**SYLLABUS**

for the education cycle starting in the academic year 2021/2022

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| **Name of course/module** | Surgery |
| **Name of unit(s) in which the course is implemented** | 1. 1st Clinical Department of General and Endocrine Surgery at the Medical University of Bialystok
2. 2nd Clinical Department of General and Gastroenterological Surgery at the Medical University of Bialystok
3. Department of Thoracic Surgery at the Medical University of Bialystok
4. Department of Vascular Surgery and Transplantation at the Medical University of Bialystok
5. Department of Cardiology at the Medical University of Bialystok
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| **E-mail of the unit** | 1. klchirog@umwb.edu.pl
2. chgastro@umwb.edu.pl
3. thorax@umb.edu.pl
4. chirnacz@umb.edu.pl
5. kardiochirurgia@umb.edu.pl
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| **Faculty** | Faculty of Medicine with the Division of Dentistry and Division of Medical Education in English |
| **Major** | Medicine |
| **Mode of study** | long-cycle studies |
| **Form of study** | full-time  part-time  |
| **Language of the course** | Polish  English  |
| **Course type** | obligatory  facultative  |
| **Year/ semester** | I  II  III  IV  V  VI  | 1  2  3  4  5  6  7  8  9 10 11  12  |
| **Introductory courses and essential requirements** | Implementation of learning outcomes in the scope of knowledge, skills and competences from the previous years. |
| **Number of hours of teaching divided into forms of teaching** | III year: Lectures 25 /seminars 21; practical classes 24 IV year: Lectures 20 /seminars 21, practical classes 24V year: Lectures 20 /seminars 14; practical classes 31VI year: /seminars 60, practical classes 60(+ 180h of practical classes on Year VI as a chosen clinical course) |
| **Course assumptions and objectives** | 1. Learning the pathophysiology and natural course of diseases requiring surgical treatment.
2. Mastering the principles of complex diagnostics of patients requiring invasive treatment (taking medical history, physical examination, additional examinations).
3. Learning the principles of qualification for surgical treatment and mastering the indications and contraindications for surgical treatment.
4. Familiarising oneself with the methods and results of early and long-term surgical treatment.
5. Learning the principles of management in multi-organ injuries and the principles of oncological surgery.
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| **Teaching methods** | 1. transfer of knowledge in a lecture form
2. presentation
3. case description
4. discussion
5. literature analysis
6. independent searching for knowledge
7. consultation on Thursday in the last week of block practical classes (01.00 p.m - 03.00 p.m.)
8. other practical classes
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| **Name and surname of the tutor** | Scientific & didactic and didactic staff employed at: 1st Clinical Department of General and Endocrine Surgery, 2nd Clinical Department of General and Gastroenterological Surgery, Department of Thoracic Surgery, Department of Vascular Surgery and Transplantation and Department of Cardiology at the Medical University of Bialystok |
| **Name and surname of the person responsible for teaching** | Dr n. med. Piotr Wojskowicz (I Department); Dr hab. Zbigniew Kamocki (II Department); Dr hab. Mirosław Kozłowski (Department of Thoracic Surgery, Dr hab. Jerzy Głowiński (Department of Vascular Surgery and Transplantation), Prof. Tomasz Hirnle (Department of Cardiology) |

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| **Symbol** **and number of the learning outcome****in accordance with the educational standard and other subject learning outcomes** | **Description of the learning outcomes for the major** | **Form of training** | **Method of verification of assumed learning outcomes** |
| **Knowledge**  |
| E.W1. | knows the genetic, environmental and epidemiological determinants of the most common diseases | *Lectures, Seminars, Practical classes:* | Summarizing methods:4-year curriculum, test and practical exam in the VI year of studyFormative methods- entry assessments- observation of student work- evaluation of preparation for classes- assessment of activity during classes- assessment of individual actions- case description - partial assessment |
| E.W7. | knows and understands the causes, symptoms, principles of diagnosis and therapeutic proceedings in relation to the most common internal diseases occurring in adults and their complications1. diseases of the digestive system, including diseases of the mouth, oesophagus, stomach and duodenum, intestines, pancreas, liver, bile ducts and gallbladder,
2. endocrine diseases, including diseases of the hypothalamus and pituitary gland, thyroid gland, parathyroid gland, adrenal cortex and medulla, ovaries and testes, as well as neuroendocrine tumours, polyglandular syndromes, different types of diabetes mellitus and metabolic syndrome: hypoglycaemia, obesity, dyslipidaemia
3. cardiovascular diseases, including: ischaemic heart disease, heart defects, endocardial diseases, heart muscle, pericardium, heart failure (acute and chronic), arterial and venous vessel diseases, arterial hypertension: primary and secondary, pulmonary hypertension,
4. respiratory system diseases, including: respiratory tract diseases, chronic obstructive pulmonary disease, bronchial asthma, bronchial dilatation, cystic fibrosis, respiratory tract infections, interstitial lung diseases, pleural diseases, mediastinal diseases, obstructive and central sleep apnoea, respiratory failure (acute and chronic), respiratory system tumours
5. water-electrolyte and acid-base disorders: states of dehydration, states of overhydration, electrolyte disturbances, acidosis and alkalosis;
 | *Lectures, Seminars, Practical classes:* |
| E.W40 | knows the theoretical and practical background of laboratory diagnostics | Lectures, Seminars, Practical classes: |
| F.W1. | knows and understands the causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases requiring surgical intervention, taking into account the specificity of childhood, including in particular1. acute and chronic diseases of the abdominal cavity.

Assessment of nutritional status in patients. Home-based nutirional therapy - indications. Parenteral and enteral nutrition. Nutrition in oncological diseas. | Lectures, Seminars, Practical classes: |
| F.W3. | knows the qualification principles for basic surgical procedures and invasive diagnostic and therapeutic procedures, the principles of their performance and the most common complications | Lectures, Seminars, Practical classes: |
| F.W4. | knows the most common complications of the above mentioned treatments and procedures | Lectures, Seminars, Practical classes: |
| F.W5. | knows the principles of perioperative safety, preparation of the patient for surgery, administering general and local anaesthesia and controlled sedation | Lectures, Seminars, Practical classes: |
| F.W10. | He knows issues of contemporary imaging, in particular:1. radiological symptomatology of basic diseases
2. instrumental methods and imaging techniques used for therapeutic procedures,
3. indications, contraindications and preparation of patients for particular types of imaging examinations and contraindications to use of contrast agents.
 | Lectures, Seminars, Practical classes: |
| F.W14. | has basic knowledge on procedural transplantology, knows indications for transplantation of irreversibly damaged organs and tissues and related procedures | *Seminars* |
| F.W15. | knows the principles of suspicion and diagnosis of brain death | *Seminars* |
| **Skills** |
| E.U1. | takes medical history with an adult patient | Practical classes | Summarizing methods:- performance of a specific taskFormative methods- assessment of activity during classes- assessment of individual actions |
| E.U3. | carries out a full and focused physical examination of the adult patient | Practical classes |
| E.U14. | recognises life-threatening conditions | Practical classes |
| E.U16. | plans diagnostic, therapeutic and preventive procedures | Practical classes |
| E.U32. | is able to plan specialist consultations | Practical classes. |
| E.U37. | recognises patient agony and establishes death | Practical classes. |
| E.U38. | is able to keep medical records of the patient | Practical classes. |
| F.U1. | assists in a typical surgical procedure, knows how to prepare the operating field and provide local anaesthesia of the operated area | Practical classes |
| F.U2. | uses basic surgical instruments | Practical classes. |
| F.U3. | applies the principles of aseptic and antiseptic | Practical classes. |
| F.U4. | dresses a simple wound, applies and changes sterile surgical dressing | Practical classes. |
| F.U6. | examines nipples, lymph nodes, thyroid gland and abdominal cavity in the aspect of acute abdomen and performs finger examination through the anus | Practical classes. |
| F.U9. | supplies external bleeding | Practical classes. |
| **social competences** |
| K1 | respects medical confidentiality and patient rights | Practical classes. | Summarizing methods:- continuous assessment by the teacher (observation)Formative methods- observation of student work- discussion during classes |
| K2 | is able to establish and maintain deep and respectful contact with the patient as well as to show understanding for ideological and cultural differences |
| K3 | is guided by the welfare of the patient |
| K4 | perceives and recognises own limitations and makes self-assessments of deficits and learning needs |
| K5 | takes activities towards patient on the basis of ethical principles with awareness of social conditions and disease restrictions |
| K6 | promotes pro-health behaviour |
| K7 | uses objective sources of information |
| K8 | formulates conclusions from own measurements or observations |
| K9 | implements the principles of professional comradeship and cooperation in a team of specialists, including representatives of other medical professions, also in multicultural and multinational environment |
| K10 | formulates opinions on various aspects of professional activity |
| K11 | accepts responsibility connected with decisions made within the scope of professional activity, including in terms of his/her own and other people's safety |

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| **ECTS credits** | 5+4+4+8  |
| **Student workload** |
| **Form of activity** | **Number of hours to complete the activity**  |
| **Activities requiring participation of the tutor:** |
| 1. Course completion: lectures (according to the study plan)
 | 65 |
| 1. Course completion: practical classes (according to the study plan)
 | 119  |
| 1. Course completion: seminars (according to the study plan)
 | 56 |
| 1. Course completion: practical solution of clinical problems. (according to the plan)
 | 80 |
| 1. Course completion: optional classes
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| 1. Participation in consultations
 | 10 |
|  | hours total: 330 |
| **Independent student work:** |
| 1. Self-preparation for theoretical and practical classes (making a project, documentation, case description, etc.)
 | 90 |
| 1. Self-preparation for assessments/tests
 | 50 |
| 1. Self-preparation for the final examination/assessment
 | 30 |
|  | hours total: 170 |

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| **Learning content of the course** |
| **Learning outcomes****(symbol and number)** | **Subject** |
|  | **LECTURES** |
| E.W1. /E.W7. /F.W10. | Peritonitis.  |
| E.W1. /E.W7. /F.W10. | Septic shock. |
| E.W1. / E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Acute appendicitis. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Cholelithiasis. Diagnosis, symptoms, complications, treatment. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Abdominal hernias: diagnosis, symptoms, complications, treatment. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Complications of peptic ulcer disease - surgical treatment. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Acute pancreatitis. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Chronic pancreatitis. |
| F.W1. /F.W4. | Principles of nutritional treatment of surgical patients. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Burn and frostbite |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Oligovolemic shock. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Upper gastrointestinal bleeding. Diagnosis and treatment.  |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Non-cancerous disorders of the gastrointestinal tract. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Video surgery - operations using laparoscopic techniques |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Pancreatic tumours - epidemiology, symptoms, diagnosis, treatment |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Biliary tract tumours - epidemiology, symptoms, diagnosis, treatment. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Liver tumours - epidemiology, symptoms, diagnosis, treatment. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Colorectal neoplasms - epidemiology, symptoms, diagnosis, treatment. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Nipple cancer. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Parathyroid gland diseases - epidemiology, symptoms, diagnosis, treatment. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Thyroid diseases - epidemiology, symptoms, diagnosis, treatment. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Adrenal diseases - epidemiology, symptoms, diagnosis, treatment. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Neuroendocrine tumours of the gastrointestinal tract. Polyglandular syndromes. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Lung cancer, part I: Epidemiology, pathogenesis and clinic. TNM classification and endoscopic and minimally invasive diagnosis, invasive (surgical) diagnosis and surgical treatment. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Tumours of the thoracic organs. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Chest injuries: epidemiology, chest wall injuries, pneumothorax, haematoma of the pleural cavity, injuries to internal organs, treatment. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Diagnosis and emergency care of thoracic injuries. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Pathogenesis, symptoms, diagnosis and treatment of chronic limb ischaemia. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Acute limb ischaemia. |
| E.W1. /E.W7. /F.W1. /F.W3. /F.W4. /F.W5. | Peripheral vascular injuries. Diagnosis and management. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Chronic venous insufficiency. Venous thromboembolism. |
| E.W1. /E.W7. /F.W1. /F.W10. / | Pathogenesis and diagnosis of abdominal aortic aneurysms. Aortic dissection. |
|  | **SEMINARS** |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Pathophysiology of wound healing. |
| F.W3. | Basic surgical instruments. |
| F.W3. | Contemporary suture materials. |
| E.W40. /F.W10. | Additional examinations in surgery, interpretation of their results. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Intestinal obstruction. |
| F.W5. | Asepsis and antisepsis. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Purulent soft tissue infection.  |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Wound infections. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Disorders of water-electrolyte balance. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Inflammatory bowel diseases. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Surgical disorders of the liver. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Stomach tumours - epidemiology, symptoms, diagnosis, treatment |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Genetically determined tumours, family occurrence of tumours |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Genetically determined tumours, family occurrence of tumours |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Metabolic and bariatric surgery. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Multi-organ injuries including abdominal injuries |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. /F.W4. /F.W5. /F.W10. / | Diseases of the anus. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Acute peritonitis |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Diverticulitis |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Intestinal obstruction |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Multi-organ injuries |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Abdominal hernias |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Surgery of the thyroid and parathyroid glands with special reference to complications |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Adrenal surgery with special reference to complications |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Bariatric surgery with special reference to complications |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Acute appendicitis. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Cholelithiasis. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Acute cholecystitis. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Inflammation of the biliary tract. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Acute pancreatitis. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Intestinal failure. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Upper gastrointestinal bleeding. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Bleeding from the lower gastrointestinal tract. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Non-cancerous lung diseases treated surgically |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Diseases of the oesophagus, with particular emphasis on oesophageal cancer |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Lung cancer |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | VIII TNM classification of lung cancer and oesophageal cancer |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Esophageal diseases treated surgically |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Purulent lung and pleural diseases |
| E.W1. /E.W7. / E.W40 / F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Pleural diseases |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Diseases of the diaphragm |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Thoracic injuries |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. / | Selected problems in arterial surgery (treatment of aortic aneurysms, aortic arch syndrome, acute and chronic intestinal ischaemia, Raynaud's phenomenon). |
| E.W1. /E.W7. /F.W1. /F.W15. | Fundamentals of transplantology. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Chronic ischaemia of lower limbs. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Aneurysms of the abdominal aorta and peripheral arteries. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Subclavian artery steal syndrome. Stenosis and obstruction of extracranial cerebral arteries. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Venous thromboembolism. Chronic venous insufficiency. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Arterial compression syndromes, vasomotor disorders. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Acute lower limb ischaemia, vascular injury. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Renal vascular hypertension. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Techniques for endovascular treatment of vascular disease. |
|  | **PRACTICAL CLASSES** |
| E.U1. /E.U3. /E.U16.  | Taking medical history and physical examination in surgery |
| F.U1 / F.U9. | Techniques of surgical suture placement. |
| E.U16. /E.U32. / F.U.6 | Independent preparation of medical history - clinical case. |
| E.U1. /E.U3. /E.U16. /E.U32. | Presentation of clinical cases. |
| E.W38. /F.W1. /F.W10. / E.U1./ E.U3. /E.U37. /F.U1. /F.U2. /F.U3. /F.U4. /F.U9. /F.U6. | Classes in the Clinic, Outpatient Clinic, ER and operating block. |
| E.W41. /F.W1. /F.W10. / | Imaging diagnostics  |
| E.W7. /E.W40. /F.W1. / E.U14. /E.U37. /  | Emergency management and monitoring and treatment of patients with shock  |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Chest flaccidity and pneumothorax: emergency and definitive management |
| E.W1. /E.W7. /F.W1. /F.W10. / | TNM classification. |
| E.W1. /E.W7. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Pulmonary emphysema: complications and indications for surgical treatment |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Pleural effusions: causes and indications for surgical treatment |
| E.W1. /E.W7. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Diaphragmatic hernias: causes, symptoms, imaging diagnosis and treatment |
| E.W1. /E.W7. /F.W1. /F.W3. F.W4. /F.W5. / | Surgical and combined treatment of cancer of the oesophagus and gullet |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. / | Purulent lung and pleural diseases: lung abscess and pleural abscess; methods of surgical treatment |
| E.W1. /E.W7. /F.W1. / | Esophageal diverticula |
| E.W1. /E.W7. /F.W1. / | Achalasia and hernias of the oesophageal hiatus |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Pulmonary tuberculosis: indications for surgical treatment |
| E.W1. /E.W7. /F.W1. / | Congenital and acquired defects of the chest wall |
| E.W1. /E.W7. /F.W1. / | Symptomatology of arterial and venous diseases - bedside teaching. |
| E.W41. /F.W1. /F.W3. F.W4. /F.W5. /F.U2. /  | Operational techniques - video presentations. |
| E.W1. /E.W7. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Surgery of extracranial cerebral arteries. |
| E.W1. /E.W7. /E.W40. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Renal vascular hypertension. |
| E.W1. /E.W7. /F.W1. / | Compression and vasomotor syndromes. |
| E.W41. /F.W1. /F.W3. F.W4. /F.W5. /F.W10. / | Intravascular surgery. |

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| **Obligatory literature:** *(1-2 items)* |
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| **Supplementary literature:** *(1-2 items)* |
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| **Criteria for the assessment of the achieved learning outcomes and the form and conditions of obtaining credit for the course:**  |
| 1. The way of crediting individual practical classes - they are not subject to individual credit
2. The way of crediting seminars - they are not subject to individual credit
3. The possibility to make up for absences in the case of excused absences (dean's leave, sick leave)
4. The way and form of crediting all didactic classes in a given unit: test colloquium
5. Test and practical exam in the VI year after obtaining credits in particular clinics
6. Form of exemption from the exam - not practised
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*(date and signature of the head of the teaching uni*