Degree Programme in Biomedical Laboratory Science, MedisiinaD, Kiinamyllynkatu 10, Turku

Please note that these courses are only for BLS exchange students

International Semester 2022	Spring	Autumn		
THEORY COURSES	**ECTS**	**ECTS**	**Course no**	**Group**
Hematology 1, self-study, eLearning		2		2nd year/3rd semester
PROFESSIONAL BASICS PRACTICE IN CLASSROOM SETTINGS, PRACTICE COURSES (TH00BN81) Please choose the labs you attend:	**ECTS**	**ECTS**	Spring max 13 ECTS Autumn max 16 ECTS	**Please note: 1 ECTS = 27 hours student work**
Clinical Biochemistry; automated analyzers	3	3		2nd year/3rd or 4th semester
Clinical Hematology I and II (spring)	2	2	TH00BN80	2nd year/3rd or 4th semester
Clinical Immunohematology	2		TH00BN80	2nd year/4th semester
Blood sampling and Point-of-Care-Testing	1-2	1-2	TH00BN80	1st year/2nd semester
Clinical Pathology		2	TH00BN80	2nd year/4th semester
Clinical Microbiology	2	1	TH00BN80	1st year/1st or 2nd semester
Molecular genetics		3	TH00BN80	2nd year/3rd semester
Clinical Physiology		1	TH00BN80	1st year/1st or 2nd semester
Project work, presentation; international student exchange	1	1	TH00BN80	Exchange
Introduction to Biomedical Laboratory Scientist's profession in Hospital Laboratory (**only for BLS students**)	1	1	TH00BN80	Exchange
Common courses for all TUAS exchange students				
Finnish for Exchange students Starts online on the 18 or 20.1.2021 depending which group you join.	3	3		Exchange
GetFinternational **http://getfinternational.tuas.fi/**	3	3		Exchange

THEORY COURSES

Hematology 1, 2 ECTS (only Autumn semester), self study, eLearning
Students know the phases of haematopoiesis and know the principles of haematological examinations. Students are familiar with the methods of diagnosing haematological diseases, and know how haemostatic system works. Students are familiar with the quality system in the haematology laboratory. Students know the principles of the laboratory examinations securing the safety of blood transfusion and are familiar with the conditions of safe blood donation.
Students know the tasks and production phases of the blood cells and know the regulation of blood cell production. Students know the phases of haemostasis and know the methods for examining the function of haemostasis. Students know the morphology of healthy, mature blood cells. Students know the methods for finding out about the production of blood cells. Students know the principles of the analysis methods in the haematology laboratory and quality management.

PRACTICE COURSES, PROFESSIONAL BASICS PRACTICE IN CLASSROOM SETTINGS (TH00BO81)

Students learn by working in learning laboratories following quality standards and safety laboratory practices.

Clinical Biochemistry; automated analyzers 3 ECTS
Students rehearse using automated analysers in clinical biochemistry and know how to apply their skills in the assessment of biochemical examination results, the errors dependent on the specimen and the reliable function of the analysers. Students know how to work according to the quality manual and the instructions in place. Students can identify the phases of pre-analytics, analytics and post-analytics in clinical biochemistry work.

Clinical hematology I or II

- Hematology I (Autum semester, 2 ECTS): Students can independently prepare a technically high quality blood film and know mature, healthy blood cells. Students know how to work with microscopes independently.
- Hematology II (Spring semester, 2 ECTS): Students know immature blood cells and can assess the alterations which are seen in the blood count in connection with blood diseases. Students can identify findings in an aberrant blood film.

Clinical immunohematology 2 ECTS
Students know how to use the equipment for blood transfusion serology examinations and can under supervision carry out basic examinations in blood transfusion serology. Students know how to independently get results for blood type determination analyses.

Blood Sampling and Point-of-Care-Testing 1-3 ECTS
Student can independently carry out the specimen collection for different clinical specimens taking into account the requirements of pre-analytics and occupational safety. Student is able to answer for the safety and well-being of the client during the specimen collection. Student knows how to guide clients and take into account in their guidance the impact of pre-analytical factors on the results of the laboratory examinations. Student knows how to serve clients from other cultures. Student knows how to apply the principles of good service in customer work and in the collaboration with other professional groups.

Clinical Pathology 2 ECTS
Students know the handling process of a histological specimen in the laboratory. Students master the tissue embedding technique, the tissue sectioning and the use of a microtome. Students are familiarised with immunohistochemical staining, they can identify the tissue components and know how to carry out histological and cytological staining and make a cytocentrifuge preparate. Students can tell apart benign cell changes from normal findings.

Clinical microbiology I (1 ECTS) or II (2 ECTS)
- Clinical microbiology I (Autumn semester, 1 ECTS): Students have the basic knowledge of the most common pathogenic microbes, know microbiological identification methods and know the microbiological instruments. Students know the basics of specimen collection for identifying microbes and know the correct procedure for obtaining a specimen from the larynx.
- Clinical microbiology II (Spring semester 2 ECTS): Students know how to obtain a high quality specimen from the larynx, rehearse the use of microbe cultivation and identification methods and train their skills in interpreting the results. Students know how to work abiding by the occupational health instructions of the microbiology laboratory.

Molecular Genetics 3 ECTS
The student knows the factors affecting DNA and RNA isolation. The student is aware of the chromosomal structure, inheritance disturbances and disturbance factors. The student knows the most important methods of gene and chromosomal research so well that he can absorb new methodological information and apply it to the diagnostics of patients with hereditary diseases. VNTR analysis, chromosome examinations, G-tracks, cell culture, PCR.

Clinical Physiology 1 ECTS
ECG registration.

Introduction to Biomedical Laboratory Scientist's profession in Finland 1 ECTS
Students get familiar with the Biomedical Laboratory Scientist's career in Finland e.g. visiting the hospital laboratories.

Project work, Presentation, International Student Exchange 1 ECTS
Students get familiar with giving a presentation in English.

Get Finternational 3 ECTS

International students: gaining a wider perspective into the Finnish society, taking part in it more actively, learning how to analyse the adaptation to a foreign culture, learning how to interact with the representatives of different cultures. Finnish students: learning how to interact with the representatives of different cultures, being more confident in using foreign languages, analysing cross-cultural issues, gaining another perspective in one's own culture.