



Syllabus on the Discipline « Clinical practical training on Surgery »

1. General information	
Faculty	Medical Faculty
Educational program <i>(field, specialty, level of higher education, form of education)</i>	22 Health care Specialty 222 "Medicine" second (master's) level of higher education, full-time
Academic year	2023 - 2024
Name of discipline, code <i>(internet)</i>	Surgery, Educational component 44 https://new.meduniv.lviv.ua/kafedry/kafedra-hirurgiyi-1/
Department <i>(name, address, phone, e-mail)</i>	Surgery №1, 79010, Lviv, Yu. Roofa str., 4, Kaf surgery 1@meduniv.lviv.ua
Head of the Department <i>(e-mail)</i>	Lukavetsky Oleksiy Vasyliovych, MD, PhD, DSc (in Medicine), Professor, Kaf surgery 1@meduniv.lviv.ua
Year of study	5th year
Semester	10
Type of discipline <i>(obligatory / by choice)</i>	Obligatory
Teachers	Professor, MD, PhD, DSc Vasyl Kolomytsev vasyl.kolomytsev@gmail.com Assoc. Professor MD, PhD Volodymyr Khomyak khomyak@gmail.com Ass. Prof. MD, PhD Jaroslav Pavlovsky pavl.jarik@ymail.com
Erasmus yes/no	no
The person responsible for the syllabus	Lukavetsky Oleksiy Vasyliovych, MD, PhD, DSc (in Medicine), Professor, Kaf surgery 1@meduniv.lviv.ua
ECTS credits	1,5
Number of hours <i>(practical classes)</i>	45
Language of instruction	Ukrainian / English
Information for consultation	According to the schedule
Clinical Base	LNMU, Dept. of Surgery №1, 79010, Lviv, Yu. Roofa str., 4, Kaf surgery 1@meduniv.lviv.ua Lviv, CHospital «LOCL», Yu. Roofa 4

2. Brief review of the subject

The clinical practical training of students of the higher medical educational establishments of III-IV levels of accreditation is an important step in preparation of a physician, as well as irreplaceable component of the educational process.

The program of the clinical practical training for students of the V year of higher medical establishments is made for specialties "General Medicine" 7.110101, "Paediatrics" 7.110104, "Medical-prophylactic practice" 7.110105 is prepared in accordance with the Regulation on the practical training of students of Danylo Halytsky Lviv National Medical University, Approved with the Scientific Council of Danylo Halytsky Lviv National Medical University on 16.09.2015 report №8-BP. Training on the above specialties are conducted during 6 years of studying.

According to the educational plan, practical training is carried out in the X semester, when students acquire knowledge of basic clinical disciplines: internal medicine, neurology, surgery, traumatology, oncology, pediatrics, obstetrics and gynecology.

Practical training of V year students is carried out at the end of the semester and therefore has no classroom hours. Most of the time practice is independent work of students controlled and evaluated by practice managers. The practice of students of medical faculties is conducted as an doctor's assistant of outpatient surgical department in the amount of professional duties of physician of outpatient department and lasts one week.

Student's activities are supervised by practice managers from the university and managers from outpatient department. Final control of Practical training on Surgery – differentiated credit – is performed on the last day of practice.

During practical training student is performing with the doctor of surgical outpatient department reception of outpatients.

During the out-patient student conduct patient's survey, physical examination, prescribe treatment and issue medical records: prescriptions, sick leaves, referrals to different examinations and consultations, letters to Disability Commission and others. Perform the disability expertise.

During the out-patient patient is conducted laboratory and other examination and, if necessary, performed invasive manipulation, outpatient surgery, cast immobilization, dressings; student accompany the patient and takes an active part in the examinations, surgical manipulations and operations.

Student with the doctor, after ambulatory care of patients, visits the home calls (primary or recurrent). In outpatients card is recorded the patient's condition and treatment is prescribed with a mark of visiting of the patient at home.

While working in the polyclinic student must acquire principles of the dispensary services. He participates in the selection of patients for follow-up on medical or social criteria, conducts a dynamic observation of patients and healthy, taken to account; assigns necessary treatment, preventive and rehabilitative measures; fills documentation used in clinical services.

Together with doctor of outpatient department student takes part in the work of Doctor's Consultative commission and Disability Commission and learn how to fill in sick leave, develop criteria for determining disability groups.

Organization of the educational process of Practical Training is carried out under the European Credit Transfer-accumulative system (ECTS). Assessment of students for Practical Training of V year is rating and is set by multi-point scale taking into account the current and final control, with definition on ECTS system and the traditional scale accepted in Ukraine. According to the MoH Ukraine Order from 23.07.2007 №414 Practical Training of students of V year is 6.0 ECTS credits; 180 hours, respectively, 1.0 ECTS credits and 30 hours for surgery.

3. Aim and goals of the subject

The main goal of Practical Training of V year students' of General Medicine is to secure knowledge and practical skills gained in the study of basic clinical and theoretical subjects and their further deepening and improvement while working in health care settings, and getting acquainted with the doctor's work in the main city and regional hospitals, the organization of medical and anti-epidemic work, with the basics of ethics and medical ethics for the acquisition and consolidation of skills of health education work, the basics of health care.

The purpose of the medical practice is to consolidate practical skills within the objectives set in education program for specialists in "General Medicine" 7.110101, "Pediatrics" 7.110104, "Medical prophylaxis" 7.110105:

- conduct an inquiry and physical examination of patients and analysis of their results in various surgical diseases;
- plan the scheme of examination of the patient depending on the clinical course of the disease;
- analyze the results of basic laboratory and instrumental methods of examination;

- identify the leading pathological symptoms and syndromes in most common surgical diseases;
- carry out differential diagnostics and make a preliminary diagnosis of the most common surgical diseases;
- interpret the general principles of treatment, rehabilitation and prevention of the most common surgical diseases;
- participate in providing emergency care in urgent cases in prehospital stage;
- execute necessary medical manipulations;
- learn the rules of writing medical records at the outpatient department;
- learn the knowledge of moral and deontological principles of medical specialist and principles of professional subordination in clinic.

Competences and results of study, formation of which promotes the discipline - the relationship with the regulatory content of the training of higher education applicants, formulated in terms of learning outcomes in the Standard.

According to demands of standard the discipline provides the acquiring by students the *competences*:

- *integral*: the ability to solve typical and complex problems and practical problems in the field of professional activity 22 "Health care", which involves the application of certain theoretical knowledge, skills, practical skills and methods of relevant professional orientation;

- *general*:

1. The ability to abstract thinking, analysis and synthesis;
2. The ability to study and to master by modern knowledge;
3. The ability to use knowledge in practical situations;
4. The ability to plan and manage by time;
5. The knowledge and understanding of presentive area and understanding of professional activity;
6. The skills of application of informative and communicative technologies;
7. The ability to adaptation and action in the new situation;
8. The ability to accept the substantiated decisions;
9. The ability to work in the team;
10. The skills of interpersonal interaction;
11. The certainty and persistence about given tasks and taken obligations;
12. The aspiring to saving of environment;
13. The ability to act on principle of ethical rationale (motives);

- *special (professional)*:

1. To call - over of anamnesis in surgical patient;
2. Carrying out of objective research of the surgical patient;
3. The estimation of severity of disease clinical signs;
4. Making of plan of investigation and evaluation their results;
5. Carrying out of differential diagnostics;
6. The providing of care for severe patient;
7. To reveal and estimate an acute medical conditions;
8. Diagnose the urgent surgical diseases: acute appendicitis, cholecystitis, pancreatitis, GI bleeding, complications of peptic ulcer, intestinal obstruction;
9. Providing of basic supporting of life and cardio-pulmonary resuscitation in accordance with modern European recommendations;
10. Treatment of the pain;
11. Administration of adequate treatment;

12. Performing of medical procedures and medical manipulations (determination of the blood pressure, carrying out of vein puncture and catheterization of the veins, application of the means for realization of intravenous transfusion, performing of subcutaneous, intramuscular injections, catheterization of urinary bladder, washing of the stomach, performing of enema;

13. Patients transportation;

14. Carrying out of the donors: blood compounds transfusion;

Detailing of competencies according to descriptors of SWU in «Competence Matrix».

4. Prerequisites of the discipline

«Surgery» as a discipline is based on the knowledge gained by students in the study of normal and pathological anatomy, topographic anatomy, normal and pathological physiology, biochemistry, histology, microbiology, pharmacology, clinical radiology, internal diseases, general surgery, anesthesiology and intensive care, hygiene, social medicine, organization and economics of health care

5. Program results of study

List of the results of study

Code of the result of study	Content of the result of study	Link to the code in the matrix of competencies
Code is created while filling out the syllabus (categories: Kn – knowledge, Ab – ability, C – competence, AR – autonomy and responsibility)	Results of study determine that the student must know, understand and be able to perform, after completing the discipline. Results of study follow from the set learning goals. To enroll in the discipline, it is necessary to confirm the achievement of each result of study.	Symbol of the Program Result of study Code in the Higher Education Standard
Kn – 1, Ab – 1, C – 1, AR – 1	Collect data on patient complaints, medical history, life history, conduct and evaluate the results of physical examination.	PR 1
Kn – 2, Ab – 2, C – 2, AR – 2	Evaluate information about the diagnosis based on the results of laboratory and instrumental investigations.	PR 2
Kn – 3, Ab – 3, C – 3, AR – 3	Highlight the leading clinical symptom or syndrome. Establish the most probable or syndromic diagnosis of the disease. Assign laboratory and / or instrumental examination of the patient. Carry out differential diagnosis of diseases. Establish a preliminary and clinical diagnosis.	PR 3
Kn – 4, Ab – 4, C – 4, AR – 4	Determine the necessary mode of work and rest during treatment	PR 4
Kn – 5, Ab – 5, C – 5, AR – 5	Determine the necessary therapeutic nutrition in the treatment of the patient.	PR 5
Kn – 6, Ab – 6, C – 6, AR – 6	Determine the principles and methods of treatment (conservative, operative) of patient.	PR 6
Kn – 7, Ab – 7, C – 7, AR – 7	Determine the tactics of urgent medical care based on the diagnosis of emergency.	PR 7
Kn – 8, Ab – 8, C – 8, ARB – 8	Provide emergency medical care based on a diagnosis of emergency.	PR 8

Kn – 9, Ab – 9, C – 9, AR – 9	Organize medical and evacuation measures among the population and servicemen, taking into account the existing system of medical and evacuation support.	PR 9
Kn – 11, Ab – 11, C – 11, AR – 11	Demonstrate the ability to perform the required medical manipulations.	PR 11
Kn – 12, Ab – 12, C – 12, AR – 12	Implement a system of anti-epidemic and preventive measures within the primary health care. Implement a system of primary prevention measures within the primary health care. Organize secondary and tertiary prevention measures among the assigned contingent of the population.	PR 12
Kn – 15, Ab – 15, C – 15, AR – 15	Determine the presence and degree of restrictions on life, type, degree and duration of disability with the registration of relevant documents.	PR 15
Kn – 16, Ab – 16, C – 16, AR – 16	Demonstrate the ability to prepare an annual report on personal activities; to conduct medical records at the clinic of surgical diseases.	PR 16
Kn – 17, Ab – 17, C – 17, AR – 17	Conduct screening for major diseases; evaluate morbidity indices, integrated health indicators; identify risk factors for the occurrence and course of diseases.	PR 17
Kn – 18, Ab – 18, C – 18, AR – 18	Identify negative environmental factors; determine the relationship between the environment and health; develop preventive measures. Carry out analysis of morbidity of the population, identifying risk groups, risk areas, risk factors. Assess the impact of socio-economic and biological determinants on the health of the individual, family, population.	PR 18
Kn – 19, Ab – 19, C – 19, AR – 19	Investigate the scope and effectiveness of the physician, department, health care institution; identify defects in activities and causes. Carry out selection and use unified clinical protocols for medical care; develop and use local health care protocols. Carry out quality control of medical care. Estimate the cost of medical services; substantiate the choice of an adequate method of financing (payment) and the choice of rational forms of organization of medical services. Apply methods of economic analysis when choosing methods of diagnosis, prevention, treatment, rehabilitation.	PR 19
Kn – 20, Ab – 20, C – 20, AR – 20	Organize the work of medical staff; to form rational medical routes of patients; organize interaction with colleagues, organizations and institutions; apply tools to promote medical services.	PR 20
Kn – 21, Ab – 21, C – 21, AR – 21	Form goals and determine the structure of personal activities.	PR 21
Kn – 22, Ab – 22, C – 22, AR – 22	Adhere to a healthy lifestyle, use the techniques of self-regulation and self-control.	PR 22
Kn – 23, Ab – 23, C – 23, AR – 23	To be aware of and guided in their activities by civil rights, freedoms and responsibilities, to raise the general educational and cultural level.	PR 23
Kn – 24, Ab – 24, C – 24, AR – 24	To demonstrate the moral and ethical principles of medical specialist and principles of professional subordination in	PR 24

	surgery			
Kn – 25, Ab – 25, C – 25, AR – 25	Organize the necessary level of individual safety (own and persons cared for) in case of typical dangerous situations in the individual field of activity.		PR 25	
6. Discipline format and scope				
Discipline format (<i>full-time / part-time</i>)	Full-time			
Type of classes	Hours	Number of groups		
practical classes	45			
7. Topics and scope of the discipline				
Code of the class type	Topic	Scope of study	Code of the study result	Teaching staff
P-1 (<i>practical class 1</i>)	Organization of surgical work and structure of surgical diseases in outpatient department. Differential diagnosis of the most common surgical diseases in outpatient department.	Students get acquainted with the most common diseases seen in outpatient department and learn to differentiate them.	Kn, Ab, C, AR – 1-6,9,11 15-17, 24,25	Prof. V. Kolomiytsev; Assoc.prof. V. Khomyak; As.prof. J. Pavlovsky
P-2 (<i>practical class 2</i>)	Acute purulent infection in outpatient department	Study of prevention and treatment of purulent infection and diseases, which can cause it.	Kn, Ab, C, AR – 1-6,9,11 15-17, 24,25	Prof. V. Kolomiytsev; Assoc.prof. V. Khomyak; As.prof. J. Pavlovsky
P-3 (<i>practical class 3</i>)	Tactics of surgeon in acute trauma in outpatient department and emergency room	Students get acquainted with the urgent trauma surgery.	Kn, Ab, C, AR – 1-6,9,11 15-17, 24,25	Prof. V. Kolomiytsev; Assoc.prof. V. Khomyak; As.prof. J. Pavlovsky
P-4 (<i>practical class 4</i>)	Peculiarities of work of oncologist, urologist, proctologist in outpatient department	To study the management of patients with diseases, treated by narrow surgical specialists.	Kn, Ab, C, AR – 1-6,9,11 15-17, 24,25	Prof. V. Kolomiytsev; Assoc.prof. V. Khomyak; As.prof. J. Pavlovsky
P-5 (<i>practical class 5</i>)	Diagnosis of emergency conditions and urgent care in outpatient department. Differentiated credit	While working on this section, students study urgent surgical pathology.	Kn, Ab, C, AR – 1-9,11 15-17, 24,25	Prof. V. Kolomiytsev; Assoc.prof. V. Khomyak; As.prof. J. Pavlovsky
8. Verification of study result				
Current control				
Forms of control and evaluation system is carried out according to the requirements of the discipline program and instruction of the system of evaluation of learning activities of students in credit-modular system of educational process, approved by the Ministry of Healthcare of Ukraine (2005). Grade for the discipline is determined based on the results of the current study and evaluation of				

students' assimilation of the separate modules according to the Act on rating system of evaluation of learning activities of students in High Medical (Pharmaceutical) Educational Establishments in Ukraine.

In carrying out all types of control (at each class, on the final class of semantic modules, on the final module control) will be applied objective methods for evaluating the level of knowledge and practical skills – MCQs for theoretical knowledge, individual control of students' actions, complicated clinical cases.

Current control carried out at each class according to the specific goals of each topic. In evaluating the learning activities of students is planned use of standardized methods of control: MCQs solving, structured written answers on open questions, control of conduction of practical skills.

Evaluation of current study: The share of each topic within a module is the same but may be different for different modules of single discipline. Evaluation of current educational system of students is described in the study program of the discipline. During each class of the module for current study student gets marks: "5" (excellent), "4" (good), "3" (satisfactory), "2" (unsatisfactory).

Mark "5" (excellent) – gets student who deeply and reliably learned program material, thoroughly, consistently, competently and methodically explains theoretical knowledge, in whose answers theory is closely related with practice. The student does not hesitate to answer on modified tasks, easily cope with the clinical cases and questions of the second and third level of knowledge assessment, shows acquaintance with monographic literature, correctly justifies the decision, possesses elements of doctor's abilities, skills and techniques of practical work. Practical skills perform without error, in professional activities can efficiently use the acquired knowledge.

Mark "4" (good) – gets student who knows program material correctly and essentially explains it, who does not make significant errors in responses to questions and in carrying out the necessary practical skills.

Mark "3" (satisfactory) – gets student who has knowledge of the basic material only, but does not learned details, not correctly formulate answers, has difficulties in performing practical skills or performs them with significant errors, has difficulties in solving clinical cases of the third level of knowledge control.

Mark "2" (unsatisfactory) - gets student who does not know a large part of the program material, makes substantial errors, uncertainly executes practical works, does not solve II-III level tasks of control.

Final control

General evaluation system	Participation to the classes during the semester – 60%/40% on a 200-point scale.	
Evaluation scales	Traditional 4-point scale, multi-point (200-point) scale, ECTS rating scale.	
Conditions of admission to the final control	The student attended all practical classes and received at least 72 points for current performance.	
Type of final control	Methods of final control	Enrollment criteria
Exam	Solve 40 test tasks.	Each test - 2 points

The maximal number of points that a student can score for the current academic activity for admission to the exam / differentiated test is 120 points.

The minimal number of points that a student must score for the current academic activity for admission to the exam / differentiated test is 72 points.

The calculation of the number of points is based on the grades obtained by the student on a 4-point (national) scale during the study of the discipline, by calculating the arithmetic mean (AM), rounded to two decimal places. The resulting value is converted into points on a multi-point scale as follows:

$$x = \frac{AM \times 120}{5}$$

Recalculation of the average mark for current activities in a multi-point scale for disciplines that end with exam.

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	120	4.45	107	3.91	94	3.37	81
4.95	119	4.41	106	3.87	93	3.33	80
4.91	118	4.37	105	3.83	92	3.29	79
4.87	117	4.33	104	3.79	91	3.25	78
4.83	116	4.29	103	3.74	90	3.2	77
4.79	115	4.25	102	3.7	89	3.16	76
4.75	114	4.2	101	3.66	88	3.12	75
4.7	113	4.16	100	3.62	87	3.08	74
4.66	112	4.12	99	3.58	86	3.04	73
4.62	111	4.08	98	3.54	85	3	72
4.58	110	4.04	97	3.49	84	< 3	Not enough
4.54	109	3.99	96	3.45	83		
4.5	108	3.95	95	3.41	82		

Percentage of students is determined among all students of the course within a corresponding specialty. Students who have been assessed FX, F ("2") are not ranked even after retaking the module. These students will automatically receive points E after retaking the module.

Mark ECTS	Statistical index
A	Best 10 % of students
B	Next 25 % of students
C	Next 30 % of students
D	Next 25 % of students
E	Last 10 % of students

9. Policy of discipline

Academic Integrity: Students' work is expected to be their original research or reasoning. Lack of references to sources used, fabrication of sources, copying, interference in the work of other students, etc. are examples of possible academic dishonesty. Identification of signs of academic dishonesty in the student's work is the basis for non-enrollment by the teacher, regardless of the extent of plagiarism or deception.

Sources of training: the source base can be provided by the teacher exclusively for educational purposes without the right to transfer it to third parties. Students are encouraged to use other literature that is not listed in available thematic plans.

10. References

1. Haimovici's Vascular Surgery / E. Ascher, F.J. Veith, P. Gloviczki [et al.] – West Sussex: Wiley-Blackwell, 2012. – 1317p.
2. Essential practice of surgery: basic science and clinical evidence / J.A. Norton, R.R. Bollinger, A.E. Chang [et al.] – New York: Springer, 2003. – 761p.
3. Textbook of endocrine surgery / O.H. Clark, Q.-Y. Duh, E. Kebebew [et al.]. – Philadelphia: Elsevier, 2005. – 828p.
4. Emergency war surgery / M.A. Cubano, M.K. Lenhart, J.A. Bailey [et al.]. – Houston: Office of the Surgeon General, 2013. – 472p.
5. Schwartz's principles of surgery / C. B. Brunicaardi ed. – 9th ed. – Texas: The McGraw-Hill Professional, 2010. – 1888 p.
6. Sabiston Textbook of Surgery / C. Townsend, R.D. Beauchamp, B.M. Evers, K. Mattox ed. – 20th ed. – Elsevier, 2016. – 2176 p
7. Schwartz's principles of surgery 2-voleme set / F. C. Brunicaardi, D.K. Andersen, T.R. Billiar [et al.] – 11th ed. – Texas: The McGraw-Hill Professional, 2019.

11. Equipment and software of the discipline / course

1. Guidelines for medical students.

2. Sets of MCQs for test control of knowledge.
3. MCQs, guidelines and selected materials of lectures on the platform for distance learning Misa.
4. Training-class of the Department.
5. Multimedia presentations, videos.

Equipment for the training-room of the Department of Surgery № 1

№.	Equipment	Qw
1.	Mannequin for cardiopulmonary resuscitation	1
2.	Ambu breathing bag	1
3.	Airways	2
4.	Phantom for stomach lavage	1
5.	Tube for stomach lavage	1
6.	Phantom for urinary bladder catheterization	1
7.	Urinary catheters: - metal - Foley catheter	1 3
8.	Model of the upper extremity for venous puncture	1
9.	Model of a limb wound	1
10.	Model of a hand with burns of various degrees	1
11.	Model of breast pathology	5
12.	Cramer splint for immobilization	3
13.	Sets for metal osteosynthesis	3
14.	Needle with adapter for puncture of the pleural cavity	1
15.	Blood grouping kit	1
16.	Negatoscope	1

12. Additional information

Responsible persons for the educational process at the department of Surgery №1 – as. prof. Volodymyr Marina;

Responsible for student's research group of the department of Surgery №1 – assoc. prof. Ihor Stoianovskyy.

*Venue of classes – **Department of Surgery №1, Lviv, Yu. Roofa str., 4.***

Links to website - <https://new.meduniv.lviv.ua/kafedry/kafedra-hirurgiyi-1/>

Syllabus compiler

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V. Khomyak, MD, PhD, associate professor;

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