

**DANYLO HALYTSKYI LVIV NATIONAL MEDICAL UNIVERSITY**

“Approved”  
The first prorector for pedagogical work  
prof. Gzegotskyi M. R. \_\_\_\_\_  
“ \_\_\_ ” \_\_\_\_\_ 2015

**SYLLABUS**

**of the course "Manufacturing clinical practice (therapy)"  
for the 4th year students of medical faculty, on specialty:**

7.12010001 “General Medicine”

7.12010002 “Pediatrics”

7.12010005 “Medical prophylaxis”

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Discussed and approved on the meeting  
of the Internal Medicine Department № 1  
protocol № \_\_\_\_\_  
“ \_\_\_ ” \_\_\_\_\_ 2015  
Head of the department  
\_\_\_\_\_ Abrahamovych O.O

Approved by  
the profile methodical commission on  
therapeutic disciplines  
protocol № \_\_\_\_\_  
“ \_\_\_ ” \_\_\_\_\_ 2015  
Headed by \_\_\_\_\_ Radchenko O.M.

**Syllabus was worked out by**

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## 1. EXPLANATORY NOTE

The program for "Manufacturing clinical practice" for the 4<sup>th</sup>-year students of higher medical educational institutions of Ukraine III-IV accreditation levels are made up for specialties 7.12010001 - "General medicine", 7.12010002 - "Pediatrics", 7.12010005 – "Medical prophylaxis" with direction of 1201 "Medicine" according to educational qualification characteristics and educational-vocational training program for the specialists training, approved by the order of MES of Ukraine from 16.04.03 № 239, and according to the curriculum developed by Ministry of Health of Ukraine dated 23.07.07 № 417. Education for these specialties is held for 4<sup>th</sup> year students according to united educational plan.

According to the curriculum, the manufacturing clinical practice must be held in VIII semester, when the students has appropriate knowledge in main disciplines: internal medicine, surgery, pediatrics and obstetrics.

Manufacturing practice of medical students as the assistant of a doctor of the therapeutic, surgical, pediatric departments and lying-in hospital. The clinical (doctors') practice of the 4<sup>th</sup>-year students with the duties of a doctor continued for 4 weeks – 1 week in each of these departments: therapeutic, surgical, pediatric departments and lying-in hospital.

<b>Title of the practice</b>	<b>The number of weeks</b>	<b>The number of the credits/hours</b>	<b>The educational year/ VIII semester</b>	<b>The type of control</b>
Manufacturing medical practice in therapeutic department of the hospital	1	1,5 credit / 45 h	IV course/ VIII semester	Differentiated test

## 2. PURPOSE AND TASKS OF MANUFACTURING CLINICAL PRACTICE IN THERAPEUTIC DEPARTMENT OF THE HOSPITAL

Is to consolidate practical skills acquisition in scope of aims of the educational-vocational program of the specialist's training on specialties: 7.12010001 - "General Medicine", 7.12010002 - "Pediatrics", 7.12010005 - "Medical prophylaxis."

### **The student should know how to:**

- conduct a survey and physical examination of patients and analyze the results,
- plan the scheme of the clinical course of the disease,
- analyze the results of laboratory and instrumental methods of investigation,
- identify the leading pathological symptoms and syndromes of the most common diseases,
- conduct differential diagnosis and to set a preliminary diagnosis of the most common diseases,
- interpret general principles of treatment, rehabilitation and prevention of the most common diseases
- participate in providing first aid in case of urgent conditions,
- execute necessary medical manipulations,
- master the knowledge of moral-deontological principles of medical specialist and principles of professional subordination in the clinic.

The tasks of the practice is to consolidate knowledge and skills in the study of basic clinical and theoretical subjects (examination of the patient, establishing the clinical diagnosis, treatment prescription) and the further improvement of practical skills, get acquainted with organization of medical affairs and conditions of the doctor in the city and region, as well as consolidate skills sanitary-educational work.

### **3. PRACTICE CONTENT**

#### **1. The structure and organizing of the work in a hospital; amount and form of the work of a doctor-intern (6 hours):**

- to examine the structure of the medical institution;
- to know the organization of the work in a hospital;
- to inspect with the amount and forms of the work of doctor-intern;
- to learn the principles of providing routine and emergency medical care for the therapeutic patient,
- to learn how to keep medical records,
- to learn the regulatory documents necessary for the therapist,
- to learn how to use the principles of ethics and deontology,
- to get acquainted with modern techniques in patients counseling in practice of the therapist,
- to perform the work of the assistant of a doctor
- to participate in rounds of the head of the department and ward physician, morning medical conferences, clinical conferences in the department and clinical-patomorphological conferences of a hospital.

#### **2. Complaints, anamnesis, physical examination of the patient; diagnosis, examination and treatment plan (6 hours).**

- to be able to conduct the curation of the thematic patients (collect complaints and medical history, conduct the physical examination of the patients, to justify the diagnosis, examination plan and treatment plan, to evaluate the results of laboratory and instrumental methods of investigation, fulfill the medical history and extracts, prescribe, maintain temperature sheets).

#### **3. Diagnosis and assistance in emergency conditions. The technique of injection (6 h.)**

- to be able to diagnose and assist in emergent treatment in case of status asthmaticus, asthma attacks, hepatic encephalopathy, hypertensive crisis, angina, acute myocardial infarction, cardiac asthma, pulmonary edema, disorders of the rhythm and conduction, acute renal failure, complicated peptic ulcer, hepatic colic, complications after vaccination (urticaria, angioedema, anaphylactic shock).
- to learn to perform intravenous, intramuscular, subcutaneous and intravenous infusions,
- to determine the blood group,
- to be able to conduct test for blood compatibility,
- to learn to transfuse blood and blood substitutes.

#### **4. Registration and decoding of the ECG, results of the echocardiography, ultrasonography of the internals, endoscopic methods of the diagnosis. Fundamentals of vaccination (6 hrs.):**

- to record and interpret ECG in various pathological conditions independently,
- to interpret data echocardiography, to distinguish the structure of the heart,
- to learn the principles of conducting and interpretation of the results of ultrasound of the internal organs (size, location, structure)
- to interpret the results of endoscopic examination,
- to take part in probing the stomach and duodenum,
- to know the basics of regulatory documents on vaccination,
- to be able to assist the patients with postvaccinal complications.

#### **5. 1. Laboratory and instrumental methods of diagnosis in the therapeutic department (4 hours):**

- to learn how to interpret data of the analysis (blood, urine, feces, sputum, gastric and duodenal contents, pleural fluid),
- to take part in the pleural puncture and other practical skills,
- to interpret data and X-ray radiography,
- to learn to assess the performance of spirometry.

#### **5. 2. Differentiated test (2 hours)**

**LIST OF THE SKILLS THAT HAS THE STUDENT MUST LEARN DURING  
PRACTICE AND ASSESSMENT IN POINTS**

<b>N</b>	<b>The list of skills and abilities</b>	<b>Points</b>
1-6.	Methods of physical examination of patients and the evaluation of the state of: - cardiovascular system, - respiratory system, -gastrointestinal system, - urinary system, - musculoskeletal system, - endocrine system.	3-5 3-5 3-5 3-5 3-5 3-5
7.	Measuring the blood pressure on the upper and lower extremities	3-5
8.	Assessment of CBC and biochemical analysis, blood troponin test	3-5
9.	The interpretation of urinalysis and results of Zimnitskiy, Nechyporenko, Reberg tests	3-5
10.	Interpreting of the coagulogram, lipidogram	3-5
11.	Interpreting of the ELISA for viral hepatitis	3-5
12.	Interpreting gastric and duodenal probing	3-5
13.	Methods of recording and decoding of ECG, interpretation the conclusion of Holter monitoring of ECG and veloergometry	3-5
14.	Interpreting the results of echocardiography	3-5
15.	Interpreting the indicators of respiratory system (spirometry)	3-5
16.	Interpreting rthe results of radiography and fluoroscopy	3-5
17.	Interpreting the results of computed tomography and nuclear magnetic imaging	3-5
18.	Interpreting the results of endoscopic studies and data of pH-measuring	3-5
19.	The clinical interpretation of ultrasound examination of the abdomen	3-5
20.	Interpretation of indicators for identifying diabetes and thyroid disease	3-5
21.	Technique of pleural puncture	3-5
22.	Technology of the bowel cleaning	3-5
23.	Setting the allergic tests (intradermal, scarification) before administration of drugs. Injection of drugs (IV, IM, SC), blood-letting, blood grouping and Rh factor determining.	3-5
24.	Treatment of internal diseases under existing protocols of medical care approved by MPH of Ukraine	3-5
	<b>Total</b>	<b>72-120</b>

**Note.**

0 points - a student presumed substantial errors during the answer and performing the practical skills;

3 points - a student has learned theoretical material, practical training is satisfactory, but it is assumed errors in performing manipulation, interpretation of the results of additional research methods;

4 points - a student has learned the theoretical material able to methodically examine a patient properly, perform diagnostic and therapeutic manipulation, but assumed some inaccuracies during the answering and performance of practical skills;

5 points - a student has learned the theoretical material thoroughly, methodically properly inspect the patient, performs diagnostic and therapeutic manipulations.

#### 4. CONTROL METHODS

Shows the assessment system for practices using traditional (4-point) and 200-point scale. The grade for practice is the total of scores for performance of student's practical skills that are tested by the practice supervisor from the base of practice (a maximum of 120 points, minimum - 72 points) and points for the final control, put during the differentiated test (maximum - 80 points, minimum - 50 points).

The points for the discipline, are converted into the ECTS scale, and into 4-point scale. Points of the ECTS scale cannot be converted into the 4-point scale and vice versa. Scores of the students enrolled in one specialty, ranked by ECTS scale as follows:

ECTS evaluation	Statistical index
<b>A</b>	<b>Best 10% of the students</b>
<b>B</b>	<b>Next 25% of the students</b>
<b>C</b>	<b>Next 30% of the students</b>
<b>D</b>	<b>Next 25% of the students</b>
<b>E</b>	<b>The latest 10% of the students</b>

The points for practice for students who completed the program successfully converted into the traditional 4-point scale by absolute criteria:

Points	Mark according to 4-point scale
<b>170 -200 points</b>	<b>5</b>
<b>140-169 points</b>	<b>4</b>
<b>From the minimum number of points that a student must score to 139 points</b>	<b>3</b>
<b>Lower than the minimum number of points that a student must score</b>	<b>2</b>

Final control of discipline "Manufacturing clinical practice" (Clinical Practice in therapeutic department of a hospital) includes the practical skills and the tasks solving, in which it is needed to interpret the results of the laboratory and instrumental investigations.

**EVALUATION CRITERIA FOR THE FINAL CONTROL  
OF THE DISCIPLINE "MANUFACTURING CLINICAL PRACTICE"  
MEDICAL PRACTICE IN THE THERAPEUTIC DEPARTMENT OF A HOSPITAL**

Task	Points	Mark (min.-max.)
Practical skills № 2	0-10-15-20	20-40
Labs № 3	0-10-15-20	15-20
Investigations № 3	0-10-15-20	15-20
<b>Total</b>		<b>50-80</b>

Note.

- 0 points - a student presumed substantial errors during the answer and practical skills;  
 10 points - a student has learned theoretical material, practical training is satisfactory, but it is assumed errors in performing manipulation, interpretation of the results of additional research methods;  
 15 points - a student has learned the theoretical material able to methodically examine a patient properly, perform diagnostic and therapeutic manipulation, but assumed some inaccuracies in the answer and performance of practical skills;  
 20 points - a student has learned the theoretical material thoroughly, methodically properly inspect the patient, performs diagnostic and therapeutic manipulations.

**5. THE QUESTIONS FOR THE STUDENTS TO PREPARE  
TO FINAL CONTROL  
on the discipline "Manufacturing clinical practice"  
Clinical practice in the therapeutic department of a hospital**

1. The main duties and professional activities of a doctor of the therapeutical department.
2. The survey and physical examination of the patients with major diseases of the cardiovascular, digestive, respiratory, blood-forming, genito-urinary, musculo-skeletal and the endocrine systems.
3. The evaluation of the results of the clinical examinations of blood, urine and feces.
4. The evaluation of the results of biochemical and bacteriological examinations of blood, urine and sputum.
5. The evaluation of the results of ECG, echocardiography, spirometry, pH-metry, X-ray, ultrasonography of the internals, endoscopy.
6. Justification and formulation of the clinical diagnosis.
7. Principles of the treatment, primary and secondary prevention of major disorders of the respiratory, digestive, blood-forming, cardiovascular, genitor-urinary, musculo-skeletal and endocrine systems.
8. Urgent help in case of asthmatic status, asthma attacks, bronchial obstructive syndrome, hepatic encephalopathy, hypertensive crisis, strokes, acute myocardial infarction, cardiac asthma, pulmonary edema, arrhythmias and conduction, acute renal failure, complicated peptic ulcer, hepatic colic, complications of vaccination (urticaria, angioedema, anaphylactic shock).





	under the supervision of a doctor	its decoding	
14 <sup>00</sup> -15 <sup>00</sup>	Presence during echocardiography, ultrasound of internal organs and so on.	Interpreting of the echocardiography, ultrasound of internal organs	2 2

Signature of the Head of the Practice \_\_\_\_\_

**Characteristics of the student**

Student of LNMU

\_\_\_\_\_  
(Full Name)

Passed the practice in \_\_\_\_\_

(name of the department, hospital)

During the practice

completed \_\_\_\_\_

\_\_\_\_\_  
During the practice the student has proved her(him)self as \_\_\_\_\_

Conclusions and evaluation:

Head of Practice: \_\_\_\_\_

(signature) (surname, initials)

Head Doctor: \_\_\_\_\_

(signature) (surname, initials)

**References:**

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**Summary digital report on the results of the manufacturing clinical practice in internal medicine**

Student \_\_\_\_\_ 4 course

Medical faculty, group \_\_\_\_\_

Base (Hospital) \_\_\_\_\_ city \_\_\_\_\_

<b>№</b>	<b>The list of skills and abilities</b>	<b>Points</b>	<b>Signature of the supervisor of practice from the base of practice</b>
1	2	3	4
1- 6.	Methods of physical examination of patients and the evaluation of the state of: - cardiovascular system, - respiratory system, -gastrointestinal stystem, - urinary system, - musculoskeletal system, - endocrine system.		
7.	Measuring the blood pressure on the upper and lower extremities		
8.	Assessment of CBC and biochemical analysis, blood troponin test		
9.	The interpretation of urinalysis and results of Zimnitskiy, Nechyporenko, Reberg tests		
10.	Interpreting of the coagulogram, lipidogram		
11.	Interpreting of the ELISA for viral hepatitis		
12.	Interpreting gastric and duodenal probing		
13.	Methods of recording and decoding of ECG, interpretation the conclusion of Holter monitoring of ECG and veloergometry		
14.	Interpreting the results of echocardiography		
15.	Interpreting the indicators of respiratory system (spirometry)		
16.	Interpreting rthe results of radiography and fluoroscopy		
17.	Interpreting the results of computed tomography and nuclear magnetic imaging		
18.	Interpreting the results of endoscopic studies and data of pH-measuring	3	4

1	2	3	4
19.	The clinical interpretation of ultrasound examination of the abdomen		
20.	Interpretation of indicators for identifying diabetes and thyroid disease		
21.	Technique of pleural puncture		
22.	Technology of the bowel cleaning		
23.	Setting the allergic tests (intradermal, scarification) before administration of drugs. Injection of drugs (IV, IM, SC), blood-letting, blood grouping and Rh factor determining.		
24.	Treatment of internal diseases under existing protocols of medical care approved by MPH of Ukraine		
25.	Interpreting of the coagulogram, lipidogram		
<b>26.</b>	<b>Total</b>		

<b>№</b>	<b>Practical skills</b>	<b>Points</b>	<b>Signature of the supervisor of practice from the base of practice</b>
<b>1.</b>	<b>The final control of practical skills</b>		

<b>Mark for the differentiated tests</b>	<b>Points</b>	<b>Mark</b>	<b>Signature of the supervisor of practice from the base of practice</b>

### **CONCLUSIONS ON THE PRACTICE**

1. Conclusions on the practice are carried out in the presence of all the accounting documents provided by the program of practice and the characteristics of the manufacturing activity of the student during practice, signed by the direct and general manager from the practice base.
2. Evaluation of the mastering of practical skills and abilities by the student is made using criteria specified in the work program of the practice and in the student's practice diary. The mark on the practice is the sum of the points for the performance of student's practical skills and points for final control. Performing the daily checks of practical skills of the student is made by the practice supervisor from the base and their implementation is vided by him in practice diary of the student. The Head of the Practice of Danylo Halytsky Lviv National Medical University (the University) systematically monitors keeping the diaries by the students. The final control after the manufacturing practice can be conducted by the students who received for the implementation of the practical skills of the certain kind not less than 72 points, presented a report on the practice and positive characteristics of general manager of the basis of practice. Final control, according to the practice program, the students complete at the last day of practice in the presence of committee, comprised of practice supervisors from the University and, where possible, from the bases of practice.

3. Assessment of the practice is filling by the head of practice from the University in the diary, student's academic record and test-examination information sheet. Within three days after the practice ended, the practice supervisor from the University delivers a statement to the appropriate dean's office, a report on the practice – to the University Practice Department. Practice diary is kept at the department for 1 year.
4. The mark for the practice is taken into the account when considering the appointment of scholarships along with estimates for other exams and differentiated tests.
5. Students who have not completed the program of practice without important reasons, received poor marks for practice and do not eliminate the academic arrears before the next semester, must be expelled from the University.
6. Summary of the practice is annually heard and discussed by the relevant departments, specialized methodical commissions, academic councils of the faculties and University.