

MINISTRY OF HEALTH PROTECTION OF UKRAINE

ODESSA NATIONAL MEDICAL UNIVERSITY

Department of General and Military Surgery

I APPROVE



Vice-rector for scientific and pedagogical work

Eduard BURYACHKOVSKY

September 1, 2023

CURRICULUM ON EDUCATIONAL DISCIPLINE

"Surgical treatment of wounds"

Level of higher education: second (master's degree)

Field of knowledge: 22 "Health care"

Specialty: 222 "Medicine"

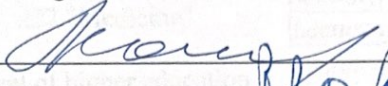
Educational and professional program: Medicine

Odesa 2023

The curriculum is compiled on the basis of the educational and professional program "Medicine" for the training of specialists of the second (master's) level of higher education in the specialty 222 "Medicine" of the field of knowledge 22 "Health care", approved by the Scientific Council of ONMedU (protocol No. 8 of June 29, 2023).

Developers: MD, Prof. M.A. Kashtalyan, Ph.D., Assoc. Davydov D.M., assistant Bilash O.V.

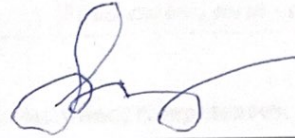
The program was discussed at the meeting of the department of general and military surgery Protocol No. 1 dated August 28, 2023.

Head of the department  Mykhailo KASHTALYAN

Agreed with the guarantor of the EPP  Valery MARICHEREDA

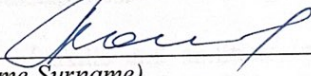
The program was approved at the meeting of the subject cycle commission for surgical disciplines of the ONMedU

Protocol No. 1 dated 08/30/2023.

The head of the subject cycle methodical Committee on Surgical Disciplines  Vasyl Myshchenko

Reviewed and approved at the meeting of the department

Department of General, Pediatrics and Military Surgery with a course in Laboratory
Protocol No. 1 of "04" 09 2023

Head of Department  Mykhailo KASHTALYAN
(signature) (First Name Surname)

Reviewed and approved at the meeting of the department

Protocol No. ___ of "___" _____ 20__

General (GC):

- GC1 Ability to engage in abstract thinking, analysis and synthesis
- GC2 Ability to learn and register modern knowledge
- GC3 Ability to apply knowledge in practical situations
- GC4 Knowledge and understanding of the subject area and understanding of professional activity
- GC5 Ability to adapt and act in a new situation
- GC6 Ability to make informed decisions
- GC7 Ability to work in a team
- GC8 Ability to evaluate and ensure the quality of performed work

Special (SC):

- SC1 Ability to collect medical information about the patient and medical condition

1. Description of the academic discipline :

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the academic discipline
The total number of:	Branch of knowledge 22 "Health care"	<i>Full-time education</i> <i>Elective discipline</i>
Credits: 3	Specialty 222 "Medicine"	<i>Year of training: 3</i>
Hours: 90	Level of higher education second (master's)	<i>Semesters V-VI</i>
Content modules: 4		<i>Lectures (0 hours)</i>
		<i>Seminars (0 hours)</i>
		<i>Practical (30 hours)</i>
		<i>Laboratory (0 hours)</i>
		<i>Independent work (60 hours)</i>
		<i>including individual tasks (0 hours)</i>
		<i>Final control form - credit</i>

2. The purpose and tasks of the educational discipline, competences, program learning outcomes.

Purpose: Mastery by the acquirer of knowledge and formation of elements of professional competences in the field of surgery, and improvement of skills and competences acquired during the study of previous disciplines.

Task:

1. Formation of skills and abilities: on diagnosis and treatment of wounds, wound complications, including in cases of gunshot wounds.
2. Mastering skills in performing primary and secondary surgical treatment of wounds.
3. Mastering the ability to determine tactics wound treatment and prevention of wound complications.

The process of studying the discipline is aimed at forming elements of the following competencies:

- IC – Ability to solve typical and complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.
- **General (GC):**
 - GC1 Ability to abstract thinking, analysis and synthesis
 - GC2 Ability to learn and master modern knowledge
 - GC3 Ability to apply knowledge in practical situations
 - GC4 Knowledge and understanding of the subject area and understanding of professional activity.
 - GC5 Ability to adapt and act in a new situation
 - GC6 Ability to make informed decisions
 - GC7 Ability to work in a team
 - GC16 Ability to evaluate and ensure the quality of performed works .
- **Special (SC):**
 - SC1 Ability to collect medical information about the patient and analyze clinical data

- SC6 Ability to determine the principles and nature of treatment and prevention of diseases.
- SC8 Ability to determine tactics and provide emergency medical care.
- SC10 Ability to perform medical manipulations
- SC16 Ability to maintain medical documentation, including electronic forms
- SC24 Compliance with ethical principles when working with patients and laboratory animals

Program learning outcomes (PRO):

PRO1 To have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.

PRO 5 Collect complaints, anamnesis of life and diseases, evaluate the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information about the diagnosis (according to list 4), taking into account the age of the patient.

PRO17 Perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.

PRO24 To organize the necessary level of individual safety (own and the persons they care about) in case of typical dangerous situations in the individual field of activity.

As a result of studying the academic discipline, the student of higher education must:

Know: clinical signs of a wound, wound complications, features of surgical treatment.

Be able:

- Communicate with the patient, collect complaints, anamnesis of life and illness.
- Perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.
- To organize the necessary level of individual safety (own and the persons he cares for) in case of typical dangerous situations in the individual field of activity.

3. Content of the academic discipline

SURGICAL TREATMENT OF WOUNDS

Content module 1. The concept of wounds.

Topic 1. Definition, signs of a wound. Classification of wounds. Phases of the wound process.

Definition of the wound. The main clinical signs of the wound. Components of the wound. Early process, its phases. Classification of wounds: by origin; according to the nature of the wounded object; according to the degree of infection. Types of healing and phases of the wound process. Features of a gunshot wound.

Topic 2. Early complications.

Wound complications: development of infection in the wound, bleeding from the wound, wound failure, hypertrophic scars and keloids. General principles of wound treatment and prevention of complications of the wound process.

Content module 2. Use of surgical equipment and skills in wound treatment.

Topic 3. Surgical instruments.

Classification of medical instruments: by scope of application; by frequency of use; according to the conditions of use; by appointment. General requirements for medical instruments. Cutting tools. Requirements for cutting tools. Modern tools for separating tissues. Clamping tools. Impression tools. Methods of sterilization.

Topic 4. Suture materials and surgical needles.

Basic terms and definitions. Classification of suture materials. Suture thread marking systems. Basic requirements for suture material. Surgical, atraumatic and ligature needles. Clips and staples for stitching. Suturing surgical devices. Sterilization of suture material.

Topic 5. Surgical knots and sutures.

Component parts of the node. Types of nodes. Knot tying technique. Apodactyl method. Types of surgical sutures. The technique of laying knotted and continuous seams. Skin suture removal technique.

Content module 3. Surgical wound treatment.

Topic 6. Means of asepsis during surgical treatment of a wound.

Aseptic conditions. Preparation and treatment of the operating field. Treatment of the surgeon's hands. Putting on sterile underwear and gloves.

Topic 7. Local anesthesia.

Definition. Modern drugs for local anesthesia. Indications and contraindications for local anesthesia. Types of local anesthesia. The technique of performing infiltration and infiltration case anesthesia according to O. V. Vishnevskiy. Complications of local anesthesia. Prevention and general principles of treatment of complications of local anesthesia.

Topic 8. Primary surgical treatment of a wound.

Definition. Indications and contraindications for primary surgical wound treatment. The main types of primary surgical wound treatment. Stages of primary surgical wound treatment. Primary and primary-delayed sutures.

Topic 9. Peculiarities of surgical treatment of a gunshot wound.

General principles of surgical treatment of a gunshot wound. Stages of primary surgical treatment of a gunshot wound. Methods of closing a gunshot wound.

Topic 10. Secondary surgical treatment of a wound.

Infected wounds. Local and general signs of the inflammatory process. Classification of wound infection. Tetanus Emergency prevention of tetanus. Clostridial and putrefactive wound infection, features of surgical treatment. Indications and contraindications for secondary surgical wound treatment. Wound drainage techniques.

Content module 4. Modern methods of wound treatment.

Topic 11. Antibiotic prophylaxis and antibiotic therapy in the treatment of wounds.

The concept of antibiotic prophylaxis and antibiotic therapy. Antibiotic resistance. Infection monitoring of wounds. Indications for antibiotic prophylaxis. Indications and contraindications for antibiotic therapy of wound infection. Rational use of antibacterial drugs.

Topic 12. Peculiarities of wound treatment in the postoperative period.

The postoperative period, its phases. Rational analgesia. The concept of dressing. Using the properties of the dressing material in the treatment of wounds.

Topic 13. Use of preparations for local treatment of wounds.

Peculiarities of local treatment of surgical and accidental wounds depending on the degree of infection and the phase of the wound process. Use of proteolytic enzymes, sorbents, hypertonic solutions, hyperosmolar ointments, special dressings. Stimulation of wound regeneration and repair.

Topic 14. Wound therapy with negative pressure. Ultrasonic wound debridement.

NPWT and VAC apparatus and equipment. Indications and contraindications for the use of negative pressure systems. Possible application modes. Ultrasonic wound debridement (UWD) indications and contraindications for use.

Topic 15. Control of learning practical skills.

4. The structure of the academic discipline

Names of topics	Number of hours					
	In total	Including				
		Lectures	Seminars	Practical	Laboratory	IWS
Content module 1. The concept of wounds.						
Topic 1. Definition, signs of a wound. Classification of wounds. Phases of the wound process. Definition of the wound. The main clinical signs of the wound. Components of the wound. Early process, its phases. Classification of wounds: by origin; according to the nature of the wounded object; according to the degree of infection. Types of healing and phases of the wound process. Features of a gunshot wound.	6	0	0	2	0	4
Topic 2. Early complications. Wound complications: development of infection in the wound, bleeding from the wound, wound failure, hypertrophic scars and keloids. General principles of wound treatment and prevention of complications of the wound process.	6	0	0	2	0	4
<i>Together according to content module 1</i>	12	0	0	4	0	8
Content module 2. Use of surgical equipment and skills in wound treatment.						
Topic 3. Surgical instruments. Classification of medical instruments: by scope of application; by frequency of use; according to the conditions of use; by appointment. General requirements for medical instruments. Cutting tools. Requirements for cutting tools. Modern tools for separating tissues. Clamping	6	0	0	2	0	4

tools. Impression tools. Methods of sterilization.						
Topic 4. Suture materials and surgical needles. Basic terms and definitions. Classification of suture materials. Suture thread marking systems. Basic requirements for suture material. Surgical, atraumatic and ligature needles. Clips and staples for stitching. Suturing surgical devices. Sterilization of suture material.	6	0	0	2	0	4
Topic 5. Surgical knots and sutures. Component parts of the node. Types of nodes. Knot tying technique. Apodactyl method. Types of surgical sutures. The technique of laying knotted and continuous seams. Skin suture removal technique.	6	0	0	2	0	4
<i>Together according to content module 2</i>	18	0	0	6	0	12
Content module 3. Surgical wound treatment.						
Topic 6. Means of asepsis during surgical treatment of a wound. Aseptic conditions. Preparation and treatment of the operating field. Treatment of the surgeon's hands. Putting on sterile underwear and gloves.	6	0	0	2	0	4
Topic 7. Local anesthesia. Definition. Modern drugs for local anesthesia. Indications and contraindications for local anesthesia. Types of local anesthesia. The technique of performing infiltration and infiltration case anesthesia according to O. V. Vishnevskyi. Complications of local anesthesia. Prevention and general principles of	6	0	0	2	0	4

treatment of complications of local anesthesia.						
Topic 8. Primary surgical treatment of a wound. Definition. Indications and contraindications for primary surgical wound treatment. The main types of primary surgical wound treatment. Stages of primary surgical wound treatment. Primary and primary-delayed sutures.	6	0	0	2	0	4
Topic 9. Peculiarities of surgical treatment of a gunshot wound. General principles of surgical treatment of a gunshot wound. Stages of primary surgical treatment of a gunshot wound. Methods of closing a gunshot wound.	6	0	0	2	0	4
Topic 10. Secondary surgical treatment of a wound. Infected wounds. Local and general signs of the inflammatory process. Classification of wound infection. Tetanus Emergency prevention of tetanus. Clostridial and putrefactive wound infection, features of surgical treatment. Indications and contraindications for secondary surgical wound treatment. Wound drainage techniques.	6	0	0	2	0	4
<i>Together according to content module 3</i>	30	0	0	10	0	20
Content module 4. Modern methods of wound treatment.						
Topic 11. Antibiotic prophylaxis and antibiotic therapy in the treatment of wounds. The concept of antibiotic prophylaxis and antibiotic therapy. Antibiotic resistance. Infection monitoring of wounds. Indications for antibiotic prophylaxis. Indications and	6	0	0	2	0	4

contraindications for antibiotic therapy of wound infection. Rational use of antibacterial drugs.						
Topic 12. Peculiarities of wound treatment in the postoperative period. The postoperative period, its phases. Rational analgesia. The concept of dressing. Using the properties of the dressing material in the treatment of wounds.	6	0	0	2	0	4
Topic 13. Use of preparations for local treatment of wounds. Peculiarities of local treatment of surgical and accidental wounds depending on the degree of infection and the phase of the wound process. Use of proteolytic enzymes, sorbents, hypertonic solutions, hyperosmolar ointments, special dressings. Stimulation of wound regeneration and repair.	6	0	0	2	0	4
Topic 14. Wound therapy with negative pressure. Ultrasonic wound debridement. NPWT and VAC apparatus and equipment. Indications and contraindications for the use of negative pressure systems. Possible application modes. Ultrasonic wound debridement (UAW) indications and contraindications for use.	6	0	0	2	0	4
Topic 15. Control of learning practical skills.	6	0	0	2	0	4
<i>Together according to content module 4</i>	30	0	0	10	0	20
Test.	0	0	0	0	0	0
Total :	90	0	0	30	0	60

5. Topics of lectures / seminars / practical / laboratory classes

5.1. Topics of lectures

Lectures are not provided.

5.2. Topics of seminar classes

Seminar classes are not provided.

5.3. Topics of practical classes

No	Topic name	Number of hours
1	Topic 1. Practical class 1. Definition, signs of a wound. Classification of wounds. Phases of the wound process. Definition of the wound. The main clinical signs of the wound. Components of the wound. Early process, its phases. Classification of wounds: by origin; according to the nature of the wounded object; according to the degree of infection. Types of healing and phases of the wound process. Features of a gunshot wound.	2
2.	Topic 2. Practical class 2. Early complications. Wound complications: development of infection in the wound, bleeding from the wound, wound failure, hypertrophic scars and keloids. General principles of wound treatment and prevention of complications of the wound process.	2
3	Topic 3. Practical class 3. Surgical instruments. Classification of medical instruments: by scope of application; by frequency of use; according to the conditions of use; by appointment. General requirements for medical instruments. Cutting tools. Requirements for cutting tools. Modern tools for separating tissues. Clamping tools. Impression tools. Methods of sterilization.	2
4	Topic 4. Practical class 4. Suture materials and surgical needles. Basic terms and definitions. Classification of suture materials. Suture thread marking systems. Basic requirements for suture material. Surgical, atraumatic and ligature needles. Clips and staples for stitching. Suturing surgical devices. Sterilization of suture material.	2
5	Topic 5. Practical class 5. Surgical knots and sutures. Component parts of the node. Types of nodes. Knot tying technique. Apodactyl method. Types of surgical sutures. The technique of laying knotted and continuous seams. Skin suture removal technique.	2
6	Topic 6. Practical class 6. Means of asepsis during surgical treatment of a wound. Aseptic conditions. Preparation and treatment of the operating field. Treatment of the surgeon's hands. Putting on sterile underwear and gloves.	2
7	Topic 7. Practical class 7. Local anesthesia. Definition. Modern drugs for local anesthesia. Indications and contraindications for local anesthesia. Types of local anesthesia. The technique of performing infiltration and infiltration case anesthesia according to O. V. Vishnevskiy. Complications of local anesthesia. Prevention and general principles of treatment of complications of local anesthesia.	2

8	Topic 8. Practical class 8. Primary surgical treatment of the wound. Definition. Indications and contraindications for primary surgical wound treatment. The main types of primary surgical wound treatment. Stages of primary surgical wound treatment. Primary and primary-delayed sutures.	2
9	Topic 9. Practical class 9. Peculiarities of surgical treatment of a gunshot wound. General principles of surgical treatment of a gunshot wound. Stages of primary surgical treatment of a gunshot wound. Methods of closing a gunshot wound.	2
10	Topic 10. Practical class 10. Secondary surgical treatment of the wound. Infected wounds. Local and general signs of the inflammatory process. Classification of wound infection. Tetanus Emergency prevention of tetanus. Clostridial and putrefactive wound infection, features of surgical treatment. Indications and contraindications for secondary surgical wound treatment. Wound drainage techniques.	2
11	Topic 11. Practical class 11. Antibiotic prophylaxis and antibiotic therapy in the treatment of wounds. The concept of antibiotic prophylaxis and antibiotic therapy. Antibiotic resistance. Infection monitoring of wounds. Indications for antibiotic prophylaxis. Indications and contraindications for antibiotic therapy of wound infection. Rational use of antibacterial drugs.	2
12	Topic 12. Practical class 12. Peculiarities of wound treatment in the postoperative period. The postoperative period, its phases. Rational analgesia. The concept of dressing. Using the properties of the dressing material in the treatment of wounds.	2
13	Topic 13. Practical class 13. Use of preparations for local treatment of wounds. Peculiarities of local treatment of surgical and accidental wounds depending on the degree of infection and the phase of the wound process. Use of proteolytic enzymes, sorbents, hypertonic solutions, hyperosmolar ointments, special dressings. Stimulation of wound regeneration and repair.	2
14	Topic 14. Practical class 14. Wound therapy with negative pressure. Ultrasonic wound debridement. NPWT and VAC apparatus and equipment. Indications and contraindications for the use of negative pressure systems. Possible application modes. Ultrasonic wound debridement (UAW) indications and contraindications for use.	2
15	Topic 15. Practical class 15. Control of learning practical skills.	2
	Together	30

5.4. Laboratory topics classes

Laboratory classes are not provided.

6. Independent work of a student of higher education

No	Title of the topic / types of tasks	Number of hours
----	-------------------------------------	-----------------

1.	<p>Topic 1. Preparation for practical class 1</p> <p>Definition, signs of a wound. Classification of wounds. Phases of the wound process.</p> <p>Definition of the wound. The main clinical signs of the wound. Components of the wound. Early process, its phases. Classification of wounds: by origin; according to the nature of the wounded object; according to the degree of infection. Types of healing and phases of the wound process. Features of a gunshot wound.</p>	4
2.	<p>Topic 2. Preparation for practical class 2</p> <p>Early complications. Wound complications: development of infection in the wound, bleeding from the wound, wound failure, hypertrophic scars and keloids. General principles of wound treatment and prevention of complications of the wound process.</p>	4
3.	<p>Topic 3. Preparation for practical class 3</p> <p>Surgical instruments. Classification of medical instruments: by scope of application; by frequency of use; according to the conditions of use; by appointment. General requirements for medical instruments. Cutting tools. Requirements for cutting tools. Modern tools for separating tissues. Clamping tools. Impression tools. Methods of sterilization.</p>	4
4.	<p>Topic 4. Preparation for practical class 4</p> <p>Suture materials and surgical needles. Basic terms and definitions. Classification of suture materials. Suture thread marking systems. Basic requirements for suture material. Surgical, atraumatic and ligature needles. Clips and staples for stitching. Suturing surgical devices. Sterilization of suture material.</p>	4
5.	<p>Topic 5. Preparation for practical class 5</p> <p>Surgical knots and sutures. Component parts of the node. Types of nodes. Knot tying technique. Apodactyl method. Types of surgical sutures. The technique of laying knotted and continuous seams. Skin suture removal technique.</p>	4
6.	<p>Topic 6. Preparation for practical class 6</p> <p>Means of asepsis during surgical treatment of a wound. Aseptic conditions. Preparation and treatment of the operating field. Treatment of the surgeon's hands. Putting on sterile underwear and gloves.</p>	4
7.	<p>Topic 7. Preparation for practical class 7</p> <p>Local anesthesia. Definition. Modern drugs for local anesthesia. Indications and contraindications for local anesthesia. Types of local anesthesia. The technique of performing infiltration and infiltration case anesthesia according to O. V. Vishnevskiy. Complications of local anesthesia. Prevention and general principles of treatment of complications of local anesthesia.</p>	4
8.	<p>Topic 8. Preparation for practical class 8</p> <p>Primary surgical treatment of the wound. Definition. Indications and contraindications for primary surgical wound treatment. The main types of primary surgical wound treatment. Stages of primary surgical wound treatment. Primary and primary-delayed sutures.</p>	4
9.	<p>Topic 9. Preparation for practical class 9</p> <p>Peculiarities of surgical treatment of a gunshot wound. General principles of surgical treatment of a gunshot wound. Stages of primary surgical treatment of a gunshot wound. Methods of closing a gunshot wound.</p>	4

10.	Topic 10. Preparation for practical class 10 Secondary surgical treatment of the wound. Infected wounds. Local and general signs of the inflammatory process. Classification of wound infection. Tetanus Emergency prevention of tetanus. Clostridial and putrefactive wound infection, features of surgical treatment. Indications and contraindications for secondary surgical wound treatment. Wound drainage techniques.	4
11.	Topic 11. Preparation for practical class 11 Antibiotic prophylaxis and antibiotic therapy in the treatment of wounds. The concept of antibiotic prophylaxis and antibiotic therapy. Antibiotic resistance. Infection monitoring of wounds. Indications for antibiotic prophylaxis. Indications and contraindications for antibiotic therapy of wound infection. Rational use of antibacterial drugs.	4
12.	Topic 12. Preparation for practical class 12 Peculiarities of wound treatment in the postoperative period. The postoperative period, its phases. Rational analgesia. The concept of dressing. Using the properties of the dressing material in the treatment of wounds.	4
13.	Topic 13. Preparation for practical class 13 Use of preparations for local treatment of wounds. Peculiarities of local treatment of surgical and accidental wounds depending on the degree of infection and the phase of the wound process. Use of proteolytic enzymes, sorbents, hypertonic solutions, hyperosmolar ointments, special dressings. Stimulation of wound regeneration and repair.	4
14.	Topic 14. Preparation for practical class 14 Wound therapy with negative pressure. Ultrasonic wound debridement. NPWT and VAC apparatus and equipment. Indications and contraindications for the use of negative pressure systems. Possible application modes. Ultrasonic wound debridement (UAW) indications and contraindications for use.	4
15.	Topic 15. Preparation for practical class 15 Control of learning practical skills.	4
	Together	60

7. Teaching methods

Practical classes: conversation, solving clinical situational problems, demonstration and practice of manipulation skills according to list 5, instruction and practice of skills on simulation dummies.
Independent work: independent work with the textbook, independent solution of clinical tasks.

8. Forms of control and assessment methods (including criteria for evaluating learning outcomes)

Current control: oral survey, testing, assessment of performance of practical skills, solution of situational clinical tasks, assessment of activity in class.

Final control : credit.

The structure of the current evaluation in the practical class :

1. Evaluation of theoretical knowledge on the subject of the class:
 - methods: survey, solving a situational clinical problem;

- the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2 .
- 2. Evaluation of practical skills and manipulations on the subject of the class:
 - methods: assessment of the correctness of the performance of practical skills
 - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2 .

Current assessment criteria for practical training:

Rating	Evaluation criteria
Perfectly "5"	The applicant is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills and interpretations of clinical, laboratory and instrumental research data, expresses his opinion on the subject of the class, demonstrates clinical thinking.
Fine "4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills and interpretations of clinical, laboratory and instrumental research data with some errors, expresses his opinion on the subject of the class, demonstrates clinical thinking.
Satisfactorily "3"	The applicant does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of a situational clinical problem, demonstrates practical skills and interpretations of clinical, laboratory and instrumental research data with significant errors.
Unsatisfactorily "2"	The applicant does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills and interpretation of clinical, laboratory and instrumental research data.

Credit is given to the applicant who completed all tasks of the work program of the academic discipline, took an active part in practical classes, completed and defended an individual assignment and has an average current grade of at least 3.0 and has no academic debt.

Test is carried out: at the last class before the beginning of the examination session - at ribbon system teaching, on to the last occupation - with a cyclical system of education. The credit score is the arithmetic mean of all components on a traditional four-point scale and has a value that is rounded using the statistical method with two decimal places after the decimal point.

9. Distribution of points received by students of higher education

The obtained average score for the academic discipline for applicants who have successfully mastered the work program of the academic discipline is converted from a traditional four-point scale to points on a 200-point scale, as shown in the table:

Conversion table of a traditional assessment into a multi-point scale

Traditional four-point scale	Multipoint 200-point scale
Excellent ("5")	185 - 200
Good ("4")	151 - 184
Satisfactory ("3")	120-150
Unsatisfactory ("2")	Below 120

Multi-point scale (200-point scale) characterizes the actual success rate of each applicant in mastering the educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is performed by the information and technical department of the University.

According to the obtained points on a 200-point scale, the achievements of the applicants

are evaluated according to the ECTS rating scale. Further ranking according to the ECTS rating scale allows you to evaluate the achievements of students from the educational component who are studying in the same course of the same specialty, according to the points they received.

The ECTS scale is a relative-comparative rating, which establishes the applicant's belonging to the group of better or worse among the reference group of fellow students (faculty, specialty). An "A" grade on the ECTS scale cannot be equal to an "excellent" grade, a "B" grade to a "good" grade, etc. When converting from a multi-point scale, the limits of grades "A", "B", "C", "D", "E" according to the ECTS scale do not coincide with the limits of grades "5", "4", "3" according to the traditional scale. Acquirers who have received grades of "FX" and "F" ("2") are not included in the list of ranked acquirers. The grade "FX" is awarded to students who have obtained the minimum number of points for the current learning activity, but who have not passed the final examination. A grade of "F" is given to students who have attended all classes in the discipline, but have not achieved a grade point average (3.00) for the current academic activity and are not admitted to the final examination.

Applicants who study in one course (one specialty), based on the number of points scored in the discipline, are ranked on the ECTS scale as follows:

Conversion of the traditional grade from the discipline and the sum of points on the ECTS scale

Evaluation on the ECTS scale	Statistical indicator
A	Top 10% achievers
B	The next 25% of earners
C	The next 30% of earners
D	The next 25% of earners
E	The next 10% of earners

10. Methodological support

- Working program of the academic discipline
- Syllabus of the academic discipline
- Situational clinical tasks
- Methodical development of practical classes

11. Questions for preparing for the final inspection

1. Definition of the wound. The main clinical signs of the wound. Components of the wound.
2. Early process, its phases.
3. Classification of wounds: by origin; according to the nature of the wounded object; according to the degree of infection.
4. Wound complications: development of infection in the wound, bleeding from the wound, wound failure, hypertrophic scars and keloids.
5. General principles of wound treatment and prevention of complications of the wound process.
6. Classification of medical instruments: by scope of application; by frequency of use; according to the conditions of use; by appointment.
7. General requirements for medical instruments. Cutting tools. Requirements for cutting tools.
8. Modern tools for tissue separation. Clamping tools. Impression tools. Methods of sterilization.
9. Classification of suture materials. Suture thread marking systems. Basic requirements for suture material.
10. Surgical, atraumatic and ligature needles. Clips and staples for stitching. Suturing surgical devices. Sterilization of suture material.

11. Component parts of the node. Types of nodes. Knot tying technique. Apodactyl method.
12. Types of surgical sutures. The technique of laying knotted and continuous seams. Skin suture removal technique.
13. Preparation and treatment of the operating field.
14. Treatment of the surgeon's hands. Putting on sterile underwear and gloves.
15. Types of local anesthesia. Complications of local anesthesia. Prevention and general principles of treatment of complications of local anesthesia.
16. Primary surgical treatment of the wound. Definition. Indications and contraindications for primary surgical wound treatment.
17. The main types of primary surgical wound treatment.
18. Stages of primary surgical wound treatment. Primary and primary-delayed sutures.
19. General principles of surgical treatment of a gunshot wound. Stages of primary surgical treatment of a gunshot wound.
20. Methods of closing a gunshot wound.
21. Infected wounds. Local and general signs of the inflammatory process. Classification of wound infection.
22. Tetanus. Emergency prevention of tetanus.
23. Clostridial and putrefactive wound infection, features of surgical treatment.
24. Indications and contraindications for secondary surgical wound treatment. Wound drainage techniques.
25. Infectious wound monitoring. Indications for antibiotic prophylaxis.
26. Indications and contraindications for antibiotic therapy of wound infection.
27. Rational use of antibacterial drugs.
28. The postoperative period, its phases.
29. Use of dressing material properties in wound treatment.
30. Peculiarities of local treatment of surgical and accidental wounds depending on the degree of infection and the phase of the wound process.
31. Apparatus and means of NPWT and VAC. Indications and contraindications for the use of negative pressure systems. Possible application modes.
32. Ultrasonic debridement of wounds (UWD) indications and contraindications for use.

List of practical skills

1. Tying a surgical knot.
2. Applying nodal seams.
3. Application of continuous seams.
4. Removal of skin sutures.
5. Treatment of the operating field.
6. Treatment of the surgeon's hands.
7. Putting on sterile underwear and gloves.
8. Use of surgical instruments.
9. Local infiltration anesthesia.
10. Performing primary surgical treatment of wounds.
11. Performing secondary surgical treatment of wounds.
12. Performing a dressing.
13. Applying bandages.

12. Recommended literature

Main:

1. General Surgery. Textbook for students of higher medical educational establishments / [Lihonenko OV, Zubaha AB, Khimich SD et al.]; Edited by Prof. SD Khimich, Prof. MD Zheliba / Kyiv AUS Medicine Publishing, 2019.- 608 p.

2. General Surgery. Textbook for students of higher medical educational establishments / [Lihonenko OV, Chorna IO et all.]; Edited by Prof. Ja.S.Bereznickij, MPZacharash, MPMishalov,/ - Vinnica: New book- 2019. -344с
3. R. Kushnir. Lecture of General surgery for foreign students of II and III years of medical faculty. – Ternopil "Ukrmedkniga", 2018 - 318 p
4. Lyapis MA Methods of examination of a surgical patient / MA Lyapis. – Ternopil: Ukrmedbook, 2004. – 156 p.

1. Загальна хірургія: підручник / С. Д. Хіміч, М. Д. Желіба, , І. Г. Герич та ін.: за ред. професорів С. Д. Хіміча, М.Д. Желіби,. – К.: ВСВ «Медицина», 2018. – 608 с.
2. Загальна хірургія : [підручник для студентів вищих навч. закладів МОЗ України] / за ред.: Я. С. Березницького, М. П. Захараша, В. Г. Мішалова, В. О. Шідловського ; В. П. Андрищенко, Я. С. Березницький, А. В. Верба та ін. - Вінниця : Нова Книга, 2018. - 342 с.
3. Хірургія. (Підручник з загальної хірургії) /за ред..проф.Я.С.Березницького. – Дніпропетровськ, РВА „Дніпро VAL”, Т.1. – 2018. – 443с.

Additional:

1. Butyrsky A. General surgery. - Simferopol. 2014. - 478 p
2. General surgery. Selected lectures edited by prof. VV Mishchenko // V. Ye. Vansovych, ND Voloshenkova, DM Davydov, et other// Odessa 2019. 338p
3. Gostishcev VK General surgery/ The manual. -M.:Geotar-med, 2018. 220p
4. Schevchenko SI Surgery / SI Schevchenko and others. - Kharcov, 2004.
5. Kushnir R. Lectures of general surgery. - 2015.
6. Methodological recommendations on surgical patient care. – Vinnitsa medical national university, 2016.
7. Short practice of surgery. 24th edition. Vol.1. Edited by RCGRussell, Norman S. Williams, Christopher JKBulstrode. A member of the Hodder Headline Group. - London, 2018. – 738 p.

1. Амбулаторні хірургічні маніпуляції / за ред. Проф.. Польового В .П., Шкваровського І. В., Желіби М. Д. – Чернівці: Медуніверситет, 2018. – 252 с.
2. Десмургія : навчальний посібник / О. О. Виноградов, М. О. Ропасєва, О. І. Гужва, А. В. Радченко ; Держ. закл. «Луган. нац. ун-т імені Тараса Шевченка». – Старобільськ : Вид-во ДЗ «ЛНУ імені Тараса Шевченка», 2015. – 80 с.
3. Шаповал С.Д. Гнійно-септична хірургія./Навчальний посібник. – Київ ВСВ «Медицина» - 2019 – 192 с.
2. Невідкладні стани в хірургії. /Навчальний посібник для медичних ВНЗ І—ІІІ рівнів акредитації МОЗ України/ К. Бобак, А. Бобак, В. Киретов - Київ ВСВ «Медицина» - 2017 – 560с.

13. Electronic information resources

1. <https://moz.gov.ua/> - Ministry of Health of Ukraine
2. www.ama-assn.org - American Medical Association / American Medical Association
3. www.who.int - World Health Organization
4. www.dec.gov.ua/mtd/home/ - State Expert Center of the Ministry of Health of Ukraine
5. <http://bma.org.uk> - British Medical Association
6. <http://iss-sic.com/> - International Society of Surgeons