The purpose of education
C1 The purpose of education is to familiarize students with the pathogenesis, symptomatology, and treatment of internal diseases (pulmonary diseases, kidney diseases, gastrointestinal tract diseases, vascular diseases)
C2 Knowing preventive activities against formation of kidney medicine, vascular diseases, lung diseases and alimentary tract diseases
C3 Interpretation of medical research, making a diagnosis, differential diagnosis. Keeping medical records.
C4 Students should possess the ability to efficiently collect medical history, physical examination, proper technique with the correct interpretation of the clinical examination ascertained deviations from the norm
C5 Students also owe to possess knowledge of basic laboratory tests and diagnostic procedures, including internal medicine with knowledge of the results of variations in the underlying disease entities
C6 Students should possess the ability to carry out differential diagnosis, perform simple diagnostic tests with the diagnosis, therapy planning of the basic units of internal diseases

The matrix of learning outcomes for the subject in relations to the verification methods and the intended learning outcomes of the course form

<table>
<thead>
<tr>
<th>Number of education effect</th>
<th>Description of education effect</th>
<th>Methods of verification</th>
<th>Form of teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.W1</td>
<td>The student understands the</td>
<td>Credit test, attendance at L,S,C</td>
<td></td>
</tr>
<tr>
<td>E.W2</td>
<td>The relationship between morphological abnormalities, altered function of affected organs and the clinical symptoms, the diagnosis and treatment options.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.W3</td>
<td>He knows the pathogenesis and symptomatology of kidney diseases, vascular diseases, lung diseases &amp; gastrointestinal tract diseases.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.U1</td>
<td>Student performs differential diagnosis of the most common diseases of adults.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.U2</td>
<td>Assesses and describes the state of the patient's somatic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.U3</td>
<td>Planned diagnostic and therapeutic procedures for the most common diseases of adults.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.U4</td>
<td>Interprets the results of laboratory tests.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.U5</td>
<td>Normal and pathological identifies stricture and organs in additional imaging studies (X-ray, ultrasound, CT).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Student work input (balance of ECTS points)**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessons on-site (hrs.)</td>
<td>105x2</td>
</tr>
<tr>
<td>Own work (hrs.)</td>
<td>42x2=84</td>
</tr>
<tr>
<td>Summary of student workload</td>
<td>147x2=294</td>
</tr>
<tr>
<td>ECTS points for subject</td>
<td>7(winter)+ 6.5 (summer)=13.5</td>
</tr>
</tbody>
</table>

**Course content:**

### Lectures (6 hours)

**Department of Pulmonology & lung Cancer**

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Topic</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture 1</td>
<td>Bronchial asthma</td>
<td>Dr. Ewa Passowicz-Muszyńska</td>
</tr>
<tr>
<td>Lecture 2</td>
<td>Lung cancer</td>
<td>Dr. Pawel Piesiak</td>
</tr>
<tr>
<td>Lecture 3</td>
<td>Breathing disorders during sleep</td>
<td>Dr. hab. Anna Brzecka</td>
</tr>
</tbody>
</table>

### Lectures (8 hours)

**Department of Angiology, Hypertension & Diabetes**

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture 1</td>
<td>Pathogenesis of atherosclerosis-a contemporary overview</td>
</tr>
<tr>
<td>Lecture 2</td>
<td>Inflammatory vascular diseases</td>
</tr>
<tr>
<td>Lecture 3</td>
<td>Venous thromboembolic disease- an interdisciplinary problem of contemporary medicine</td>
</tr>
<tr>
<td>Lecture 4</td>
<td>Hypertension in diabetes mellitus. Benefits of the hypertensive treatment beyond lowering of blood pressure</td>
</tr>
</tbody>
</table>

### Lectures (8 hours)

**Department of Nephrology & Transplantation Medicine**

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture 1</td>
<td>Pharmacological intervention in progressive renal disease. The importance of early detection of chronic kidney disease. Susceptibility to elevated blood pressure and proteinuria as factors of progressive damage and</td>
</tr>
</tbody>
</table>
benefits from lowering both of them. The role of renin angiotensin system and its blockade.

Lecture 2
From diet to gene therapy - management of patient with renal disease. The growing spectrum of treatment (low protein diet, immunosuppressive therapy for glomerulonephritis, gene therapy targeting interstitial cells).

Lecture 3

Lecture 4

Lectures (8 hours)

| Lecture 1 | Acid-related diseases | Dr A. Smereka |
| Lecture 2 | IBD | Dr. R. Kempiński |
| Lecture 3 | Malabsorption and malabsorption syndrome | Dr A. Mulak |
| Lecture 4 | Chronic non-infectious liver diseases | Dr K. Neubauer |

Classes (15 hours winter semester zimowy & 20 hours summer semester)

Dept. of Pulmonology & Lung Cancer

1. Pulmonary symptoms, types of dysnea. The reasons and diagnosis of hemoptysis. Differential diagnosis of hemoptysis

2. Diagnostic studies in pulmonology-spirometry (understand the reason PFTs are performed, basic interpretation of spirometry, know the difference between obstructive and restrictive lung disease, know how pulmonary function tests (PFT) are clinically applied. Body plethysmography, diffusing capacity, bronchial challenge testing, pulse oximetry. The role of radiological imaging in pulmonary diagnosis (chest X-ray, CT scans, PET CT)

3. Airway obstruction: bronchial asthma, acute bronchitis, chronic obstructive pulmonary disease- etiology, pathophysiology, symptoms and signs, physical examination. Staging of the severity of asthma and levels of asthma control, diagnostic tests, examination of the blood and sputum, chest X-ray. Static lung volumes and capacities (TLC, FRC, RV). General principles of treatment.

4. Interstitial lung diseases (ILD)- What causes ILD? What are the symptoms of ILD. Complications of ILD (pulmonary hypertension, cor
pulmonale, respiratory insufficiency). How is ILD diagnosed? Treatment of ILD (corticosteroids, azathioprine, imuran, cyclophosphamide) Smoking cessation

5. Sleep apnea: symptoms, causes & risk factors of obstructive sleep apnea. Effects of sleep apnea on health (sleep deprivation and oxygen deprivation), diagnosis and treatment.


Classes (15 hours winter semester zimowy & 20 hours summer semester)

Dept. of Angiology, Systemic Hypertension & Diabetology

1. The ground of the angiological examination:
   - anamnesis, including risk factors for atherosclerosis and predisposing factors for peripheral arterial disease
   - physical examination with assessment of peripheral arterial, venous and lymphatic system
   - accessory examinations and laboratory tests in vascular diseases

   Peripheral arterial disease (PAD):
   - types of obstruction, stages of PAD, prognosis
   - arteriosclerosis obliterans
   - autoimmune peripheral vasculitides (arteritides)
   - Buerger’s disease

   Medical treatment of peripheral arterial disease (PAD):
   - pharmacological, physiotherapy, prophylaxis

2. Acute limb ischemia: etiology, diagnosis and management

   Thoracic outlet syndrome (TOS): pathogenesis, differential diagnosis, treatment
   Raynaud’s phenomenon, livedo reticularis: pathogenesis, differential diagnosis, treatment

3. Diabetic vascular complications: pathogenesis and clinical manifestation of micro- and macroangiopathy
   Diabetic foot syndrome: epidemiology, prophylaxis, medical treatment, invasive treatment (indications for endovascular treatment, surgical treatment, and amputation), topical treatment, physiotherapy

4. Symptomatology and diagnosis of peripheral venous diseases
   Thrombophilia: definition, diagnosis
### superclass Lymphatics, vascular system

| 5. | Venous thromboembolic disease: pulmonary embolism, deep vein thrombosis  
|    | - diagnostic rules  
|    | - pharmacological treatment  
|    | - indications for inferior vena cava filter placement  
|    | Prophylaxis of trophic lesions |

| 6. | Chronic lymphatic insufficiency  
|    | Treatment of venous and lymphatic ulcers |

|    | Secondary hypertension in the course of renal artery stenosis (renovascular hypertension): indications for endovascular treatment |

### Classes (20 hours winter semester zimowy & 15 hours summer semester)

**Department of Nephrology and Transplantation Medicine**

| 1. | Chronic kidney disease definition, stages. Practical approach to the patient with suspected kidney disease; major complaints and symptoms: arterial hypertension, loin pain, swellings, oliguria and polyuria. Evaluation of kidney function lab results and abnormal urinary sediment, additional examinations e.g. ultrasound, renal scintigraphy, renal angiography, computed tomography. Approach to the patient with hematuria and proteinuria. |

| 2. | Acute glomerulonephritis and primary chronic glomerulonephritis; nephrotic syndrome, indications for biopsy; supportive treatment, principles of steroid therapy. |


| 6. | Renal involvement in systemic diseases: lupus nephritis, vasculitis, diabetes mellitus, malignancy. |


### Classes (20 hours winter semester zimowy & 15 hours summer semester)

**Department of Gastrology & Hepatology**


Classes summer semester, 19hours

transplantation. Primary and secondary liver tumors.


SEMINARS

Winter semester (VII) SEMINARS:
1. Sarcoidosis - Ewa Passowicz-Muszyńska
2. Chronic obstructive pulmonary diseases (COPD) - Paweł Plesiak
3. Pulmonary function tests - Paweł Plesiak

Summer semester (VIII) SEMINARS:
1. Acute disorders in pulmonolgy - Anna Brzecka
2. Pneumonia - Paweł Plesiak
3. Pleural diseases - Monika Kosacka
4. Pulmonary embolism - Monika Kosacka

Seminars – Department of Gastrology & Hepatology winter semester 4, summer semester 3

Seminars Winter semester
1. Abdominal pain, vomiting.
2. GI endoscopy: indications, contraindications, complications.
3. Heartburn, eructation, dysphagia
4. Constipation, diarrhoea, meteorismus

Seminars Summer semester
1. Dietetician treatment in GI tract diseases
2. GI bleeding. Screening laboratory tests in GI tract diseases
3. Ascites, jaundice, skin pruritus

 unary semester 4.

1. Peripheral arterial disease – manifestation, treatment rules
2. Thrombophilia – definition, diagnosis
3. Diabetic foot syndrome
4. Thromboangiitis obliterans – differential diagnosis, treatment
5. Image examinations in vascular diseases
6. Indications and contraindications for endovascular treatment
7. Ulcerations of lower limbs in vascular diseases – differential diagnosis, treatment rules

Seminars - Department of Nephrology and Transplantation Medicine, winter semester 4 summer semester 3

Seminars:
1. Chronic kidney disease definition, stages, epidemiology of renal diseases.
2. Acute glomerulonephritis and primary chronic glomerulonephritis. Histopathological features,
3. Urinary tract infections.
5. Renal involvement in systemic diseases: lupus nephritis, vasculitis, diabetes mellitus, malignancy


2.Gerd Herold „Internal Medicine“ Publisher: iulu. com; First English Edition
(February 1, 2011)

3. M. Gabriel Khan, M.D., Joseph P. Lynch, Pulmonary Diseases and Therapy: A practical Approach. Publisher Williams & Wilkins, 1977


Requirements concerning instructional aids -
Multimedia projector, notebook, laptop, pendrive,

Conditions for successful completion of course:
Credit test in summer semester, attendance at classes, students performance at all levels activity, clinical skills, assimilation of new knowledge, work ethic, humanistic qualities

Name and address of unit conducting course, contact information (tel./email)
Department of Pulmonology and Lung Cancer.
53-439 Wrocław, ul. Grabiszynska 105
email: r.jankowska@wp.pl; Phone: (71)-33-49-559

contact: Ewa Passowicz-Muszyńska, email: emuszn@wp.pl
Phone: (71)-33-49-700

Person responsible for the course for a given year
Prof. dr hab. Renata Jankowska

Signature of head of unit conducting the course

Signature of dean

Data sporządzenia sylabusa: 08.04.2014