UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN

Course sylabus – part A

48SJO-LABDIAG
Laboratory Diagnostics

2025

ECTS: 3.00

SUBJECT MATTER CONTENT:

Classes

1. Laboratory diagnostics of urine system (urinalysis).
2. Specimen collection (systems).
3. Laboratory diagnosis of coagulation system.
4. Water and electrolyte balance and acid-base balance.
5. Serology of blood groups.
6. Point of care system in the laboratory diagnostics.
7. Hematology diagnostics (CBC, ESR, blood smear).
7. Full blood count, ESR /hematology/

Lecture

Lectures:

1. Place of laboratory diagnostics in the health care system
2. Effect of pre-analytical variability on laboratory results. Types of laboratory errors.
3. Effects of drugs on the results of laboratory tests, therapy drug monitoring.
4. Laboratory diagnostics of emergencies, laboratory diagnosttics of patient's nutriton.
5. Interpreting laboratory values in older adults and newborns.

Seminar

I.SEMINAR

1. Laboratory diagnostics of the liver diseases
2. Laboratory diagnostics of CSF
3. Nutricional deficiencies in laboratory results.
4. Laboratory diagnostics of autoimmunity diseases.

II. SEMINAR

1. Laboratory diagnostics of the pancreas diseases.
2. Laboratory diagnostics of the genital system disease (ovaries, testicles, prostate).
3. Influence of lifestyle on laboratory test results.
4. Laboratory diagnostics of borreliosis and Tick-borne encephalitis.

III. SEMINAR

1. Laboratory diagnostics of the thyroid disease
2. Tumor markers.
3. Laboratory diagnostics of cardiovascular system.
4. Laboratory diagnostics of leukemias.

4. SEMINAR

1. Laboratory diagnostics of the urinary system.
2. Laboratory diagnostics of body fluid.

Legal acts specifying learning outcomes: 311/2023 (Medicine),
Status of the course: None
Group of courses: None
Discipline: Medical Sciences
Classes:
Lecture (15 h)
Seminar (15 h)
Classes (20 h)
Step: Kierunek lekarski trzeci rok (oferta w jęz. angielskim dla obcokrajowców)
Program: Medicine
Form of studies:full-time
Level of studies: uniform master's studies

Introductory subject: anatomy, physiology, biochemistry

Prerequisites: knowledge of anatomy, physiology, biochemistry

Coordinators:

Blanka Wolszczak-Biedrzycka, blanka.wolszczak@uwm.edu.pl

3. Electrophoresis and immunofixation.
4. Laboratory diagnostics of anemias.
V. SEMINAR
1. Laboratory diagnostics of the endocrinic system (the hypothalamus, the pituitary gland).
2. Laboratory diagnostics of bone diseases.
3. Laboratory diagnostics of pregnant women.
4. Laboratory diagnostics of athletes.

TEACHING OBJECTIVE:
To acquire knowledge on the collection and handling of diagnostic material, avoidance of pre-laboratory errors,
acquire practical skills on collection and correct handling of the material, acquire the ability to perform tests used by patients (e. g. glucometry, INR determination), use of lab results. in the patient's diagnosis.

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL 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/NMA_P7S_WG++++++

Symbols for outcomes related to the field of study:
K.9.+, E.U24.+, E.U28.+, E.W39.+, E.W40.+, E.W41.+

LEARNING OUTCOMES (Knowledge, Skills, Social competence):

W1 the types of biological materials used for laboratory diagnostics and the sampling rules;
theoretical and practical basis of laboratory diagnostics;
the possibilities and limitations of laboratory testing in emergencies;

U1 interpret the results of laboratory tests and identify the causes of deviations from the norm;
collect and secure material for tests used in laboratory diagnostics;

K1 recognising and recognising their own limitations and self-assessing educational deficits and needs

TEACHING FORMS AND METHODS:
Classes-['W1', 'U1', 'K1']-presentation
Lecture-['W1', 'U1', 'K1']-presentation
Seminar-['W1', 'U1', 'K1']-presentation

FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:
Lecture-(Written exam)-[]-60% to pass
Seminar-(Presentation)-[]-
Classes-(Written test)-['W1', 'U1', 'K1']-single choice test - 60% pass

Literature:
1. ***A Manual of Laboratory and Diagnostic Tests***, Fischbach, Lippincott Williams Wilkins (LWW), -, Strony: -, Tom:- (literatura podstawowa)

UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN

Detailed description of ECTS credits awarded - part B
Laboratory Diagnostics

48SJO-LABDIAG
2025
ECTS: 3.00

The number of ECTS credits awarded consists of:

1. Contact hours with the academic teacher:

- participation in: Lecture	15 h
- participation in: Seminar	15 h
- participation in: Classes	20 h
- consultation	4 h
	Total: 54 h

2. Independent work of a student:

preparing to tests and final exam	21.00 h
	Total: 21.00 h

Total (contact hours + independent work of a student): 75.00 h

1 ECTS credit = 25-30 h of an average student's work, number of ECTS,
ECTS Points = 75.00 h : 25 h/ECTS = **3.00** ECTS

Average: 3.00 ECTS

- including the number of ECTS credits for contact hours with the direct participation of an academic teacher	2.16 ECTS
- including the number of ECTS credits for hours of independent work of a student	0.84 ECTS