



CLINICAL PATHOLOGY

1. Information about the program

1.1.	UNIVERSITY: "GRIGORE T. POPA" UNIVERSITY OF MEDICINE AND PHARMACY OF IAȘI
1.2.	FACULTY: PHARMACY SCHOOL / DEPARTMENT: MEDICAL DEPARTMENT I
1.3.	SUBJECT: CLINICAL PATHOLOGY
1.4.	STUDY FIELD: HEALTH
1.5.	STUDY CYCLE: UNDERGRADUATE
1.6.	STUDY PROGRAMME: PHARMACY

2. Subject data

2.1.	SUBJECT: CLINICAL PATHOLOGY						
2.2.	Module leader: Prof. Lucia Corina Dima-Cozma, PhD						
2.3.	Seminar leader: Prof. Lucia Corina Dima-Cozma, PhD						
2.4. Year of study	IV	2.5. Semester in which is taught	I	2.6. Evaluation type	C1	2.7. Subject status	Compulsory

3. Duration of the course (hours per semester)

3.1. Number of hours / week	3	3.2. Number of hours / week	1	3.3. Seminar / lab	2
3.4. Total number of learning hours	42	3.5. Total number of learning hours	14	3.6. seminar / lab	28
3.7. Distribution of activities in the course					hours
Study based on the manual, printed course, bibliography and notes					2
Additional research in the library, on specialized e-platforms and field study					2
Preparation for seminars, practical courses, portfolios and essays					1
Tutoring					1
Assessment					2
Other activities					-
3.8. Number of hours of individual study					6
3.9. Number of hours per semester					50
3.10. Number of ECTS					2

4. Previous Knowledge (if applicable)

4.1. course related	Related to course of Anatomy, Physiology, Pathophysiology, Biochemistry.
4.2. skill related	Skills related to the courses of Anatomy, Physiology, Pathophysiology, Biochemistry.



5. Requirements (if applicable)

5.1. course conditions	PC projections facilities.
5.2. seminar / laboratory conditions	Access of the student in the clinic, laboratory spaces, PC projections facilities.

6. Specific Skills Acquired

Professional skills displayed by knowledge and skills	<ul style="list-style-type: none"> • Clinical evaluation of the patient with respiratory disease: symptoms and signs, history, type of medication, major contraindications and side effects. • Evaluation of the dyspnea and parameters of the spirometry, reading of the chest radiography. • Clinical evaluation of the patient with cardiovascular disease: symptoms and signs, history, type of medication, major contraindications and side effects. • Measurement of blood pressure and heart rate. • Recording and reading of the electrocardiogram in emergency (acute ischemia, myocardial infarction, rhythm troubles). • Clinical evaluation of the patient with digestive and metabolic disease: symptoms and signs, history, type of medication, major contraindications and side effects. • Clinical evaluation of the patient with renal disease: symptoms and signs, history, type of medication, major contraindications and side effects. • Interpretation of the routine biological parameters.
Transversal skills (role skills, professional and personal skills)	<ul style="list-style-type: none"> • Communication with the patient, role of anamnesis. • Education of the patient with chronic disease. • Team work.

7. Course Objectives (confirmed by the grid of specific skills acquired)

7.1. General Objective	The students will develop abilities for interaction with the patient and the physician and for understanding the major diseases.
7.2. Specific Objectives	<ul style="list-style-type: none"> - theoretical information about the most important and frequent diseases in the respiratory, cardiovascular, digestive, metabolic and renal diseases; - acquiring the practical skills for taking anamnesis and learning some maneuvers of clinical examination; - interpretation of laboratory parameters; - acquiring the practical skills for contributing to the education of the patient with chronic disease.

8. Contents

8.1. Course	Teaching methods	Observations
Clinical pathology of the respiratory system: signs and symptoms, clinical and paraclinical description, principles of diagnosis and treatment of the patients with COPD, asthma, bronchiectasia	<ul style="list-style-type: none"> - Active-integrative - PC based projection 	2 hours
Clinical pathology of the respiratory system: clinical and paraclinical description, principles	<ul style="list-style-type: none"> - Active-integrative - PC based 	2 hours

<p>of diagnosis and treatment of the patients with pneumonia, pleuresia, bronchopulmonary neoplasia</p> <p>Clinical pathology of the cardiovascular system: signs and symptoms, clinical and paraclinical description, principles of diagnosis and treatment of the patient with ischemic heart disease, valvular disease</p> <p>Clinical pathology of the cardiovascular system: clinical and paraclinical description, principles of diagnosis and treatment of the patient with hypertension, heart failure, rhythm troubles, peripheral arterial disease</p>	<p>projection</p> <ul style="list-style-type: none"> - Active-integrative - PC based projection <ul style="list-style-type: none"> - Active-integrative - PC based projection 	<p>2 hours</p> <p>2 hours</p>
<p>Clinical pathology of the metabolic system: clinical and paraclinical description, principles of diagnosis and treatment of the patient with diabetes mellitus and obesity</p> <p>Clinical pathology of the digestive system: symptoms and signs, clinical and paraclinical description, principles of diagnosis and treatment of the patient with esophagitis, gastric and duodenal ulcerus, chronic hepatic diseases</p> <p>Clinical pathology of the renal system: symptoms and signs, clinical and paraclinical description, principles of diagnosis and treatment of the patient with glomerular, interstitial disease, renal failure</p>	<ul style="list-style-type: none"> - Active-integrative - PC based projection <ul style="list-style-type: none"> - Active-integrative - PC based projection <ul style="list-style-type: none"> - Active-integrative - PC based projection 	<p>2 hours</p> <p>2 hours</p> <p>2 hours</p>
<p>Bibliography:</p> <ol style="list-style-type: none"> 1. Bates B. <i>A guide to physical examination and history taking</i>, V. Ed. IB Lippincott, 1991. 2. Blenkinsopp A, Paxton P. <i>Symptoms in the pharmacy</i>. Fifth edition. Blackwell Publishing, 2005. 3. Harrison. <i>Principles of internal medicine</i>. 16-th edition. Ed. Mc Graw Hill, 2009. 4. Ewald GA, McKenzie CR. <i>The Washington Manual of Medical Therapeutics</i>. 28th edition. Little, Brown and Company, 1995. 		
<p>8.2. Seminar / Practical lessons</p>	<p>Teaching Methods</p>	<p>Observations</p>
<p>Anamnesis of the patient, basic clinical examination</p> <p>Routine biological evaluation of the patient</p> <p>Symptoms and signs of the respiratory diseases, clinical examination of the thorax</p>	<p>Demonstration of the technique to be acquired</p> <p>Team work</p> <p>Individual practical activity</p> <p>Demonstration of the technique to be acquired</p> <p>Team work</p> <p>Individual practical activity</p> <p>Demonstration of the technique to be acquired</p> <p>Team work</p>	<p>2 hours</p> <p>2 hours</p> <p>2 hours</p>

COPD, asthma (presentations of clinical cases)	Individual practical activity Demonstration of the technique to be acquired Team work	2 hours
Bronchopulmonary neoplasia, bronchiectasia, pleural diseases (clinical cases). Practical demonstration for the methods of corticoids administration and discussion of side effects	Individual practical activity Demonstration of the technique to be acquired Team work	2 hours
Principles for chest radiography interpretation	Individual practical activity Demonstration of the technique to be acquired Team work	2 hours
Electrocardiogram technique, correct measurement of blood pressure and heart rate	Individual practical activity Demonstration of the technique to be acquired Team work	2 hours
The main pathological modification of electrocardiogram in ischemic heart disease and rhytm troubles	Individual practical activity Demonstration of the technique to be acquired Team work	2 hours
Exemplifications and clinical cases for ischemic heart disease, hypertension; interactive discussions about cardiovascular risk factors	Individual practical activity Demonstration of the technique to be acquired Team work	2 hours
Exemplifications and clinical cases for valvular diseases, rhytm troubles, arterial diseases, heart failure	Individual practical activity Demonstration of the technique to be acquired Team work	2 hours
Interactive discussions about active depistation of the diabetes mellitus, monitorisation and complication prevention	Individual practical activity Demonstration of the technique to be acquired Team work	2 hours
Exemplifications and clinical cases presentations in digestive pathology (esophagytis, gastric and duodenal ulcerus, chronic hepatic diseases)	Individual practical activity Demonstration of the technique to be acquired Team work	2 hours
Exemplifications and clinical cases discussion in renal pathology (glomerular and interstitial	Individual practical activity Demonstration of the technique to be acquired	2 hours

diseases, renal failure)	Team work Individual practical activity	
Revision	Team work Individual practical activity	2 hours
Bibliography:		
<ol style="list-style-type: none"> 1. Bates B. <i>A guide to physical examination and history taking</i>, V. Ed. IB Lippincott, 1991. 2. Blenkinsopp A, Paxton P. <i>Symptoms in the pharmacy</i>. Fifth edition. Blackwell Publishing, 2005. 3. Harrison. <i>Principles of internal medicine</i>. 16-th edition. Ed. Mc Graw Hill, 2009. 4. Ewald GA, McKenzie CR. <i>The Washington Manual of Medical Therapeutics</i>. 28th edition. Little, Brown and Company, 1995. 		

9. The agreement between the course contents and the expectations of the representatives of the epistemic communities, professional associations and employers in the field related to the program

The discipline offer to the student the knowledge and practical skills necessary for actual understanding and interaction with a patient with major disease in the clinical respiratory, cardiovascular, digestive, metabolic and renal disease. As an important goal, the discipline aim to offer to the students the necessary background for understanding the practical evaluation of the diagnosis and treatment and for the intervention of the pharmacist in the long term medical education of the patient (for monitoring and correct administration of drugs). The analytic program is discussed in discipline and revised annually and the evaluation is performed regarding the correspondence between the students abilities and the expectations of the academic communities, professional associations and employers.

10. Assessment

Activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Percentage of the final grade
10.4. Course	Theoretical evaluation..	Written test	50 %
10.5. Seminar / Practical lessons	Practical evaluation.	Practical project	40 %
	Average grade of ongoing examinations.	Ongoing examinations	10 %
Minimal standard of proficiency: 5 mark.			