

**MEDICAL UNIVERSITY – PLOVDIV**  
**FACULTY OF MEDICINE**

**SYLLABUS**

**IN**

**SPECIAL SURGERY**

**Approved by the Department Council on 25.05.2022**

**Confirmed by the Faculty Council - Protocol №6/15.06.2022**

# SPECIAL SURGERY

Discipline	Final exam/ semester	Academic hours				Academic hours in years and semesters	
						4th year	
SPECIAL SURGERY	VIII	Total	Lectures	Practices	ECTS	1 <sup>st</sup> sem.	2 <sup>nd</sup> sem.
				180	60	120	9.1

**DISCIPLINE:**

“SPECIAL SURGERY”

**TYPE OF DISCIPLINE ACCORDING TO THE UNIFORM STATE**

**REQUIREMENTS:**

MANDATORY

**LEVEL OF QUALIFICATION:**

MASTER /M/

**FORMS OF TRAINING:**

LECTURES, EXERCISES

**YEAR OF TRAINING:**

4<sup>TH</sup> & 6<sup>TH</sup>

**DURATION OF TRAINING:**

TWO SEMESTERS

**ACADEMIC HOURS:**

60 HOURS OF LECTURES, 120 HOURS OF EXERCISES

**TECHNICAL EQUIPMENT APPLIED IN THE TRAINING:**

AUDIO VISUAL EQUIPMENT; MODELS; IMAGING EQUIPMENT;

SURGICAL INSTRUMENTS, CATHETERS, SONDS, DIFFERENT TYPE OF BANDAGES;

WORK WITH PATIENTS UNDER THE SURVEILLANCE OF THE ASSISTANTS AND PROFESSOR.

**FORMS OF EVALUATION:**

CURRENT AND FINAL ASSESSMENT: TEST AND ORAL EXAM

**EVALUATION CRITERIA:**

ASSESSMENT BY THE ASSISTANT DURING THE SEMESTER;

TEST INCLUDING OPEN AND CLOSED QUESTIONS AND CLINICAL CASES;

TEST AND ORAL EXAM WITH FINAL GRADE.

**ASPECTS OF EVALUATION CRITERIA:**

The final grade determines the extent to which the student has achieved the goal of the education set at the beginning. It is multi-component and includes a written final exam grade as well as the following components:

Assessment from ongoing control;

Assessment from a written exam;

Assessment from the final oral exam;

If one of the components of the final grade is weak 2, then the final grade will be weak 2.

**SEMESTER EXAM:**

WRITTEN AND ORAL EXAM

**STATE EXAM:**

PART OF EXAM “SURGICAL DISEASES”

**LECTURER:**

PROFESSORS FROM THE DEPARTMENT OF SPECIAL SURGERY

**DEPARTMENT:**

“SPECIAL SURGERY»

**ANNOTATION:**

Special surgery is a medical specialty that studies the symptoms, etiology, pathogenesis, diagnosis, prevention and treatment of the different kind of surgical diseases (etc. traumas, inflammatory and tumor diseases of the neck, thorax and abdomen)

**BASIC AIMS OF THE DISCIPLINE:**

To teach the students: patient physical examination, laboratory and imaging investigation.  
To develop the ability of clinical interpretation of the symptoms of different surgical diseases.  
To make the differential diagnosis and the final diagnosis of patients with surgical diseases.  
To assimilate practical skills for obtaining the right diagnosis of surgical diseases.  
To be able to perform basic procedures and manipulations in surgery.  
To understand the interdisciplinary approach in special surgery with general surgery, pediatrics, obstetrics and gynecology, urology, oncology, radiology, etc.

**EXPECTED RESULTS:**

Assessment of basic information from the history and the physical examination of the patients with surgical diseases.  
To be able to perform the most commonly used methods of examination in special surgery.

To have the necessary knowledge about the common surgical diseases

Skills for recognition, correct assessment, approach and initial treatment of emergencies and urgent cases in special surgery

### **LECTURES:**

#### **LECTURES “SPECIAL SURGERY” FOR MEDICAL STUDENTS – IV COURSE – 1<sup>ST</sup> SEMESTER**

1. The Abdominal Wall, Including Hernia – Part I. Groin Hernias.
2. The Abdominal Wall, Including Hernia – Part II. Umbilical Hernias. Femoral hernias.
3. Small Intestine and Appendix: Acute Appendicitis; Meckel’s Diverticulum. Crohn’s Disease.
4. Acute peritonitis.
5. Abdominal Trauma: Blunt and Penetrating abdominal traumas.
6. Stomach and Duodenum: Peptic Ulcer Disease’s Complications.
7. Stomach and Duodenum: Stomach Cancer.
8. The small intestine: Small bowel Obstruction. Small bowel tumours. Foreign bodies.
9. Colon and Rectum: Part I - Diverticular disease: diverticulitis, bleeding, and fistula. Ulcerative Colitis – Part II. Colonic Obstruction. Sacrococcygeal pilonidal sinus.
10. Colon and Rectum: Part II - Colorectal tumors.
11. Colon and Rectum: Part III - Large-bowel obstruction.
12. Gallbladder Disease.
13. Portal Hypertension. Liver Abscess and Cysts.
14. The Spleen. Splenic Trauma. Disorders of Splenic Function.

#### **LECTURES “SPECIAL SURGERY” FOR MEDICAL STUDENTS – IV COURSE – 2<sup>ND</sup> SEMESTER**

1. Acute pancreatitis. Pathogenesis. Clinical Presentation. Diagnosis. Treatment.
2. Chronic Pancreatitis. Pancreatic Pseudocysts.
3. Exocrine and Endocrine Pancreatic Tumors.
4. Acute generalized peritonitis. Intra-abdominal abscesses.
5. Cervical cysts and fistulas. Neck Phlegmonas.

- 6. Non-toxic goitre. Hashimoto's disease. De Quervain's thyroiditis.**
- 7. Thyrotoxicosis. Carcinoma of the thyroid gland.**
- 8. Thoracic Trauma.**
- 9. Benign breast tumors. Acute mastitis. Breast Cancer.**
- 10. Pleural Empyema. Spontaneous Pneumothorax. Tumors of the pleura.**
- 11. Lung abscess. Lung Hydatid Disease. Bronchiectatic disease.**
- 12. Acute Mediastinitis. Mediastinal Tumors and Cysts.**
- 13. Lung Cancer.**
- 14. Achalasia. Esophageal diverticulas. Diaphragmal Hernias. Esophageal Cancer. Panaritium.**

**PRACTICES:**  
**“SPECIAL SURGERY” FOR MEDICAL STUDENTS – IV COURSE – 1<sup>ST</sup>**  
**SEMESTER**

1. The Abdominal Wall, Including Hernia – Part I. Groin Hernias.
2. The Abdominal Wall, Including Hernia – Part II. Umbilical Hernias. Femoral hernias.
3. Small Intestine and Appendix: Acute Appendicitis; Meckel’s Diverticulum. Crohn’s Disease.
4. Acute peritonitis.
5. Abdominal Trauma: Blunt and Penetrating abdominal traumas.
6. Stomach and Duodenum: Peptic Ulcer Disease’s Complications.
7. Stomach and Duodenum: Stomach Cancer.
8. The small intestine: Small bowel Obstruction. Small bowel tumours. Foreign bodies.
9. Colon and Rectum: Part I - Diverticular disease: diverticulitis, bleeding, and fistula. Ulcerative Colitis – Part II. Colonic Obstruction. Sacrococcygeal pilonidal sinus.
10. Colon and Rectum: Part II - Colorectal tumors.
11. Colon and Rectum: Part III - Large-bowel obstruction.
12. Gallbladder Disease.
13. Portal Hypertension. Liver Abscess and Cysts.
14. The Spleen. Splenic Trauma. Disorders of Splenic Function.

**PRACTICES**  
**“SPECIAL SURGERY” FOR MEDICAL STUDENTS – IV COURSE – 2<sup>ND</sup>**  
**SEMESTER**

1. Acute pancreatitis. Pathogenesis. Clinical Presentation. Diagnosis. Treatment.
2. Chronic Pancreatitis. Pancreatic Pseudocysts.
3. Exocrine and Endocrine Pancreatic Tumors.
4. Acute generalized peritonitis. Intra-abdominal abscesses.
5. Cervical cysts and fistulas. Neck Phlegmonas.

- 6. Non-toxic goitre. Hashimoto's disease. De Quervain's thyroiditis.**
- 7. Thyrotoxicosis. Carcinoma of the thyroid gland.**
- 8. Thoracic Trauma.**
- 9. Benign breast tumors. Acute mastitis. Breast Cancer.**
- 10. Pleural Empyema. Spontaneous Pneumothorax. Tumors of the pleura.**
- 11. Lung abscess. Lung Hydatid Disease. Bronchiectatic disease.**
- 12. Acute Mediastinitis. Mediastinal Tumors and Cysts.**
- 13. Lung Cancer.**
- 14. Achalasia. Esophageal diverticulas. Diaphragmal Hernias. Esophageal Cancer. Panaritium.**



## **CONSPECTUS OF SURGICAL DISEASES - FOR 4<sup>TH</sup> YEAR MEDICAL STUDENTS**

1. Head traumas
2. Inflammatory diseases of head and face
3. Congenital cervical cysts and fistulas
4. Thyroiditis and thyroid cancer
5. Endemic goiters
6. Thyrotoxicosis
7. Cervical traumas
8. Neck phlegmon
9. Acute mastitis
10. Benign breast tumors
11. Breast cancer
12. Blunt thoracic trauma
13. Open thoracic trauma
14. Traumatic pneumothorax
15. Pneumothorax
16. Rib fractures and flail chest
17. Pleural empyema
18. Lung abscess
19. Bronchiectasis
20. Lung cancer
21. Lung hematic disease
22. Esophageal diverticulitis
23. Esophageal cancer
24. Achalasia
25. Acute mediastinitis
26. Blunt abdominal trauma
27. Open abdominal trauma
28. Acute peritonitis
29. Primary type of peritonitis
30. Intraabdominal abscess
31. Anterior abdominal wall hernias. General information.
32. Anterior abdominal wall hernias. Complications. Incarceration and strangulation.
33. Femoral hernias
34. Inguinal hernias

35. Umbilical and epigastric hernias
36. Diaphragmatic hernias
37. Acute appendicitis. General information.
38. Acute appendicitis. Complications. Acute peritonitis, appendicular infiltrate, appendicular abscess.
39. Acute appendicitis in children, elderly and pregnant women.
40. Chronic appendicitis
41. Peptic ulcer disease. Surgical point of view. Complications.
42. Peptic ulcer perforation
43. Upper gastrointestinal bleeding
44. Pyloric stenosis
45. Malignant degeneration of peptic ulcer
46. Peptic ulcer penetration
47. Benign stomach tumors
48. Gastric cancer
49. Liver hydatid disease
50. Liver abscess
51. Cholecystitis
52. Portal hypertension. Clinical presentation.
53. Acute pancreatitis
54. Pancreatic cancer
55. Pancreatic pseudocyst
56. Spleen disorders
57. Ileus. Intestinal obstruction. General information.
58. Intestinal obturation
59. Intestinal strangulation
60. Congenital ileus
61. Invagination/ intussusception
62. Mesenteric thrombosis
63. Dynamic ileus
64. Paronychia (acute inflammatory process of fingers)
65. Phlegmon of the hands and forearms
66. Hemorrhoids
67. Perianal disease. Perianal abscess. Perianal fistulas.
68. Anal fissuras

69. Colon cancer.
70. Rectal cancer.
71. Ulcero-hemorrhagic colitis
72. Mediastinal masses and tumors.
73. Caustic necrosis (burning) of the esophagus.
74. Spontaneous pneumothorax.

## **CONSPECT - STATE EXAM OF SURGICAL DISEASES**

### **I. GENERAL AND SPECIAL SURGERY**

1. Local and regional anaesthesia.
2. Wound Healing: Sanatio per Primam.
3. Wound Healing: Sanatio per Secundam. Sanatio sub crustam.
4. Thermal Trauma. Burns.
5. Thermal Trauma. Frost-bite.
6. Hemostasis.
7. Blood Transfusion. Complications.
8. Shok.
9. Surgical Infections. Necrotizing soft tissue infections.
10. Surgical Infections. Phlegmona. Abscess. Empyema.
11. Surgical Infections. Furunculus. Carbunculus.
12. Surgical Infections. Acute lymphangitis. Acute lymphadenitis.
13. Surgical Infections. Sepsis.
14. Femoropopliteal and Tibial acute occlusive Disease.
15. . Femoropopliteal and Tibial chronic occlusive Disease.
16. Venous thromboembolism.
17. Blunt trauma. Penetrating trauma.
18. Osteomyelitis.
19. Panaritium.
20. Tetanus.
21. Cervical cysts anf fistulas.
22. Thyrotoxicosis.
23. Non-toxic goitre. Hashimoto's disease. De Quervain's thyroiditis.
24. Carcinoma of the thyroid.
25. Benign breast tumors.
26. Acute mastitis.
27. Breast Cancer.
28. Chest Trauma. Rib Fractures. Flail Chest.
29. Chest Trauma. Traumatic Hemothorax.
30. Chest Trauma. Traumatic Pneumothorax.

31. Chest Trauma. Pulmonary Contusion. Tracheal Injury. Esophageal Injury. Cardiac tamponade.
32. Pleural Empyema.
33. Lung abscesses.
34. Lung Hydatid Disease.
35. Bronchiectatic disease.
36. Lung Cancer.
37. Esophageal Diverticula. Achalasia.
38. Esophageal Neoplasms.
39. Oesophageal perforation. Mallory-Weiss syndrome.
40. Acute Mediastinitis.
41. Mediastinal Tumors and Cysts.
42. Abdominal Wall Hernias. Groin Hernia.
43. Abdominal Wall Hernias. Femoral Hernia.
44. Abdominal Wall Hernias. Umbilical Hernia. Epigastral Hernia.
45. Abdominal Wall Hernias. Incisional Hernia.
46. Paraesophageal hiatal hernia. Sliding type of hiatal hernia.
47. Abdominal Trauma. Penetrating Injury.
48. Abdominal Blunt Trauma.
49. Peptic ulcer. Complications. Pyloric Stenosis. Penetration.
50. Peptic ulcer. Complications. Perforation.
51. Acute Gastro-intestinal bleeding.
52. Stomach cancer.
53. Calculous Biliary Disease
54. Acute cholecystitis.
55. Obstructive Jaundice.
56. Liver Hydatid Disease.
57. Acute Pancreatitis.
58. Acute appendicitis. History. Physical findings.
59. Appendicitis in the elderly. Appendicitis in pregnancy.
60. Ileus and Bowel Obstruction. Pathogenesis. Clinical presentation.
61. Ileus and Bowel Obstruction. Intussusception.
62. Ileus and Bowel Obstruction. Volvulus.
63. Ileus and Bowel Obstruction. Paralytic Ileus.
64. Ileus and Bowel Obstruction. Hernial obstruction.

65. Exocrine Pancreatic Cancer. Endocrine Pancreatic Tumors.
66. Liver Cancer.
67. Pancreatic Pseudocyst.
68. Mesenteric Thrombosis.
69. Acute generalized peritonitis.
70. Intra-abdominal abscesses.
71. Ulcerative Colitis
72. Diverticular disease of the colon.
73. Colorectal Cancer.
74. Anorectal Abscesses.
75. Fistula-in-Ano. Anal Fissure.
76. Hemorrhoids.

## **II. UROLOGY**

### **A. GENERAL UROLOGY**

1. Symptomatology in urology- classification.
2. Urinary symptoms- classification.
3. Changes of voided urine
4. Haematuria.
5. Retention of urine.
6. Incontinence of urine.
7. Physical examination of the genitourinary tract.
8. Radiology of the urinary tract.
9. Urologic laboratory investigations. Sperm parameters.
10. Instrumental investigations in urology.
11. Biopsy in urology.
12. Ultrasound in urology.
13. Renal function tests.
14. Acute renal failure.
15. Hydronephrosis. Pyonephrosis.
16. Chronic renal failure.
17. Catheterization of the urinary bladder. Suprapubic drainage of urine (Cystofix).
18. Overactive bladder.
19. Percutaneous Endourology. Ureterrenoscopy.
20. Urinary Obstructions. Stasis.

21. Bacterial and specific infections of the Genitourinary tract. Sexually transmitted diseases. Urosepsis.
22. Mechanism of normal micturation, Neural circuits controlling storage and expulsion of urine.
23. Urodynamic studies.
24. Urinary Obstruction. Stasis of urine.
25. Renal transplantation- general aspects.

## **B. SPECIAL UROLOGY**

26. Congenital anomalies of the kidney.
27. Congenital anomalies of the ureter.
28. Congenital anomalies of the bladder.
29. Congenital anomalies of the urethra.
30. Congenital anomalies of the testis.
31. Congenital anomalies of the penis.
32. Trauma to the kidney.
33. Injury to the ureter.
34. Injury to the bladder.
35. Injury to the urethra.
36. Trauma to the scrotum.
37. Trauma to the penis.
38. Renal parenchymal neoplasms.
39. Wilm's tumor ( nephroblastoma ).
40. Urothelial carcinoma: cancers of the bladder, ureter, renal pelvis,
41. Benign prostatic hyperplasia( BPH ).
42. Prostate cancer.
43. Germ cell tumors of the testis.
44. Tumors of the penis.
45. Inflammation of the epididymis and testis.
46. Torsion of the testis ( torsion of spermatic cord ).
47. Hydrocele. Varicocele.
48. Male infertility.
49. Nephrolithiasis- epidemiology, types of stones, specific risk factors for stone formation, pathophysiology.

50. Nephrolithiasis- clinical features, diagnosis, complications (classification), management (minimally invasive procedures).
51. Inflammation of the bladder- acute and chronic cystitis.
52. Inflammation of the prostate ( prostatitis ).
53. Disorders of ejaculation.
54. Male sexual dysfunction- physiology of penile erection (inervation of the penis, anatomy and hemodynamics of penile erection, mechanism of penile erection ). Erectile dysfunction.
55. Male reproductive system- organs involved in the production of semen. Path of sperm transport.

## **ORTHOPEDICS.**

1. Torticollis
2. Paralysis obstetrica
3. Congenital dysplasia of the hip joint
4. Congenital dysplasia of the hip joint in walking children
5. Coxa vara. Epyphysiolysis adolescentia. Coxa valga
6. Deformities and diseases of the knee joint (genu varum, genu valgum, chondrodystrophia patellae, luxatio patellae)
7. Rachitis deformities
8. Pes equinovarus
9. Scoliosis. Kyphosis. Lordosis
10. Diseases of the muscles and their insertions due to fatigue
11. Diseases of the tendons.
12. Periarthritis of the shoulder joint
13. Pes planovalgus
14. Pertes disease
15. Aseptical necroses
16. Osteochondritis dissecans of the knee joint
17. Bone tumors
18. Degenerative joint diseases (coxarthrosis and gonarthrosis)
19. Central paralysis. Peripheral paralysis
20. Fractures- in general
21. Pathological fractures
22. Spine fractures. Dislocation of the spine
23. Fractures of the pelvis



24. Pertrochanteric fractures
25. Fractures of the femoral neck
26. Supracondylar fracture of the femur
27. Patellar fractures
28. Intraarticular fractures of the knee joint
29. Diaphyseal fractures of the tibia and fibula
30. Fractures of the ankles
31. Fractures of the diaphysis of the humerus
32. Shoulder fractures
33. Surgical neck fractures of the humerus
34. Supracondylar fracture of the humerus
35. Fracture of the elbow (olecranon)
36. Fractures of the forearm
37. Colles fracture
38. Traumatic dislocations of the hip joint
39. Dislocation of the shoulder joint
40. Dislocation of the elbow joint
41. Soft tissue injuries of the knee joint
42. Fractures of the carpal, metacarpal bones and phalangeal fractures

## **ПРЕПОРЪЧВАНА ЛИТЕРАТУРА ЗА ОБУЧЕНИЕ ПО „СПЕЦИАЛНА ХИРУРГИЯ“:**

1. Лекционен курс – Специална Хирургия.
2. Lecturer Course – Special Surgery.
3. Хирургия - Учебник за студенти по медицина / Ред. Мишев П.
4. Спешна хирургия – ред. Н. Яръмов/ София : МИ „ Арсо” , 2011, 830с.
5. Ръководство по Гръдна хирургия : 23Т. – Ред. Д. Дамянов, Ред. на Том Данаил Петров, / София : А. И. « М. Дринов « 2011,
6. Хирургия : Учебник за студенти по Медицина - Ред. Н. Яръмов, / София : МИ « АРСО « 2011,
7. И. Новаков. Основни Клинични процедури. Изд. Медицински Университет – 2009.
8. И. Новаков. 112 Въпроса от Спешната Хирургия. Изд. „Медицински Университет” – Пловдив – 2011.
9. И. Новаков. „Ръководство за Практически Упражнения по Хирургия” – изд. „Медицински Университет” – Пловдив; 2011.
10. Специална хирургия под ръководството на проф. Я. Добрев – 1987г  
„Хирургически болести” – под редакцията на проф. Ст. Баев – 1997г
11. Хирургически болести” – под редакцията на проф. Ст. Баев - 1995г
12. Ръководство за практически упражнения по клинична хирургия под редакцията на проф. Ст. Баев
13. Спешна хирургия под ръководството на А. Пинкас и Вяички - 1998г  
Аноректални и чревни тумори – диагностика и лечение под редакцията на В. Димитров.
14. Essential of General Surgery – 2th ed. Williams&Wilkins; 1992.
15. Novakov I. “Selected Lectures in Special Surgery” – 2017.
16. Novakov I. “Questions & Answers in Special Surgery” – 2018.
17. Новаков И. „Закрита Гръдна Травма”. Медицински Университет – Пловдив 2019.
18. Новаков И. „Плеврални Изливи” . Медицински Университет – Пловдив 2019.

УЧЕБНАТА ПРОГРАМА НА ДИСЦИПЛИНАТА „СПЕЦИАЛНА ХИРУРГИЯ” ЗА ОБУЧЕНИЕ НА СТУДЕНТИ – МАГИСТРИ ПО „МЕДИЦИНА” Е ОБСЪДЕНА, АКТУАЛИЗИРАНА И ПРИЕТА НА КАТЕДРЕН СЪВЕТ – ПРОТОКОЛ №4/ ОТ 25.05.2022 г.