



48SJ-CSL45
2025Z
ECTS: 1.00

Course syllabus – part A Clinical Skills Labs 4

SUBJECT MATTER CONTENT:

Laboratory classes

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Classes

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TEACHING OBJECTIVE:

Upon completion of this module, the student should: 1. understands clinical interpretations of the USG and the most common pathologies during USG examination; 2. understands the sonographic interrelationships between the structure of the organs of the head and neck, abdomen and pelvis taking into account the basics of ultrasound examination. The student should acquired and developed the basics and principles of ultrasound examination, taking into account topographic anatomy of the organs and structures of the neck, chest, abdomen and pelvis and interprets the ultrasound images. The student knows the basic symptoms and USG signs and principles of differentiation of selected pathologies in USG examination. The student can independently perform an USG examination and vizualize and asses structures and organs of the neck, abdomen and pelvis as well as interpret the most common pathologies. The student can also work in a group using acquired skills and the available literature. The student is able to establish respectful contact with the patient, observing the principles of septic and antiseptic rules and the principles of proffesional behavior. The student knows the basic and principles and techniques of fine needle biopsy under USG guidance, is able to perform a biopsy of the lesion under USG image control. The student knows and improves the methods of recording and interpreting the ECG test, performs 12-lead ECG, is able to recognize and correctly interpret cardiac arrhythmias in emergencies, he recognizes the type and location of ischemic changes in the myocardium and selected ECG pathologies.

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL

Legal acts specifying learning outcomes:

672/2020 (Medicine),

Status of the course: None

Group of courses: None

Discipline: Medicine

Classes:

Laboratory classes (9 h)

Classes (21 h)

Step: Kierunek lekarski czwarty rok semestr ósmy (oferta w jęz. angielskim dla obcokrajowców)

Program: Medicine

Form of studies: full-time

Level of studies: uniform master's studies

Introductory subject: anatomy, physiology, patophysiology, internal medicine

Prerequisites: knowledge of anatomy, physiology, patophysiology, internal medicine, physical examination

Coordinators:

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LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:

Symbols for outcomes related to the discipline:

M/NM+++++, M/NMA_P7S_UW++++

Symbols for outcomes related to the field of study:

K.3.+, K.5.+, M/NM_K.8.+, E.U29.+, KA7_UU1++, KA7_UW5+,
M/NM_B.W8.+, M/NM_E.W7.+, M/NM_F.W10.+, KA7_WG1+, KA7_WG3+

LEARNING OUTCOMES (Knowledge, Skills, Social competence):

W1

Student knows and understands: M/NM_B.W8. the physical grounds of non-invasive imaging methods

W2

Student knows and understands: M/NM_E.W7. the causes, symptoms, principles of diagnosing and treating the most frequently encountered internal diseases of adults and their complications: 1) cardiovascular diseases, including ischemic heart disease, heart defects, diseases of the endocardium, myocardium, and pericardium, heart insufficiency (acute and chronic), arterial and venous diseases, hypertension – primary and secondary, pulmonary hypertension, 2) respiratory diseases, including airways diseases, chronic obstructive pulmonary disease, bronchial asthma, bronchiectasis, cystic fibrosis, respiratory tract infections, interstitial respiratory diseases, pleural diseases, mediastinum diseases, obstructive sleep apnoea, respiratory distress (acute and chronic), bronchogenic carcinomas, 3) gastrointestinal diseases, including oral diseases, oesophageal diseases, stomach and duodenal diseases, intestinal diseases, pancreatic diseases, liver diseases, biliary tract and gallbladder diseases, 4) endocrine system diseases, including the hypothalamus and pituitary gland diseases, thyroid and parathyroid diseases, adrenal cortex and medulla diseases, ovary and testicle diseases and neuroendocrine tumours, polyglandular syndromes, diabetes of various types, and the metabolic syndrome – hypoglycaemia, obesity, dyslipidaemia, 5) kidney and urinary tract diseases, including acute and chronic kidney failures, glomerulus and interstitial kidney diseases, renal cysts, kidney stones, urinary tract infections, urinary tract carcinomas, especially of the urinary bladder and kidneys, 6) diseases of the haematopoietic system, including bone marrow aplasia, anaemia, granulocytopaenia and agranulocytosis, thrombocytopaenia, acute leukaemias, myeloproliferative and myeloproliferative-myelodysplastic neoplasms, myelodysplastic syndromes, neoplasms of mature lymphocytes B and T, haemorrhagic diatheses, thrombophilia, immediate life-threatening conditions in haematology, blood disorders in diseases of other organs, 7) rheumatic diseases, including systemic connective tissue diseases, systemic vasculitis, spondyloarthropathies, bone metabolic diseases, especially osteoporosis and osteoarthritis, gout, 8) allergic diseases, including anaphylaxis and anaphylactic shock, and angioedema, 9) water-and-electrolyte and acid-base disorders:

dehydrations, excessive water retention, electrolyte management disorders, acidosis and alkalosis;

W3

Student knows and understands: M/NM_F.W10. the issues of the contemporarily employed imaging tests, especially:

- 1) radiological symptomatology of the basic diseases,
- 2) the instrumental methods and imaging techniques used in medical surgeries,
- 3) the indications, contraindications, and patient preparation for individual types of imaging tests, and contraindications against the use of contrast agents

W4

Student knows and understands: KA7_WG1 human body structure based on vital diagnostic examinations, in particular x-rays, ultrasound images, computed tomography and magnetic resonance imaging

W5

Student knows and understands: KA7_WG3 principles of performing ultrasound examination (USG) and basic principles of fine-needle and core-needle biopsy

U1

Student can: E.U29.

E.U 29. perform the basic medical procedures and therapies, including:

- 1) taking the body temperature (both external and internal), the heart rate, the arterial pressure applying a non-invasive method,
- 2) monitoring the vital signs with the use of the patient monitor, pulse oximetry,
- 3) conducting spirometry tests, oxygentherapy, assisted and controlled ventilation,
- 4) inserting the oropharyngeal tube,
- 5) performing intravenous, intramuscular, and subcutaneous injections, cannulating peripheral veins, sampling peripheral venous blood, sampling blood for culture, sampling arterial blood, sampling arterialised capillary blood,
- 6) taking swabs from the nose, throat, and skin,
- 7) catheterising the urinary bladder in women and men, inserting the gastric tube, performing gastric lavage, enema,
- 8) taking standard electrocardiogram tests and interpreting them, performing electrical cardioversion and defibrillation,
- 9) taking simple strip tests and measuring glucose concentration in blood

U2

Student can: KA7_UU1 assist with fine-needle and core-needle biopsy

U3

Student can: KA7_UW5 assist during an ultrasound examination, visualize selected structures and interpret the obtained images as well as conclude about the presence of pathological changes

K1

Student is ready to: K.3. observance of medical confidentiality and patient's rights

K2

Student is ready to: K.5. perceiving and recognizing own limitations and self-assessment of deficits and educational needs

K3

Student is ready to: M/NM_K.8. formulating conclusions from own measurements or observations

TEACHING FORMS AND METHODS:

Laboratory classes-['W1', 'K1', 'U2', 'K2', 'W3', 'U3', 'K3', 'W4', 'W5']-Practical exercises: performing and interpretation of 12-lead ECG.

Classes-['W1', 'U1', 'K1', 'W2', 'K2', 'K3']-Practical exercises: the student recognizes and visualizes the organs of the neck, abdomen and pelvis during ultrasound examination, interprets images based on individual clinical cases and learns the rules and technique of fine-needle and thick-needle biopsy.

FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:

Laboratory classes-(Colloquium practical)-['W1', 'K1', 'U2', 'K2', 'W3', 'U3', 'K3', 'W4', 'W5']-attendance at classes, performing and interpretation of ECG. To pass the course, it is necessary to pass Ultrasound part and the ECG part with a score of not less than 60%. The assessment will be the arithmetic mean of the Ultrasound part and the ECG.

Classes-(Colloquium practical)-['U1', 'K1', 'W2', 'K2', 'K3']-The OSCE practical test. To pass the course, it is necessary to pass Ultrasound part and the ECG part with a score of not less than 60%. The assessment will be the arithmetic mean of the Ultrasound part and the ECG.

Literature:

1. **Color Atlas of ultrasound anatomy**, Berthold Block, Thieme, 2011, Strony: , Tom: (literatura podstawowa)
2. **Pocket Anatomy & Protocols for Abdominal Ultrasound**, Steven M. Penny, Wolters Kluwer Health, 2019, Strony: , Tom: (literatura podstawowa)
3. **Abdominal Ultrasound: Step by Step**, Berthold Block, Thieme, 2015, Strony: , Tom: (literatura podstawowa)
4. **The Only EKG Book You'll Ever Need**, Malcolm S. Thaler, Wolters Kluwer, 2015, Strony: , Tom: (literatura uzupełniająca)
5. **Point of Care Ultrasound Made Easy**, John McCafferty, James M. Forsyth, CRC Press, 2020, Strony: , Tom: (literatura uzupełniająca)



Detailed description of ECTS credits awarded - part B
Clinical Skills Labs 4

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2025Z

ECTS: 1.00

The number of ECTS credits awarded consists of:

1. Contact hours with the academic teacher:

- participation in: Laboratory classes	9 h
- participation in: Classes	21 h
- consultation	2 h
Total: 32 h	

2. Independent work of a student:

Total: 0 h

Total (contact hours + independent work of a student): 32 h

1 ECTS credit = 25-30 h of an average student's work, number of ECTS,
ECTS Points = 32 h : 25 h/ECTS = **1.00** ECTS

Average: 1.00 ECTS

- including the number of ECTS credits for contact hours with the direct participation of an academic teacher	1.00 ECTS
- including the number of ECTS credits for hours of independent work of a student	0.00 ECTS