

**National Pirogov Memorial Medical University, Vinnytsya**

**“APPROVE”**

Vice - Rector for Academic Affairs

Prof. Y.I. Guminskiy

“ 30 ” 08 2024 year

**“AGREED”**

Head of the Department Surgery #1

Prof. V.O. Shaprynskyi

“ 30 ” 08 2024 year

**SYLLABUS**

**of discipline “Surgery”**

**(as a part of academic discipline “SURGERY, INCLUDING PEDIATRIC SURGERY”  
in the Elective Block EB3 (“Profile Internal Medicine”))**

Specialty	222 Medicine
Educational level	the second (master's) level
Educational programme	Medicine, 2020
Academic year	2021-2022
Department	Surgery #1 with a course in urology
Lecturer	
Contact information	surgery1@vnmu.edu.ua; Pirogova str., 46, Vinnytsia
Syllabus compiler	Kryvetskyi VF, Ph.D., Assoc.

## 1. Status and structure of the discipline

Discipline status	Elective
Discipline code in EPP/ discipline place in EPP	EB 3 //discipline of professional training
Course / semester	6 <sup>th</sup> year (XI or XII semester)
The amount of discipline ( the total number of hours / number of credits ECTS)	180 hours / 6 credits ECTS
Number of content modules	1
The structure of the discipline	Practical classes – 120 hours Independent work – 60 hours
Language of study	English
Form of study	Full - time ( <i>or remote by order</i> )

## 2. Description of the discipline

**Short annotation of the course, relevance.** According to the working curriculum of National Pirogov Memorial Medical University, Vinnytsya for the specialty 222 “Medicine” a discipline “Surgery, including Pediatric Surgery” as a part of Elective Block EB3 (“Profile Internal Medicine”) is taught to applicants for EPP “Medicine” by the Department of Surgery#1 during the 6<sup>th</sup> year of study, designed for 6 credits that students learn during the 11<sup>th</sup> or 12<sup>th</sup> semesters depending on timetable.

The subject of this course is: recognition, interpretation and differentiation of the main symptoms and syndromes in the surgical clinic; etiology, pathogenesis, morphology, classifications, clinical manifestations of surgical diseases and the complications caused by them; laboratory, instrumental, radiological methods of diagnosis and interpretation of their results; diagnostic and differential-diagnostic criteria of nosologies of surgical profile; methods of conservative and invasive treatment, including conditions and indications for their use and the provision of emergency care; ways to prevent these processes and rehabilitate patients.

**Prerequisites** Normal anatomy, histology, cytology and embryology (structure of internal organs at different levels, their syntopy, skeletotopy, blood supply, lymph flow and innervation; formation of organs and systems in ontogenesis); physiology (functions of organs and systems, conditions of their implementation and interdependence); pathological anatomy, pathological physiology (morphological and functional disorders in organs and systems in different types of pathological processes and defects, their relationship, course, manifestations, methods of termination); microbiology, immunology (the main pathogens of surgical diseases, their properties, factors of aggression, methods of identification; specific and nonspecific factors of local and systemic protection); propedeutics of internal medicine (methods of physical examination and additional diagnostics of the patient, typical changes in surgical diseases), radiology (types, principles of application of methods of radiological diagnostics, semiotics of surgical diseases and their complications), internal medicine (etiology, pathogenesis, clinic, medical and physiotherapist management in diseases of internal organs), pharmacology, clinical pharmacology (groups of drugs used in surgery and rules of their use), general surgery with topographic anatomy and operative surgery (organization of surgical care, deontology and care of patients with surgical profile; wound science, hemostasis; basics of transfusiology; surgical infection, asepsis and antiseptics; syntopy, skeletotopy of internal organs, surgical accesses and main types of surgical interventions). In addition, the mastering of the subject is closely interrelated with the study of all disciplines of surgical profile (anesthesiology and intensive care, pediatric surgery, neurosurgery, otorhinolaryngology, traumatology, orthopedics, etc.)

**The purpose of the course and its significance for professional activities.** The aim of the course is a formation of the ability to use the acquired knowledge and skills, general and special competencies, as well as components of scientific research to solve professional problems of a doctor in the field of health care, the scope of which provides a list of syndromes, diseases and



emergencies, interpretation of results laboratory and instrumental research, performance of manipulations from the corresponding profile list

**Postrequisites.** The course is necessary to improve the knowledge and skills for syndromic diagnosis of diseases, differential diagnosis, recognition of emergencies, interpretation of additional research methods, selection of rational methods of conservative and invasive treatment, including conditions and indications for their use and emergency care; rehabilitation of patients, performing some medical manipulations.

### 3. Learning outcomes.

Upon completion of the study, students must:

#### **Know:**

- main symptoms and syndromes in surgery;
- etiology, pathogenesis and classification of surgical diseases;
- clinical picture, diagnostic methods and results of laboratory and instrumental research in surgical patients;
- differential diagnosis of surgical diseases;
- modern methods and algorithms of conservative and operative treatment of surgical diseases within the curriculum;
- postoperative supervision and rehabilitation of surgical diseases;
- risk factors for complications in surgical patients; emergency medical care for urgent surgical diseases and conditions

#### **Be able:**

- interpret the etiology, pathogenesis and classification of surgical diseases;
- recognize the clinical picture of the main thoracic cavity, endocrine system surgical diseases;
- identify diagnostic methods and interpret the results of laboratory and instrumental research;
- to carry out differential diagnosis of thoracic cavity, endocrine system diseases;
- to compile algorithms and schemes of their conservative and surgical treatment;
- prescribe postoperative treatment and rehabilitation of patients with surgical pathology;
- identify risk factors for complications in surgical patients;
- provide medical care for urgent conditions of surgical profile in accordance with the requirements of the EPP "Medicine";
- perform medical manipulations of the surgical profile in accordance with the requirements of the EPP "Medicine";
- demonstrate mastery of moral and deontological principles of a medical specialist and the principles of professional subordination in surgery;

### 4. Content and logistic of the discipline

The course includes 8 topics that make up one content module.

<b>Module</b> "Surgery, including Pediatric Surgery", Section "Surgery"	11 <sup>th</sup> or 12 <sup>th</sup> semester 120 hours / 6 credits	<b>Practical classes</b> <ol style="list-style-type: none"> <li>1. Acute abdomen. Diagnostics, differential diagnostics, surgical tactic.</li> <li>2. Pain in the perineum and rectum. Diagnosis and principles of treatment of proctological pathology</li> <li>3. Vomiting and constipation. The estimation at differential diagnostics of abdominal diseases. Intestinal obstruction. Surgical tactic. Surgical complications of infectious diseases. Differential diagnostic of acute surgical and infectious diseases</li> <li>4. Destructive pancreatitis, its complications and results</li> <li>5. Local and the diffuse inflammatory and purulent processes in abdomen. Etiology, pathogeny, clinic, diagnostics and treatment</li> <li>6. Obstructive jaundice. Reasons. Differential diagnostic, tactic. The modern methods of treatment. Hepatic insufficiency at surgical</li> </ol>
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	<p>illnesses, methods of prophylaxis and treatment</p> <p>7. Bleeding from a digestive tract. Reasons, diagnostics and differential diagnostics, medical tactic</p> <p>8. Abdominal trauma. Clinic, diagnostics, differential diagnostics of the injuries of abdominal and retroperitoneal organs. Surgical tactic</p> <p>9. Lower extremity edema syndrome. Differential diagnosis, surgical aspect. Principles of treatment. Prevention of thromboembolic complications in surgery</p> <p>10. Syndrome of pain and ischemia of the lower extremities. Differential diagnosis, surgical aspect. Principles of treatment</p> <p>11. The syndromes thoracic pain, respiratory and cardiac insufficiency at diagnostics and differential diagnostics of thoracic diseases</p> <p>12. Surgical pathology of the lung and pleura. Principles of diagnostics and treatment</p> <p>13. Thoracic trauma. Triad of symptoms of wound of heart. The diagnostic and surgical program at the wounds of heart. Clinic and diagnostics of pneumothorax, hemotorax and chylothorax. Surgical approaches</p> <p>14. Syndrome of dysphagia. Differential diagnostics and treatment of diseases of the esophagus, mediastinum and diaphragm</p> <p>15. Practice of practical skills</p> <p>16. Local and generalized surgical infection. SIRS</p> <p>17. Emergencies in surgical patients. Hemorrhagic, infectious-toxic shock. Abdominal compartment syndrome</p> <p>18. General transplantology</p> <p>19. Special transplantology</p> <p>20. Final control</p>
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Practical classes provide a theoretical justification of the main issues of the topic and the acquisition of the following practical skills:

#### Practical skills

- to interview a surgical patient
- to carry out inspection of the surgical patient
- palpation of the chest, abdomen, lumbar
- identify and properly evaluate Volkovich-Kocher; Rovsing; Sitkovsky; Volkovich; Bartomiez-Michelson; Shchotkin-Blumberg; Yaure-Rosanov'; Cope sign
- Demonstrate the presence of signs and their degree of expression: Zakharin, Kerr, Courvoisier, Murphy, Obratsov, Ortner, Musi-Georgievsky, Botkin (cholecystocardial), Shchotkin-Blumberg;
- identify and correctly evaluate the degree of expression of the following signs: Kerte, Mayo-Robson, Schotkin-Blumberg, Johnson-Cullen-Grunwald, Mondor;
- identify the symptom and evaluate the degree of its expression (Vahl', Kivul, Mathieu-Sklyarov, Schlange, Wilms, Shimon-Dance, Zege-von Manteifel)
- collect anamnesis, conduct examination, palpation, percussion, auscultation in a patient with acute appendicitis, cholecystitis, pancreatitis, strangulated hernia, peritonitis, intestinal obstruction, perforation of the hollow organ, gastrointestinal bleeding;
- to select from the anamnesis information indicating the presence of subjective signs of abdominal hernia
- conduct a finger examination of the inguinal canal to determine the condition of the outer and inner rings
- determine the size of the hernia gate
- palpation and auscultation to determine the contents of the hernia sac;



- palpation of peripheral lymph nodes
- perform lung percussion
- perform abdominal percussion
- determine the width of the mediastinal bundle
- determine the percussion boundaries of the heart
- Auscultation of the lungs and heart
- conduct auscultation of the abdomen
- determine the characteristics of the pulse
- measure the arterial and central venous pressure
- measure body temperature
- conduct a finger rectal examination
- make a plan for examination of patients with acute appendicitis, cholecystitis, pancreatitis, strangulated hernia, peritonitis, intestinal obstruction, perforation of the hollow organ, gastrointestinal bleeding
- make a plan for examination of a patient with surgical pathology of the chest
- interpret clinical blood and urine tests
- interpret biochemical blood tests
- count the ribs on the radiograph
- identify radiographic signs of lung abscess, pleural empyema
- to reveal radiological signs of fractures of ribs, pneumo- and hemothorax, tamponade of the pericardium, pneumomediastinum
- identify radiological signs of neoplasm of the mediastinum, mediastinitis
- identify radiographic signs of diverticulum, achalasia, esophageal stenosis
- identify radiographic signs of diaphragmatic hernia
- identify radiological signs of intestinal obstruction
- identify radiographic signs of perforation of the hollow organ
- read radiographs with contrast examination of the stomach, colon and small intestine
- read radiographs with contrast examination outside the hepatic bile ducts
- interpret the results of the ultrasound
- interpret CT results
- formulate indications for surgery
- make clean and purulent wound dressings
- care for the abdominal and pleural drainage
- remove drainage
- remove sutures from the wound
- apply postural airway drainage
- fill in the line for infusion
- to conduct a pleural puncture (to imitate)
- to conduct a puncture of a pericardium (to imitate)
- assemble a set of tools for laparocentesis
- collect a set of tools for drainage of a pleural cavity
- install the Bulau valve drainage system
- insert the tube into the esophagus, stomach, decompress the stomach
- make an enema
- insert a catheter into the bladder in both men and women;
- determine blood group membership. Conduct compatibility tests, rhesus compatibility, biological test
- perform temporarily bleeding control: finger pinching of vessels throughout, overlapping with the tourniquet
- venous bleeding control
- Assist in operations
- write down preoperative epicrisis and protocol of operation, diary;



- write down a prescription for medicines;
- be guided in the appointment of surgical instruments
- use deontological principles of communication with the patient

The student's **independent work** provides preparation for practical classes, study of topics for independent extracurricular work, preparation of presentations.

**Individual work** includes the study of scientific literature, preparation of reviews on the topics provided for presentation at the meetings of the student scientific circle, the implementation of scientific and practical researches, participation in specialized competitions, scientific and practical conferences and organization of students' research works.

Thematic plans of lectures, calendar plans of practical classes, thematic plan of independent work, volume and directions of individual work are published on the website of the department.

The route for obtaining materials: Department surgery1 / for students / Full-time education / Medicine / 6 course / Educational materials / or through the link [https://www.vnmu.edu.ua/departament\\_surgery1#](https://www.vnmu.edu.ua/departament_surgery1#). Access to the materials is carried out through the student's corporate account [s000XXX@vnmu.edu.ua](mailto:s000XXX@vnmu.edu.ua).

### 5. Forms and methods of monitoring academic performance

Current control in practical studies	Methods: oral or written survey, testing, electronic survey, patients cases solving, real patients survey, interpreting and evaluating of diagnostic procedures results, practical skills control
Control of mastering the thematic section of the discipline at intermediate control lessons	N/A
Final control	Methods: oral questioning, patients cases solving (according to the Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <a href="https://www.vnmu.edu.ua/General">https://www.vnmu.edu.ua/General</a> information))
Learning success diagnostic tools	Theoretical questions, clinically-oriented situational tasks (cases), practical tasks, practical skills demonstration, tests

### 6. Assessment criteria

Knowledge assessment is carried out in accordance with the Regulations of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmu.edu.ua/General> information)

Continuous assessment	On a four point system of traditional assessments: 5 «excellent», 4 «good», 3 «satisfactory», 2 «unsatisfactory»
Midpoint separation assessment	On a four-point system of traditional assessments
Control of practical skills	On a four-point system of traditional assessments
Final control of the discipline	Exam grade: 71-80 points - "excellent" 61-70 points - "good" 50-60 points - "satisfactory" Less than 50 points - "unsatisfactory" / did not pass
Discipline assessments:	Current academic assessment - from 72 to 120 points (conversion of the average traditional assessment of



	practical class on a 120-point scale): 60% of the grade for the discipline Final control - from 50 to 80 points: 40% of the grade for the discipline Individual work - from 1 to 12 points From 122 to 200 points in total.
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### Discipline Score Scale: National and ECTS

The sum of grades for all types of educational activities	Score ECTS	Score on a national scale	
		For exam, course project (work), practice	for credit test
180-200	A	excellent	credited
170-179,9	B	good	
160-169,9	C		
141-159,9	D	satisfactory	
122-140,99	E	satisfactory	-
120-140,99	E	-	credited
119-61	FX	unsatisfactory with the possibility of reassembly	is not credited with the possibility of reassembling
1-60	F	unsatisfactory with a mandatory reexamination of discipline	is not credited with mandatory reexamination of discipline

### Policy of discipline / course

1. The student has the right to receive high-quality educational services, access to contemporary scientific and educational information, qualified advisory assistance during the study of discipline and mastering practical skills. The policy of the department during the providing of educational services is a student-centered, based on normative documents of the Ministry of Education and the Ministry of Health of Ukraine, the Statute of the University and the Procedure for the Providing of Educational Services regulated by the main principles of the organization of the educational process in National Pirogov Memorial Medical University, Vinnytsya and the principles of academic integrity ( link <https://www.vnmu.edu.ua/General> information).

### Adherence to the rules of National Pirogov Memorial Medical University, Vinnytsya, safety techniques in practical classes.

**Requirements for preparation for practical classes.** The clinical base of the course is the of KNP "Vinnytsia Regional Clinical Hospital n.a. N. Pirogov of the Vinnytsia regional council". The student must come for a practical lesson in time, be theoretically prepared according to the topic. The form of clothing at the entrance to the inpatient department of the hospital: changeable shoes, medical gown and hat. Carry a medical mask, gloves, antiseptic. At introduction of quarantine restrictions in the medical institution a strict following of its requirements is obligate. Carrying outerwear, shoes, bulky things is not allowed. During their stay in the surgical hospital, students are required to comply with the requirements of medical and sanitary regimes. Any unauthorized, without the permission of the teacher, touching the hospital equipment, devices and tools is prohibited. During interviews with patients and their relatives, as well as outside the



hospital, applicants are required to adhere to ethical and deontological principles, the requirements of current legislation on information retention. It is strictly forbidden to disseminate medical and personal information of patients in any way (including on social networks, oral stories, etc.). During contacts with staff and discussions in the learning process, the principles of tolerance, politeness and mutual respect are professed; incorrect, provocative behaviour is not allowed.

**Usage of mobile phones and other electronic devices.**

Unlimited mobile phones can only be used for emergency calls, in other cases with the permission of the teacher. The use of devices during the survey and explanations of the material is prohibited

**Academic integrity.** When studying the discipline, the student must be guided by the Code of Academic Integrity and Corporate Ethics of National Pirogov Memorial Medical University, Vinnytsya (link : <https://www.vnmu.edu.ua/General> information)/ Code of Academic Integrity). In case of violation of the norms of academic integrity during the current and final controls (writing-off, using of devices and other sources of information) student receives a mark of "2" and must work it out to his teacher in the prescribed manner within two weeks after receiving an unsatisfactory assessment). During the final control it is forbidden to use, among other things, own notes, notes, abstracts, etc.

**Missed classes.** Missed classes are working out in the manner prescribed by Regulations of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmu.edu.ua/General> information) at the working-time to a group assigned teacher or at time of work out schedule (published on the website of the department <https://www.vnmu.edu.ua/> department surgery1#) to the teacher on duty. To work out missed lesson student should answer the theoretical material and perform the practical skills provided by the topic. Assimilation of the material of missed lectures is checked at the final control)

**The procedure for admission to the discipline final control** is given in the Regulations of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmu.edu.ua/General> information). To the final control allowed students who do not have missed practical classes and lectures and received an average traditional grade of at least "3".

**Additional points.** Individual points in the discipline (from 1 to 12) that student can receive for individual work, the amount of which is published on the website of the department in the educational methodical materials of the discipline, the number of points is determined by the results of Individual Students Work (ISW) according to Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmu.edu.ua/General> information). Details of the evaluation criteria are given in the relevant section on the department page at the University website (access from the student's corporate account s000XXX@vnmu.edu.ua).

**Conflict resolution.** In case of misunderstandings and complaints to the teacher because of the quality of educational services, knowledge assessment and other conflict situations, student should submit his / her claims to the teacher. If the issue is not resolved, the student has the right to apply to the head of the department according to Complaints Consideration Procedure in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmu.edu.ua/General> information) The next steps in such situations resolving is a student government, dean-office or university administration participation. The department is aware that student-centeredness presupposes responsibility of the applicant for conscious and active acquisition of knowledge, proper implementation of norms and rules provided by the



legislation and regulatory documents of VNMU and reserves the right to inform relevant structures about violations by students and, if necessary, to ask a dean-office assistance.

**Politics in terms of remote learning.** Distance learning regulated by the Regulations of the elements of remote learning in National Pirogov Memorial Medical University, Vinnytsya (<https://www.vnmu.edu.ua/> General information). The main training platforms for studying are Microsoft Team and Google Meets. Practical classes and lectures, exercises and consultations during distance learning is published on the website of the department (<https://www.vnmu.edu.ua/> Department of surgery 1/ to Students).

Feedback from teachers is via messengers (Viber, Telegram, WhatsApp) or e-mail (at the teacher's choice) during working hours.

Leading teacher of the department: Assoc. Volodymyr Kryvetskyi, tel. (Viber, WhatsApp) 0975316386, kryvetsky.v@gmail.com

## **2. Educational resources.**

Educational and methodological support of the discipline is published on the website of the department (<https://www.vnmu.edu.ua/> department of surgery 1 / for students).

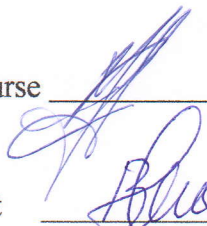
Consultations are held according to the schedule.

**3. The timetable and distribution of groups** with assigned teachers are published on the web page of the department ((<https://www.vnmu.edu.ua/> / department of surgery 1 / for students).

**4. Questions to the final semester control (grading test)** are published on the web page of the department (<https://www.vnmu.edu.ua/> / department of surgery 1 / for students).

The syllabus was discussed and approved at the meeting of the department Surgery №1 with a course in urology (record № 1, dated "30" 08 2021)

Responsible for the course



Assoc. V.F. Kryvetskyi

Head of the department



Prof. V.O. Shaprynskyi