



Pomeranian Medical University in Szczecin

SYLLABUS of the MODULE (SUBJECT) General Information

Module title: Laboratory Diagnostics	
Module type	Obligatory/ Facultative (wybrać)
Faculty PMU	Faculty of Medicine and Dentistry
Major	Medicine
Level of study	long-cycle (S2J)
Mode of study	full-time studies
Year of studies, semester	Year III semester: V and VI
ECTS credits (incl. semester breakdown)	5
Type/s of training	Seminars (20h)/ practical (30h)
Form of assessment*	<input type="checkbox"/> graded assessment: <ul style="list-style-type: none"> <input type="checkbox"/> descriptive <input type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral <input type="checkbox"/> non-graded assessment <input checked="" type="checkbox"/> final examination <ul style="list-style-type: none"> <input type="checkbox"/> descriptive <input checked="" type="checkbox"/> test <input type="checkbox"/> practical <input checked="" type="checkbox"/> oral
Head of the Department/ Clinic, Unit	prof. dr hab. n. med. Andrzej Ciechanowicz
Tutor responsible for the module	dr hab. n. med. Mariusz Kaczmarczyk (mariusz@pum.edu.pl)
Department's/ Clinic's/ Unit's website	Department of Clinical&Molecular Biochemistry (https://www.pum.edu.pl/wydzialy/wydzial-lekarski/katedra-diagnostyki-laboratoryjnej/zaklad-biochemii-klinicznej-i-molekularnej)
Language	English

* replace ☐ into ☒ where applicable

Detailed information

Module objectives		To develop the skills of the correct selection of laboratory tests and their proper use (interpretation) for further diagnostic and therapeutic procedures.
Prerequisite /essential requirements	Knowledge	Basic knowledge in biochemistry and hematology.
	Skills	Ability to use correct biochemical naming and the ability to interpret basic biochemical changes in the case of disturbed homeostasis.
	Competences	The habit of self-education and the ability to work in a team.

Description of the learning outcomes for the subject /module

No. of learning outcome	Student, who has passed the (subject) knows /is able to /can:	SYMBOL (referring the standards)	Method of verification of learning outcomes*
W01	knows environmental and epidemiological conditions of most frequent diseases	K_E.W01	K, ET/EU
W02	knows types of biological materials used in laboratory diagnostics and rules governing sampling	K_E.W37	K, ET/EU
W03	knows theoretical and practical bases of laboratory diagnostics	K_E.W38	K, ET/EU
W04	knows and understands possibilities and limitations of laboratory examinations in emergency situations	K_E.W39	K, ET/EU
U01	interprets laboratory investigations and identifies reasons for deviations	K_E.U24	K, ET/EU
K01	demonstrates the awareness for self-education, understands the need for continuing professional education, can inspire and organize learning processes in others	K_K03	K, ET/EU
K02	can establish prioritize objectives	K_K16	K, ET/EU

Table presenting LEARNING OUTCOMES in relation to the form of classes

No. of learning outcome	Learning outcomes	Type of training						
		Lecture	Seminar	Practical classes	Clinical classes	Simulations	E-learning	Other...
W01	K_E.W01		x	x				
W02	K_E.W37		x	x				
W03	K_E.W38		x	x				
W04	K_E.W39		x	x				
U01	K_E.U24		x	x				
K01	K_K03		x	x				
K02	K_K16		x	x				

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	Teaching programme	No. of hours	References to learning outcomes
Winter semester			
Seminars			
TK01	Introduction to rational laboratory diagnostics.	2	W01_W04, U01, K01, K02
TK02	Analytical basics of laboratory diagnostics.	2	W01_W04, U01, K01, K02
TK03	Basics of hematological diagnostics: the red blood cells.	2	W01_W04, U01, K01, K02
TK04	Basics of hematological diagnostics: the white blood cells.	2	W01_W04, U01, K01, K02
TK05	Diagnostics of hemostatic disorders.	2	W01_W04, U01, K01, K02
Practical classes			
TK01	Diagnostics of lipid disorders.	2	W01_W04, U01, K01, K02
TK02	Clinical enzymology.	2	W01_W04, U01, K01, K02
TK03	Diagnostics of acid-base imbalance.	2	W01_W04, U01, K01, K02
TK04	Diagnostics of water and electrolyte disturbances.	4	W01_W04, U01, K01, K02
TK05	Laboratory diagnosis of kidney diseases.	2	W01_W04, U01, K01, K02
TK06	Hypertension - the importance of laboratory tests.	1	W01_W04, U01, K01, K02
TK07	Diagnostics algorithms for selected clinical cases.	2	W01_W04, U01, K01, K02
Summer semester			
Seminars			
TK01	Laboratory diagnostics of acute and life-threatening conditions.	2	W01_W04, U01, K01, K02
TK02	Diagnostics of inborn error of metabolism. Newborn screening.	2	W01_W04, U01, K01, K02
TK03	Laboratory diagnostics in endocrinology.	4	W01_W04, U01, K01, K02
TK04	Laboratory diagnostics of dysglycemia.	2	W01_W04, U01, K01, K02
Practical classes			
TK01	Laboratory diagnostics in oncology.	2	W01_W04, U01, K01, K02
TK02	Laboratory diagnostics of gastrointestinal disorders.	4	W01_W04, U01, K01, K02
TK03	Laboratory diagnostics of protein disorders.	2	W01_W04, U01, K01, K02
TK04	Laboratory diagnostics of disorders in trace elements and vitamins.	2	W01_W04, U01, K01, K02
TK05	Introduction to laboratory genetic diagnostics.	2	W01_W04, U01, K01, K02
TK06	Differences in laboratory diagnostics in childhood, elderly and pregnancy.	1	W01_W04, U01, K01, K02

TK07	Diagnostics algorithms for selected clinical cases.	2	W01_W04, U01, K01, K02
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Booklist

Obligatory literature:

Allan Gaw, Michael J Murphy, Rajeev Srivastava, Robert A Cowan, Denis St J O'Reilly. Clinical Biochemistry

Student's workload

Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h]
	Tutor
Contact hours with the tutor	50
Time spent on preparation to seminars/ practical classess	25
Time spent on reading recommended literature	20
Time spent on writing report/making project	
Time spent on preparing to colloquium/ entry test	15
Time spent on preparing to exam	30
Other	
Student's workload in total	140
ECTS credits for the subject (in total)	5
Remarks	

* Selected examples of methods of assessment:

EP – written examination

EU – oral examination

ET – test examination

EPR – practical examination

K – colloquium

R – report

S – practical skills assessment

RZC – practical classes report, incl. discussion on results

O – student's active participation and attitude assessment

SL – lab report

SP – case study

PS - assessment of student's ability to work independently

W – entry test

PM – multimedial presentation

other...