Fauci, Anthony; Jameson, J.; Hauser, Stephen; Kasper, Dennis; Loscalzo, Joseph; Podstawy badania klinicznego / Basics in Clinical Examination. Piotr Zaborowski. 2016
	Further reading	<ol style="list-style-type: none"> Kumar and Clark's Clinical Medicine, 8th or 9th Edition by Parveen Kumar, Michael L Clark. Bates' Guide to Physical Examination and History-Taking by Lynn Bickley, Lippincott Williams & Wilkins 2012

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED TEACHING OUTCOMES

4.1. Course objectives (including all form of classes)

The aim of the course is to provide knowledge, practical skills and social competence on diseases in adults.

Prepare students to:

Plan diagnosis, treatment prophylaxis both primary and secondary.

Plan and analyze diagnostic tests.

Techniques of medical history taking and physical examination.

Shaping attitudes about relation between doctor and patient, doctor – doctor, doctor – team, patient family – doctor.

Compliance with laws and professional ethics.

Learn specifics of hospital and out-patient department treatment.

Learn indications and contraindications to specific diagnostic tests and medications including drug interactions.

Practical skills:

Ability to perform, analyse and interpret basic tests (ECG, spirometry, arterial blood gas test, strip tests, temperature measurement, swabs).

Ability to perform peripheral vein cannulation

Ability to perform advanced CPR with defibrillation.

Ability to insert gastric tube.

4.2. Detailed syllabus (including all form of classes)

Semester V. Lectures

- Cardiovascular diseases: ischemic heart disease, heart defects, endocardial disease, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vascular disease, primary and secondary hypertension, pulmonary hypertension. The role of invasive cardiology in the treatment of coronary heart disease, peripheral vessels and structural heart defects.

Semester V. Practical classes

- Cardiovascular diseases: ischemic heart disease, congenital and acquired structural heart disease, chronic / acute heart failure, cardiomyopathy, hypertension primary and secondary, pulmonary hypertension, common diseases of artery and veins. Role of interventional cardiology.

Semester V. Classes.

- Techniques of medical history taking.
- Cardiovascular physical examination.
- Patient clinical status.
- Diagnostic plan, treatment and prophylaxis.
- Heart rate and blood pressure measurement. Cardiac monitoring.
- Perform an electrocardiography. Analysis and interpretation.
- Administer a drugs via subcutaneous injection, intravenous injection, intramuscular injection. Collection of blood samples.
- Assist in pericardiocentesis.
- Perform electrical cardioversion and defibrillation.
- Identify medical emergencies.
- Identify agony and death.
- Compile medical documentation.

Semester VII. Lectures

- Respiratory diseases: respiratory diseases, chronic obstructive pulmonary diseases, bronchial asthma, bronchiectasis, cystic fibrosis, pneumonia, tuberculosis, interstitial lung disease, pleural disease, mediastinum, obstructive and central sleep apnea, respiratory failure (acute and chronic), systemic tumors respiratory, nicotine addiction.
- Kidney and urinary tract diseases: acute and chronic renal failure, glomerulonephritis and interstitial kidney disease, kidney cyst, urolithiasis, urinary tract infections, urinary tract cancer - bladder cancer and kidney cancer.
- Haematopoietic system diseases: bone marrow aplasia, anemia, granulocytopenia and agranulocytosis, thrombocytopenia, acute leukemia, myeloproliferative and myelodysplastic-myeloproliferative tumors, myelodysplastic syndromes, tumors from mature B and T lymphocytes, plasma haemorrhagic diathesis, thrombotic platelet disease in hematology, blood disorders in diseases of other organs.

Semester VII. Practical classes

- Respiratory system diseases. Chronic obstructive pulmonary diseases, Asthma, Cystic Fibrosis, Respiratory tract infections, Interstitial lung disease, Diseases of the pleura and mediastinum, Sleep apnea, Respiratory failure, Respiratory tract neoplasm. Nicotine addiction.
- Diseases of kidneys and urinary tract: Urinary Tract infections, Acute Kidney Injury AKI, Chronic Kidney Disease CKD, Glomerulopathies, Tubulointerstitial nephritides, Polycystic kidney disease, Renal calculus, Urinary Tract neoplasms, Renal and urinary cancer.

- Hematologic diseases. Aplastic Anemia, Anemias, Neutropenia, Thrombocytopenia, Agranulocytosis, Leukemias, Hodgkin's disease, Non-Hodgkin's lymphoma, Life-threatening condition.

Semester VII. Classes.

- Techniques of medical history taking.
- Physical examination focused on respiratory system, kidneys and urinary tract, Hematologic diseases.
- Patient clinical status.
- Diagnostic plan, treatment and prophylaxis.
- Respiration Rate, Body Temperature, Heart Rate, Blood Pressure measurement.
- Cardiac monitoring. Pulse oximetry monitoring.
- Implementation of oxygen therapy.
- Techniques of oropharyngeal airway insert.
- Administer a drugs via subcutaneous injection, intravenous injection, intramuscular injection. Collection of blood samples.
- Collection of nasopharyngeal specimens with the swab technique.
- Thoracentesis procedure.
- Planning medical consultations.
- Urinary catheterization in male and female.
- Blood Transfusions procedure.
- Compile medical documentation.

Semester VIII. Lectures

- Water-electrolyte and acid-base disorders: dehydration, overhydration, electrolyte imbalance, acidosis and alkalosis;
- Diseases of the internal secretion system: hypothalamus and pituitary gland, thyroid gland, parathyroid glands, adrenal cortex and spinal cord, ovaries and testicles, neuroendocrine tumors, glandular syndromes, diabetes and metabolic syndromes: hypoglycemia, obesity, dyslipidemia.

Semester VIII. Practical classes

- Rheumatic diseases. Systemic conditions and connective tissue diseases, Inflammatory arthropathies, Osteoarthritis, Osteoporosis, Gout.
- Allergic Diseases. Anaphylaxis, Angioedema.

Semester VIII. Classes.

- Acquired knowledge and skills in semesters V and VII.
- Techniques of medical history taking.
- The clinical examination of the Rheumatic and Allergic disease patient.
- Patient clinical status.
- Diagnostic plan, treatment and prophylaxis.
- Qualification for home or hospital treatment.
- Planning medical consultations.
- Skin allergy testing methods.

Semester VIII Practical classes

- Gastrointestinal diseases. esophagus, stomach, small intestine, large intestine and rectum. Liver, gallbladder, and pancreas.
- Disturbances in electrolytes balance. Acid-base disturbances. Overhydration. Dehydration. Acidosis. Alkalosis.
- Endocrine diseases: hypothalamus, pituitary gland, thyroid gland parathyroid glands adrenal glands (of cortex and medulla), ovaries, testes, neuroendocrine tumors, hypoglycemia, secondary obesity and electrolyte homeostasis. Metabolic syndrome.

Semester VIII. Classes.

- Acquired knowledge and skills in previous semesters.
- Techniques of medical history taking.
- The clinical examination of the Endocrine and Gastrointestinal diseases patient.
- Patient clinical status.
- Diagnostic plan, treatment and prophylaxis.
- Blood glucose monitoring. Measurement techniques.
- Enteral and Parenteral Nutrition
- Gastric lavage procedure.
- Paracentesis procedure. Fine-needle aspiration biopsy.

Semester IX. Lectures

- Gastrointestinal diseases: oral cavity, esophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder with particular emphasis on cancer.
- Rheumatic diseases: connective tissue systemic diseases, systemic vasculitis, spondylitis, bone metabolic diseases, osteoporosis and osteoarthritis, gout,
- Allergic diseases: anaphylaxis and anaphylactic shock as well as angioedema.

Semester IX. Classes

The use of knowledge and skills in internal medicine obtained in previous semesters during clinical classes

- conducting a targeted medical history
- performing a targeted physical examination in relation to rheumatic and allergic diseases
- forming a differential diagnosis
- assessing and describing the somatic state in terms of known disease entities
- planning diagnostic, therapeutic and preventive procedures
- qualifying the patient for home and hospital treatment
- planning specialist consultations
- proposing individual therapeutic solutions and implementing other methods of treatment against ineffectiveness or contraindications to standard therapy;

Semester IX. Practical classes

- assists in performing epidermal tests, intradermal and scarification tests as well as interpreting their results;
- stomach sampling, gastric lavage and enemy,
- assisting in performing peritoneal puncture and fine needle biopsy

4.3. Education outcomes in the discipline

Code	A student, who passed the course	Relation to teaching outcomes
within the scope of KNOWLEDGE , the graduate knows and understands:		
W01	environmental and epidemiological conditions for the most common diseases;	E.W1.
W02	the causes, symptoms, principles of diagnosis and therapeutic management in relation to the most frequent internal diseases occurring in adults and their complications: 1) cardiovascular diseases, including coronary heart disease, heart defects, endocarditis, myocarditis, pericarditis, heart failure (acute and chronic), arterial and venous diseases, primary and secondary hypertension, pulmonary hypertension, 2) respiratory diseases, including diseases of the respiratory tract, chronic obstructive pulmonary disease, bronchial asthma, bronchiectasis, cystic fibrosis, respiratory infections, interstitial lung disease, pleura, mediastinum, obstructive and central sleep apnea, respiratory failure (acute and chronic), respiratory cancers, 3) gastrointestinal diseases, including diseases of oral cavity, esophagus, stomach and duodenum, intestine, pancreas, liver, biliary tract and gall bladder, 4) endocrine diseases, including diseases of the hypothalamus and pituitary, thyroid, parathyroid, cortex and adrenal medulla, ovaries and testes as well as neuroendocrine tumors polyglandular syndromes, different types of diabetes and metabolic syndrome: hypoglycemia, obesity, dyslipidemia, 5), diseases of kidney and urinary tract, including acute and chronic renal failure, renal glomeruli diseases, cystic kidney disease, kidney stones, urinary tract infections, urinary tract tumor, particularly bladder cancer and kidney cancer, 6) hematological diseases, including bone marrow aplasia, anemia, neutropenia and agranulocytosis, thrombocytopenia, acute leukemia, myeloproliferative neoplasms and myelodysplastic -myeloproliferative disorders, myelodysplastic syndromes, cancer of mature B and T lymphocytes, bleeding disorders, thrombophilia, states of a direct threat to life in hematology, blood disorders, diseases of other organs, 7) rheumatic diseases, including systemic connective tissue disease, systemic vasculitis, inflammation of joints involving the spine, metabolic bone diseases, especially osteoporosis and degenerative diseases of the joints, gout, 8) allergic diseases, including: anaphylaxis and anaphylactic shock and angioedema,	E.W7.

	9) water-electrolyte abnormalities and acid-base disorders: states of dehydration or fluid overload, electrolyte disorders, acidosis and alkalosis,	
within the scope of ABILITIES , the graduate knows how to:		
U01	conduct a review of medical history of the adult patient;	E.U1.
U02	conduct full and targeted physical examination of the adult patient;	E.U3.
U03	assess patient's general condition, consciousness and awareness;	E.U7.
U04	perform differential diagnosis of the most common diseases in adults and children;	E.U12.
U05	assess and describe the somatic and mental state of patients;	E.U13.
U06	recognize states of a direct threat to life;	E.U14.
U07	recognize when a patient is under the influence of alcohol, drugs and other addictive products;	E.U15.
U08	plan diagnostic, therapeutic and preventive procedures	E.U16.
U09	conduct analysis of the potential side effects of each drug and the interaction between them;	E.U17.
U10	qualify the patient for home treatment and hospitalization;	E.U20.
U11	recognize states in which functional status of the patient's or his/her preferences restrict the treatment in accordance with specific guidelines for the disease;	E.U21.
U12	interpret laboratory test results and identify the reasons for deviations;	E.U24.
U13	apply dietary treatment with the consideration of enteral and parenteral feeding;	E.U25.
U14	qualify the patient for vaccination;	E.U27.
U15	collect and secure samples of material used in laboratory diagnostics;	E.U28.
U16	perform basic medical procedures and treatments, including: 1) measurement of body temperature, pulse measurement, non-invasive blood pressure measurement, 2) monitoring of vital signs using a cardio-monitor or pulse oximetry, 3) spirometry, oxygen therapy, assisted and control mode ventilation 4) introduction of the oropharyngeal tube, 5) intravenous injection , intramuscular and subcutaneous injections, cannulation of peripheral veins, collection of peripheral venous blood, collection of arterial blood, collection arterialized capillary blood, 6) collecting swabs from the nose, throat and skin, puncture of pleural cavity, 7) catheterization of the urinary bladder in women and me, nasogastric intubation, gastric lavage, enema, 8) standard electrocardiogram along with its interpretation, cardioversion and defibrillation of the heart, 9) simple test strips and measuring the concentration of glucose in the blood;	E.U29.
U17	assist when the following procedures and medical treatments are performed: 1) transfusions of blood and blood products, 2) drainage of the pleural cavity, 3) puncture of the pericardium, 4) puncture of the peritoneal cavity, 5) lumbar puncture, 6) needle biopsy, 7) epidermal tests, 8) intradermal and scarification tests and interpret their results;	E.U30.
U18	plan specialist consultations;	E.U32.
U19	implement the basic therapeutic procedure in acute poisoning;	E.U33.
U20	monitor the status of a patient poisoned by chemical substances or drugs;	E.U34.
U21	evaluate decubitus and apply appropriate dressings	E.U35.
U22	recognize the agony of the patient and pronounces him/her dead;	E.U37.
U23	keep medical records of the patient	E.U38.
U24	comply with the aseptic and antiseptic rules;	F.U3.
U25	use peripheral venous catheter;	F.U5.

4.4. Methods of assessment of the intended teaching outcomes

Teaching outcomes (code)	Method of assessment (+/-)																				
	Exam oral/written*			Test*			Project*			Effort in class*			Self-study*			Group work*			Others*		
	Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes					
	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...
W01	+	+			+																
W02	+	+			+																
U01		+			+						+										
U02		+			+						+										
U03		+			+						+										
U04		+			+						+										
U05		+			+						+										
U06		+			+						+										
U07		+			+						+										
U08		+			+						+										
U09		+			+						+										
U10		+			+						+										
U11		+			+						+										
U12		+			+						+										
U13		+			+						+										
U14		+			+						+										
U15		+									+										
U16		+									+										
U17		+									+										
U18		+									+										
U19		+									+										
U20		+									+										
U21		+									+										
U22		+									+										
U23		+									+										
U24		+									+										
U25		+									+										

*delete as appropriate

4.5. Criteria of assessment of the intended teaching outcomes		
Form of classes	Grade	Criterion of assessment
lecture (L)	3	61% -68% correct answers
	3,5	69% - 76% correct answers
	4	77% - 84% correct answers
	4,5	85 % -92% correct answers
	5	93% - 100% correct answers
classes (C)*	3	61%-68% Carrying out the targeted interview independently. During physical examination requires requires a teacher's support. Imprecise description of the somatic state. Independent solution of the basic diagnostic and therapeutic tasks. During the performance of practical skills needs to be supported by a teacher. Presents correct ethical posture in the relationship with the patient. Has difficulties in relations with the therapeutic team. Decisions confirming little knowledge of legal regulations.
	3,5	69%- 76% Carrying out the targeted interview independently. During physical examination requires requires a little teacher's support. Precise description of the somatic state. Independent solution of the basic diagnostic and therapeutic tasks. Differentiation of the basic clinical units. During the performance of practical skills needs to be supported by a teacher. Presents correct ethical posture in the relationship with the patient. Has difficulties in relations with the therapeutic team. Decisions confirming little knowledge of legal regulations.
	4	77%-84% Carrying out the targeted interview and physical examination independently. Precise description of the somatic state. Independent solution of the basic diagnostic and therapeutic tasks. Differentiation of the basic clinical units Independent performance of practical skills. Presents correct ethical posture in the relationship with the patient and the therapeutic team. Decisions confirming little knowledge of legal regulations
	4,5	85%- 92% Carrying out the targeted interview and physical examination independently. Precise description of the somatic state. Independent solution of the basic and complex diagnostic and therapeutic tasks. Differentiation of the basic clinical units. Independent performance of practical skills. Presents correct ethical posture in the relationship with the patient and the therapeutic team. Decisions confirming knowledge of legal regulations.
	5	93%-100% Carrying out the targeted interview and physical examination independently. Precise description of the somatic state. Independent solution of the complex and difficult diagnostic and therapeutic tasks. Differentiation of the clinical units. Independent performance of practical skills. Presents faultless ethical posture in the relationship with the patient and the therapeutic team. Decisions confirming knowledge of legal regulations.
Practical classes*	3	61%-68% Ability to perform basic diagnostic and therapeutic tests. Knowledge of antiseptic rules. Patient vital status monitoring. Assisting physicians with medical procedures within the core curriculum of internal medicine.
	3,5	69%- 76% Ability to perform basic diagnostic and therapeutic tests. Knowledge of antiseptic rules. Patient vital status monitoring. Assisting physicians with medical procedures within the core curriculum of internal medicine.
	4	77%-84% Ability to perform basic diagnostic and therapeutic tests. Knowledge of antiseptic rules. Patient vital status monitoring. Assisting physicians with medical procedures within the core curriculum of internal medicine.
	4,5	85%- 92% Ability to perform basic diagnostic and therapeutic tests. Knowledge of antiseptic rules. Patient vital status monitoring. Assisting physicians with medical procedures within the core curriculum of internal medicine.
	5	93%-100% Ability to perform basic diagnostic and therapeutic tests. Knowledge of antiseptic rules. Patient vital status monitoring. Assisting physicians with medical procedures within the core curriculum of internal medicine.

- **Thresholds are valid from 2018/ 2019 academic year**

5. BALANCE OF ECTS CREDITS – STUDENT’S WORK INPUT

Category	Student's workload
	Full-time studies
<i>NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/</i>	215
<i>Participation in lectures*</i>	60
<i>Participation in classes, seminars, laboratories*</i>	155
<i>Preparation in the exam/final test*</i>	
<i>Others*</i>	
<i>INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/</i>	
<i>Preparation for the lecture*</i>	110
<i>Preparation for the classes, seminars, laboratories*</i>	
<i>Preparation for the exam/test*</i>	
<i>Gathering materials for the project/Internet query*</i>	
<i>Preparation of multimedia presentation</i>	
<i>Others*</i>	
<i>TOTAL NUMBER OF HOURS</i>	
ECTS credits for the course of study	325
	13

Accepted for execution (date and signatures of the teachers running the course in the given academic year)

.....