

## PROGRAM SPECIFICATION

### Admissions/Management Information

Title of the program

**Bachelor of Laboratory Medicine Technique**

**Vietnamese Laboratory Medicine Technique Framework level**

Bachelor (Level 6)

The following information is provided to students admitted to the training program:

**Awarding institution**

Tra Vinh University

Teaching place

Tra Vinh University

**Faculty**

School of Medicine and Pharmacy

**Name of degree awarded**

**Bachelor of Laboratory Medicine Technique**

**Program code**

7720601

Admissions criteria

- **Method 1:** Considering the results of the National High School Examination, which is the plus point of 03 subjects according to the combination of examination subject reaching the minimum quality assurance threshold for university entrance as prescribed by the Ministry of Education and Training (Ground score, usually the total score of 3 subjects in the exam is  $\geq 15$ )
- **Method 2:** Considering the average score of the subjects in the 12th grade year of the selection subject combination. The minimum score threshold is 5.0 or higher for undergraduate majors.
- **Method 3:** Direct recruitment of students who won prizes in national and international competitions for excellent students

- Examination subject combinations: <b>+A00: Maths – Physics – Chemistry</b> <b>+B00: Maths – Chemistry – Biology</b>				
<b>Length and status of the program(s) and mode(s) of study</b>				
Programme	Length (years)	Status (full-time/part-time)	Start dates/months (if applicable – for programs)	Mode
<b>Bachelor of Laboratory Medicine Technique</b>	4,0 years	Full-time	September	Face-to-face, campus-based
<b>Language(s) of study</b>				
Vietnamese				
<b>Language(s) of assessment</b>				
Vietnamese				
<b>2. Program accredited by profession, law or regulation</b>				
According to the provisions of the Education Law				
<b>3. Program leader</b>				
Nguyen Ngoc The				
<b>4. Job profiles</b>				
Graduates can take up the following positions: <ul style="list-style-type: none"> <li>- Teaching staff, research staff of universities, colleges, professional secondary schools, research institutes;</li> <li>- Public and private health facilities;</li> <li>- Medical institutions (schools, factories, ...);</li> <li>- Medical laboratory equipment companies;</li> <li>- Center for Disease Control.</li> <li>- Self-organizing service testing at home.</li> </ul>				

<b>5. Purpose and learning outcomes of the programs</b>	
5 a. Educational philosophy and teaching/learning strategy	
Educational philosophy of Tra Vinh University and the program The university has an educational philosophy: <i>"Based on the practical, ethical and responsible training competencies, learners will develop into better individuals to serve a better society"</i> The educational philosophy of the program is: <i>"Companion – Reliability – Technology"</i>	
<b>5b. Program objectives</b>	
<b>PO 1</b>	Demonstrate capabilities of independent working or team working in changing working conditions and responsibilities for themselves and with groups; ability to guide and supervise others for specified task performance.
<b>PO 2</b>	Demonstrate critical thinking capabilities; evaluation of task quality after completion and the performance results of team members; communication of problems and solutions to others at work; and ability to disseminate knowledge and skills in complicated or specific task performance.
<b>PO 3</b>	Use essential skills to be able to solve complicated problems; plan, coordinate, organize, manage resources, evaluate and improve activity effectiveness; self-orient, draw professional conclusions and defend personal opinions; lead, start a business, create jobs for themselves and for others.
<b>PO 4</b>	Demonstrate an understanding of comprehensively professional knowledge and strong practice competence under career ethical standards and lawful regulations; taking initiative to improve technical quality in testing practice and career development.
<b>PO 5</b>	Maintain professional ethics, high sense of responsibility, cautious working style, sincere cooperation with colleagues; being capable of self-study and scientific research to fully meet the needs of people's health protection, care and improvement.
<b>c. Expected learning outcomes of the program</b>	
<b>ELO 1</b>	Apply basic knowledge of natural, social and political science, and relevant foundation medicine to solve health care problems.
<b>ELO 2</b>	Apply professional knowledge and interdisciplinary laboratory medicine technique for useful information supply to clinical departments in disease diagnosis, treatments and disease forecast for public health.
<b>ELO 3</b>	Properly evaluate test results based on expertise in: biochemistry, hematology, blood transfusion, microbiology, parasitology and cytological analysis.

ELO 4	Manage laboratories for safe operation and measures to ensure test quality.
ELO 5	Monitor procedures of chemical and biological product usage, operation and maintenance procedures for a number of specialized equipment used in medical laboratories under an assurance of electrical, chemical, biological and biosecurity safety in laboratories.
ELO 6	Perform proficiently common testing techniques, mass testing in community, and some specialized techniques.
ELO 7	Use proficiently information technology and foreign languages in professional practice and scientific research.
ELO 8	Perform problem-solving in career relevant situations by scientific and critical thinking methods.
ELO 9	Communicate well with colleagues, patients and community.
ELO 10	Work independently, or collaborate with colleagues and relevant parties in professional practice or when participating in volunteer work and epidemic prevention.
ELO 11	Comply with legislation regulations and professional ethics, preserve medical ethics and express social responsibilities.
ELO 12	Demonstrate professional working style, awareness of self-orientation, entrepreneurship motivation and lifelong learning.

#### **d. Other program information**

##### **i) Learning about**

The program aims to equip students with the skills to work in the medical laboratory industry to meet the requirements of the VietNam and region labor market

##### **ii) Organization to participate in training**

The program provides learning opportunities for all students regardless of ethnicity, gender or disability status

#### **6. Reference points and program regulations**

##### **iii) Internationalization**

The program aims to equip students with the skills to work in the medical laboratory to meet the requirements of the VietNam and regional labor market, compatible with regional and international standards. The program has students from the ASEAN region participating in the study. Students have the opportunity to participate in international academic exchange activities by

thematic in countries in the region. Besides, the school has international exchange activities to create a multicultural communication environment.

#### iv) The potential students

The program provides learning opportunities for all students regardless of ethnicity, gender, or disability

### 7. Program structure and requirements including levels, courses, credits, etc.

#### 7.a. Program Structure

No	Code	Course name	Credits		
			Total	Theory	Practice
<b>SEMESTER I</b>					
1.	191	Physical education 1*	1*	0	1*
2.		National Defense and Security Education*	8 credits		
3.	410291	Non-Major English 1	3	2	1
4.	220220	Basic Applied Informatics	3	1	2
5.	180050	Basic principles of Marxism-Leninism	3	3	0
6.	650062	Chemistry	2	2	0
7.	650058	Probability and Statistics in Medicine	2	1	1
8.	450015	General Law	2	1	1
9.	650005	General Human Anatomy	2	1	1
<b>Total</b>			<b>17</b>	<b>11</b>	<b>6</b>

<b>SEMESTER II</b>					
<b>Compulsory course</b>					
10.	192.08	Physical education 2*	1*	0	1*
11.	410302	Non-Major English 2	4	2	2
12.	180051	Political economics of Marxism-Leninism	2	2	0
13.	650518	Biology and Genetic	2	2	0
14.	150002	Soft skills	2	1	1

15.	650069	Embryology	2	1	1
16.		Physiology	2	1	1
17.	650560	Medical psychology – Career ethics	2	2	0
18.	650561	Fundamental Medical Laboratory Techniques	3	2	1
<b>Optional course list</b>			4		
19.	650519	Physics and Biophysics	2	2	0
20.	650438	Organic Chemistry	2	1	1
21.	640033	General Logic	2	1	1
22.	460200	Analytical Chemistry	2	1	1
<b>Total</b>			<b>19</b>	<b>13</b>	<b>6</b>

### SEMESTER III

23.	193.14	Physical education 3*	1*	0	1*
24.	Chủ nghĩa xã hội khoa học	Scientific socialism	2	2	0
25.	410303	Non-Major English 3	3	2	1
26.	650173	Biochemistry 1 (Fundamental Biochemistry)	3	2	1
27.	650175	Microbiology 1 (General Microbiology)	3	2	1
28.	650176	Parasitology 1 (Helminths)	3	2	1
29.	650616	Fundamental Haematology	2	1	1
30.	650655	Health Organisations – National Health Program – Health Education	1	1	0
31.	650547	Pathophysiology - Immunology	2	2	0
32.	650181	Pharmacology	2	2	0
<b>Total</b>			<b>21</b>	<b>16</b>	<b>5</b>

### SEMESTER IV

33.	410304	Non-Major English 4	3	2	1
34.	180001	Ho Chi Minh Ideology	2	2	0
35.	650180	Fundamental Nursing and First Aid	2	1	1
36.	650124	Epidemiology	2	1	1

37.	650366	Cellular Haematology	3	2	1
38.	650183	Biochemistry 2 (Disorders of Metabolism of Basic Substances)	2	1	1
39.	650184	Microbiology 2 (Pathogenic cocci)	2	1	1
40.	650603	Cytological Analysis 1	2	1	1
41.	650185	Internal pathology	2	2	0
42.	650186	Surgical pathology	2	2	0
43.	650656	Nutrition – Food Safety and Hygiene	1	1	0
44.	650657	Environmental Health	1	1	0
<b>Total</b>			<b>24</b>	<b>17</b>	<b>7</b>

#### SEMESTER V

45.	180053	History of Vietnamese communist party	2	2	0
46.	650190	Parasitology 2 (Protozoa)	2	1	1
47.	650371	Biochemistry 3 (Liver, Kidney and Heart Biofunction)	2	1	1
48.	650370	Microbiology 3 (Pathogenic bacilli)	2	1	1
49.	650201	Cytological Analysis 2	2	1	1
50.	650197	Coagulation Haematology	2	1	1
51.	650195	Transfusion Haematology	2	1	1
52.	650604	Hospital Infection Control	2	1	1
53.	650443	Scientific Research Methods in Medicine	2	1	1
54.	650178	Professional English in Medical laboratory	2	1	1
<b>Total</b>			<b>20</b>	<b>11</b>	<b>9</b>

#### SEMESTER VI

55.	650678	Biochemistry 4 (Cancer Makers and body fluids)	2	1	1
56.	650659	Parasitology 3 (Medical Microfungus)	2	1	1
57.	650660	Microbiology 4 (Virus and Immunology)	2	1	1

58.	650202	Quality Inspection in Medical Testing	2	1	1
59.	650607	Medical Laboratory Practice: Haematology	3	0	3
60.	650606	Medical Laboratory Practice: Biochemistry	3	0	3
<b>Total</b>			<b>14</b>	<b>4</b>	<b>10</b>

### SEMESTER VII

<b>Compulsory course</b>			5	0	5
61.	650610	Medical Laboratory Practice: Microbiology and Parasitology	3	0	3
62.	650611	Medical Laboratory Practice: Cytological Analysis	2	0	2
<b>Optional course list</b>			10		
63.	650743	Biosafety in the Laboratory	2	1	1
64.	650608	Haematological Pathology	3	2	1
65.	650708	Medical Laboratory Techniques for Detecting Microorganisms Causing Infectious Diseases	2	1	1
66.	650605	Parasitology 4 (Ectoparasites)	2	1	1
67.	650475	Molecular Biomedicine	2	1	1
68.	650709	Analytical Techniques for Food Safety and Hygiene	2	1	1
69.	650609	Biochemistry 5 (Endocrine Function)	3	1	2
<b>Total</b>			<b>15</b>	<b>5</b>	<b>5</b>

### SEMESTER VIII

70.	650706	Medical Laboratory Final Practice: Biochemistry, Haematology, Microbiology and Parasitology	4	0	4
71.	000004	Graduation thesis/ Graduation Project	7	0	7
<b>Total</b>			<b>11</b>	<b>0</b>	<b>11</b>



### **7.c. Program evaluation design**

#### **i) Contact the lecturer**

The Bachelor of Laboratory Medicine Technique program is designed with 145 credits, 81 theory, 64 practice. Theoretically, besides having lessons in the classroom, students also self-study and self-research through channels such as e-learning, homework, group discussions, presentation ... Regarding practice, besides practicing at the laboratory, medical lab under the direct guidance from teachers, the program was designed for clinical internship at hospitals inside and outside the province so that students have the opportunity to apply theory into clinical practice through learning. In addition, students also learn by project.

#### **ii) Students' self-study and research**

Regarding E-learning online resources, students can take the initiative in their study time and study anytime, anywhere. There is an online learning exchange environment, with direct supervision and feedback from lecturers. In addition, students can actively search for documents, self-study and research at the University's Learning Resource Center. Modules that including practice skills expertise in biochemistry, hematology, blood transfusion, microbiology, parasitology and cytological analysis at the labs , clinical practice at the hospital in and outside the province with the supervision and teaching of experienced clinical instructors provide students with the opportunity to improve their professional competence, communication skills and experience in a diverse internship settings.

### **8. Contribution of casual teaching staff and/or staff external to the University**

The Bachelor of Laboratory Medicine Technique program of Tra Vinh University engages the participation of experts from hospitals and research institutes and health science training universities in Vietnam. Experts from many different units, such as Tra Vinh province (Tra Vinh General Hospital , Tra Vinh Obstetrics - Pediatrics Hospital); outside Tra Vinh province (Ben Tre Nguyen Dinh Chieu Hospital, Tien Giang Central General Hospital, Pasteur Institute in Ho Chi Minh City, University of Medicine and Pharmacy at Ho Chi Minh City). Based on the needs of the training program, the School of Medicine - Pharmacy has effectively implemented the combined training model of School - Hospital; The lecturers involved in teaching theory and clinical practice in The Bachelor of Laboratory Medicine Technique program come from hospitals and universities, all of whom have clinical teaching experience and have practice certificates at medical facilities across the country more than 3 years. Annually, the School of Medicine and Pharmacy regularly opens classes to update medical knowledge continuously and organizes training courses on clinical teaching methods for clinical instructors. They actively teach and evaluate student learning outcomes based on regulations such as grades, rubrics, products, ...

### **9. Learning through experience**

#### **9.a. The program requires students to learn through experience at medical facilities**

The program provides learning opportunities through clinical internships in medical facilities under the guidance of experienced clinical faculty with good ethics and dedication to the profession. The course has 4 clinical placement course and medical laboratory final placement at general and specialized hospitals inside and outside the province.

### **9.b. Supporting students in experiential learning**

Practical clinical learning through practice of paraclinical tests expertise in biochemistry, hematology, blood transfusion, microbiology, parasitology and cytological analysis, effective team collaboration in interdisciplinary to achieve goals set out in medical facilities is required. Students must complete these modules in order to study further modules

### **9c. Brief details on the nature of work-based learning**

1. Pre-clinical practice (biochemistry, hematology, blood transfusion, microbiology, parasitology and cytological analysis)
2. Professional clinical practice
3. Final internship: Graduation internship

### **9.d. Who will be responsible for sourcing and placement?**

The School is in charge of establishing relationships with medical facilities inside and outside the province, to establish and cooperate with medical facilities in the training process. The Faculty has a study plan for students in medical facilities and sends it to students before entering the internship semester. Based on a network of more than 40 hospitals from level III to level I, Departments of Health and Universities and Colleges provide training in Health Sciences in and outside the province. In particular, students have the opportunity to choose and experience learning clinical internships and summer semester experiences through cooperation and student exchange programs studying in Japan, Taiwan, Philippines according to the needs of students. The team of full-time teaching faculty, clinical internships are considered based on the standards prescribed by the Training Industry, all have certificates, have clinical teaching methods, most of them on 3 years of experience and passion for the profession. The department selects the clinical faculty at the medical facilities in accordance with the internship content and practice facility conditions as prescribed by the Ministry of Health. Every day, students must report activities at the medical facility to the clinical instructor; Every week, clinical instructors must report progress and activities at the medical facility to the department, the Department reports the learning progress to the School in weekly and monthly faculty meetings. At the end of the clinical internship module, the student performs professional technical manipulation under the evaluation of clinical instructors or submits a complete report on the subject content and presents the results to the panel.

### **9.e. What is work-based learning time?**

Duration of learning through clinical practice in a medical facility is at least 4 weeks per module

### **9.f. How will work-based learning be assessed?**

In addition to becoming an intern at clinical departments in medical institutions, students must also undertake practical topics given by professionals at the medical facility. The outcome of these modules is the involvement of the facility instructor, the instructor. The score is the average of over 5 points, according to the components: Score of internship in medical facility , score of work with instructor and product results score.

**10. Students participate in program development How are current and/or alumni involved in the development of this proposal/program?**

Students are allowed to contribute ideas for program improvement through surveys and regular and ad hoc meetings of the Department with students. Student feedback on the quality of the instructors' teaching in each subject is collected through face-to face or online assessments at the end of each course. Feedback on teaching methods is provided through an annual survey and exit survey

**11. Change the program**

i) Transfer to the program will be? (please select Y/N) Y- Yes	Y - Yes	
ii) Moving out of the program will be? (please select Y/N)	N - No	

**12. Quality and standards**

The school has a framework in place to ensure that the standards of its programs are maintained and that the quality of the learning experience is enhanced.  
 Quality assurance and enhancement processes include:  
 - The academic supervisor of the program of training in the departments of the Council of Science and Education , including student representatives  
 - The monitoring program of the external examiners, who ensure that standards at Tra Vinh University is equivalent to other programs in the industry  
 - Managing monitoring and annual periodic assessment of programs and acquiring feedback from the faculty and students through the National Student Survey.

**13. Date on which this program specification was written or revised December, 2022**

**14. Matrix showing how the program learning outcomes are achieved through the courses**

Note: "I"=Introduced; "R"=reinforced and opportunity to practice; "M"=mastery at the senior or exit level

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### Course Contribution Matrix for ELOs

No	Course name	Expected learning outcomes											
		ELO1	ELO2	ELO3	ELO4	ELO5	ELO6	ELO7	ELO8	ELO9	ELO10	ELO11	ELO12
<b>A. COURSES IN GENERAL EDUCATION</b>													
<b>I. Courses in Political theory</b>													
1	Basic principles of Marxism–Leninism	I										I	
2	Political economics of Marxism-Leninism	I										I	
3	Scientific socialism	I										I	
4	Ho Chi Minh Ideology	I										I	
5	History of Vietnamese communist party	I										I	
<b>II. Courses in Social sciences and humanities</b>													
6	General Law	I										R	
7	Scientific Research Methods in Medicine	I						R				R	I
<b>III. Foreign Language Courses</b>													
8	Non-Major English 1	I						R		I			
9	Non-Major English 2	I						R		I			
10	Non-Major English 3	I						R		I			
11	Non-Major English 4	I						R		I			
<b>IV. Courses in Maths, Informatics and Natural science</b>													
12	Basic Applied Informatics	I						R					
13	Chemistry	I										I	
14	Biology and Genetic	R										I	
15	Probability and Statistics in Medicine	R						R					I
16	Physics and Biophysics	I										I	
17	Organic Chemistry	R				I						I	I
18	General Logic	I											
19	Analytical Chemistry	R				I						I	I



38	Environmental Health	R										M	
<b>II. Specialized courses</b>													
39	Biochemistry 1 (Fundamental Biochemistry)			R			R					R	R
40	Biochemistry 2 (Disorders of Metabolism of Basic Substances)		I	R		R	M						M R
41	Biochemistry 3 (Liver, Kidney and Heart Biofunction)		R	R			M		R				M R
42	Biochemistry 4 (Cancer Makers and body fluids)		R	R			M		R				M R
43	Microbiology 1 (General Microbiology)		R	I		I	R						R
44	Microbiology 2 (Pathogenic cocci)		M	R	I	I	M						M
45	Microbiology 3 (Pathogenic bacilli)		M	R	I	R	M		I				M R
46	Microbiology 4 (Virus and Immunology)		M	M		M	M		R				M M
47	Parasitology 1 (Helminths)		R	R			R		I				M
48	Parasitology 2 (Protozoa)		R	R			M		I				R R
49	Parasitology 3 (Medical Microfungus)		M	R			M		R				R M
50	Fundamental Haematology		I	I			R						R
51	Cellular Haematology		M	R	I	I	M		I		R		R
52	Coagulation Haematology		M	R		R	M		R				R

53	Transfusion Haematology		M	R			M		R				R
54	Cytological Analysis 1	R	R				I		R			R	I
55	Cytological Analysis 2		M	I			I		R			R	I
56	Hospital Infection Control		R		M	R		I	R			M	R
57	Professional English in Medical laboratory	M						M		R			M
58	Quality Inspection in Medical Testing			R	M				R		R		R
59	Medical Laboratory Practice: Haematology		R	M	R	M	M		R	M	M	M	M
60	Medical Laboratory Practice: Biochemistry		R	M	R	M	M		R	M	M	M	M
61	Medical Laboratory Practice: Microbiology and Parasitology		R	M	R	M	M		R	M	M	M	M
62	Medical Laboratory Practice: Cytological Analysis		R	M	R	M	M		R	M	M	M	M
63	Biosafety in the Laboratory		R		M	R		R	R			M	R
64	Haematological Pathology		R	R			M				R		R
65	Medical Laboratory Techniques for Detecting Microorganisms Causing Infectious Diseases		M	M	R		M		R		R	M	R
66	Parasitology <sup>4</sup> (Ectoparasites)		M	M			M		R		I	R	M
67	Molecular Biomedicine		I	I				R			R	R	

68	Analytical Techniques for Food Safety and Hygiene		R	M			M				R	M	R	
69	Biochemistry 5 (Endocrine Function)		M	M			M		R			M	M	
<b>III. Graduation</b>														
70	Medical Laboratory Final Practice: Biochemistry, Haematology, Microbiology and Parasitology		M	M	M	M	M	M	M	M	M	M	M	M
71	Graduation thesis/ Graduation Placement		M	M	M	M	M	M	M	M	M	M	M	M

No	COURSE DESCRIPTION	CREDITS
<b>SEMESTER I</b>		
1	<b>Non-Major English 1</b>	3
	<b>Prerequisites:</b> None In this course, students begin to familiarize themselves with English according to the European Framework of Reference (CEFR) competency assessment at A1 and pre-A2 levels. Students have the opportunity to familiarize themselves with all language skills such as Listening, Speaking, Reading and Writing. These skills are developed through topics such as: friends, shopping, food and drinks, leisure and hobbies, clothes, travel, sport, family, books and studying, language and communication, ... At the same time, students are also acquainted with exam types at the A2 level.	
2	<b>Basic Applied Informatics</b>	
	<b>Prerequisites:</b> None The course helps students know how use the Microsoft Windows operating system; office applications in the Microsoft Office suite including Word, Excel and PowerPoint; be able to use basic services of the Internet; know some specific applications of information and communication technology; In addition, students also understand some basic issues related to law in the field of information technology.	
3	<b>Basic principles of Marxism–Leninism</b>	3
	<b>Prerequisites:</b> None	



	<p>The course provides for learners the fundamental knowledge of dialectical materialism and historical materialism. In addition, the course also aims to train the skills of creatively applying Marxist-Leninist philosophy in cognitive and practical activities, resulting in forming a materialistic worldview, dialectical methodology as a theoretical foundation for the perception of the content of other subjects. Finally, the course also helps to form attitudes and awareness of the role of Marxist-Leninist philosophy, building revolutionary beliefs and ideals.</p>	
<b>4</b>	<b>Chemistry</b>	<b>2</b>
	<p><b>Prerequisites:</b> None</p> <p>The course helps students describe the atomic structure and periodic system of elements; molecular structure and chemical bonding; aggregate states of matter; present the 18 principles of thermodynamics and their application to chemistry; chemical dynamics; chemical balance; solutions and redox and electrochemical reactions. Besides, the subject helps students calculate the value of chemical quantities; apply knowledge of general chemistry to explain a number of chemical processes occurring in the living body and have the chances to practice thinking ability, creativity, ability to confidently speak in front of a crowd; being active and effective group work as well as actively researching, searching for documents, calculating values</p>	
<b>5</b>	<b>Probability and Statistics in Medicine</b>	<b>2</b>
	<p><b>Prerequisites:</b> General Informatics</p> <p>The course provides basic concepts of probability, random variable, discrete variable, binomial variable, continuous variable, standard asymptote, chance, and variance; apply some commonly used probability definition methods; knowledge of mathematical statistics. Besides, the subject helps students to be able to solve problems on classical probability, geometry, conditions; apply and handle probability problems commonly encountered in practice and scientific research; Apply mathematical statistics to scientific research. The subject helps students practice their ability to actively explore, discover and discover the applications of statistical probability in scientific research and real life</p>	
<b>6</b>	<b>General Law</b>	<b>2</b>
	<p><b>Prerequisites:</b> None</p> <p>The subject provides students with basic and fundamental knowledge about the state and law in general, the state and law of Vietnam in particular. This course is a basis</p>	

	for learners to perfect their knowledge of the law so that they can protect their legal rights and at the same time educate learners from illegal acts affecting society.	
<b>7</b>	<b>General Human Anatomy</b>	<b>2</b>
	<b>Prerequisites:</b> None The course equips students with knowledge about anatomical characteristics of parts and organs in the human body; knowledge of the functions and activities of organs and their relationship to clinical signs and applied to the study of specialized nursing subjects.	
<b>SEMESTER II</b>		
<b>1</b>	<b>Non-Major English 1</b>	<b>4</b>
	<b>Prerequisites:</b> Non-Major English 1 In this course, students continue to familiarize themselves with the A2 exam format and continue to develop the four language skills in the non-English major 1 at A2 and pre-B1 levels according to the European Framework of Reference (CEFR). These skills are developed through communication patterns and daily short messages and emails on topics such as sports, friendly people, jobs, outdoor activities, travel, past activities, facts and figures, celebration, studying ...	
<b>2</b>	<b>Political economics of Marxism-Leninism</b>	<b>2</b>
	<b>Prerequisites:</b> Basic principles of Marxism–Leninism The course helps to equip the basic knowledge of political economics of Marxism and Leninism in the process of economic development of the World in general and Vietnam in particular. The course also helps to form analytical and evaluation skills to identify the nature of economic benefit relations in the country's socio-economic development, and to help students build appropriate social responsibility in employment and life after graduation, building the stance and ideology of Marxism-Leninism for students.	
<b>3</b>	<b>Physics and Biophysics</b>	<b>2</b>
	<b>Prerequisites:</b> None The subject provides students with basic and fundamental knowledge about the state and law in general, the state and law of Vietnam in particular. This course is a basis for learners to perfect their knowledge of the law so that they can protect their legal rights and at the same time educate learners from illegal acts affecting society	
<b>4</b>	<b>Embryology</b>	<b>2</b>
	<b>Prerequisites:</b> Physics and Biophysics	

	This course equips students with knowledge about describing the morphology of tissues and major parts of organs in the human body, relationship between the structure and function of tissues and organs and the formation and development of normal human embryos a	
<b>5</b>	<b>Physiology</b>	<b>2</b>
	<b>Prerequisites:</b> Physics and Biophysics, Embryology The subject provides students with basic knowledge about the functions and activities of organ systems in the human body and functional regulation in the most consistent relationship between them and between the body and the environment.	
<b>6</b>	<b>Medical psychology – Career ethics</b>	<b>2</b>
	<b>Prerequisites:</b> None The course helps students use knowledge and skills to recognize the psychology of patients through facial expressions and body language thereby making decisions to care for patients in 3 areas Psychological- physiological and social: application of professional ethical standards of Vietnamese nurses in patient care practice. Applying the basic principles of medical ethics in 22 professional practice and scientific research based on common Vietnamese and international regulations.	
<b>7</b>	<b>Fundamental Medical Laboratory Techniques</b>	<b>3</b>
	<b>Prerequisites:</b> None The subject helps to equip learners with basic knowledge about how to organize and manage laboratories, laboratory biosafety levels, how to classify medical waste, and the role of testing. in clinical. In addition, the course also aims to train students with professional skills to perform technical operations on drawing capillary and venous blood, to master the technique of making blood smears, to use and preserve them as well as laboratory safety for technicians. The module also helps form students to practice the attitude and awareness of soft skills such as showing the cautious and meticulous attitude when performing technical operations.	
<b>8</b>	<b>Physics and Biophysics</b>	<b>2</b>
	<b>Prerequisites:</b> Chemistry The course helps students analyze energy changes in living organisms; the transport of substances in the body; bioelectricity phenomenon; bio-optics; sound and ultrasound; biological radioactivity. The main applications of physical elements to living organisms serve the purpose of protecting the environment and the body.	
<b>9</b>	<b>Analytical Chemistry</b>	<b>2</b>
	<b>Prerequisite:</b> Chemistry	

	The module provides for students the knowledge of the quantitative principles of volumetric and gravimetric methods as well as practice skills to perform quantitative manipulations with several compounds	
<b>SEMESTER III</b>		
<b>1</b>	<b>Scientific socialism</b>	<b>2</b>
	<b>Prerequisites:</b> Political economics of Marxism-Leninism The course helps to equip students with the most basic and core knowledge about Scientific Socialism, one of the three components of Marxism-Leninism. At the same time, the course also aims to train students the skills of practical understanding and application of scientific socialism knowledge to consider and evaluate the country's socio-political issues related to the country. relating to socialism and the path to socialism in our country. The course also helps to form students to practice the correct attitude and awareness about scientific socialism in particular and the ideological foundation of our Party in general.	
<b>2</b>	<b>Non-Major English 3</b>	<b>3</b>
	<b>Prerequisite:</b> Non-Major English 2 This course helps students continue to familiarize with the form of language competency assessment under the European Framework of Reference (CEFR) level pre-B1, develop language and vocabulary. Students continue to develop their listening, speaking, reading, and writing skills through topics such as fashion, risks, free time activities, entertainment episodes, films, happy families, aptitudes, and discoveries	
<b>3</b>	<b>Biochemistry 1</b>	<b>3</b>
	<b>Prerequisite:</b> Chemistry and physiology This course equips students with fundamental and systematic knowledge on biochemistry, including the main biomolecules and their metabolism in living cells, as well as the principles and significance of some common clinical biochemistry tests. Through this, students can apply and relate their biochemistry knowledge to further studies and research. Additionally, the course also aims to train students in practical skills for performing basic qualitative and quantitative biochemical tests, fostering a professional work attitude, cautiousness in handling chemicals, and proficiency in technical operations.	
<b>4</b>	<b>V Microbiology 1</b>	<b>3</b>
	<b>Prerequisite:</b> Chemistry, Physiology, Physics and Biophysics	

	<p>This course provides students with basic knowledge about bacteria, viruses, some bacteriostatic issues, antibiotics, vaccines and antiserum. At the same time, it helps students to recognize disease-causing characteristics and testing techniques for dangerous bacteria and viruses in medicine. This knowledge is the basis for students to be able to acquire specialized knowledge later, especially about antibiotics.</p>	
<b>5</b>	<p><b>Parasitology 1</b></p>	<b>3</b>
	<p><b>Prerequisite:</b> Physics and Biophysics</p> <p>The module helps to equip students with basic knowledge about morphology, ecology and life-cycle as well as epidemiological characteristics and techniques in diagnostic diseases related to parasites. Secondly, the module also aims to practice students with the attitude and awareness as well as skills to perform technical manipulations to diagnose diseases caused by helminths. About soft skills: Show a cautious and meticulous attitude when performing technical operations.</p>	
<b>6</b>	<p><b>Fundamental Haematology</b></p>	<b>2</b>
	<p><b>Prerequisite:</b> Physiology</p> <p>The course facilitates students with general knowledge of hematology such as hematopoiesis theory, outline of hemostasis, hematology of blood transfusion, hemoglobin... At the same time, learners will acquire the skills to perform tests in the field of basic hematology. Finally, the module also helps to form students' cautious and meticulous attitude when performing technical operations.</p>	
<b>7</b>	<p><b>Health Organisations – National Health Program – Health Education</b></p>	<b>1</b>
	<p><b>Prerequisite:</b> None</p> <p>The module helps to equip students with knowledge about the medical network organization system, the national health programs being implemented, the knowledge about communication - health education and health promotion, methods and means of communication in education, care, protection, and improvement of people's health.</p>	
<b>8</b>	<p><b>Pathophysiology - Immunology</b></p>	<b>2</b>
	<p><b>Prerequisite:</b> Biochemistry, General Human Anatomy, Embryology, Physiology</p> <p>The module equips students with the rules of organs, organ systems, typical pathological processes, as well as the rules of the disease in general; systems of organs and cells involved in the factors involved in the formation of the body's immune response; and the role of the specific and non-specific immune system in the body's ability to prevent diseases. The most basic points on the mechanism of immune response disorders in hypersensitivity, immunodeficiency, and autoimmune</p>	

	diseases that motivate students for self-study and lifelong research to contribute to community health care.	
<b>9</b>	<b>Pharmacology</b>	<b>2</b>
	<p><b>Prerequisite:</b> Physiology</p> <p>The module helps to equip students with basic knowledge about: pharmacokinetics of drugs, factors affecting drug effects, as well as the fundamental issues related to the use of drugs to patients including: classification, effects, mechanism of action, side effects, indications, contraindications, dosage, common drug groups (drugs acting on the autonomic nervous system, central nervous system, respiratory and digestive systems, hematopoietic systems, analgesics, antipyretics and anti-inflammatory drugs, antibiotics, parasiticides, antihistamines, hormones, vitamins). At the same time, the course also aims to train students the skill of looking for drugs based on databases and the source of drug administration. The module also helps to form and train students to adhere to the principles of drug use.</p>	
<b>SEMESTER IV</b>		
<b>1</b>	<b>Non-Major English 4</b>	<b>3</b>
	<p><b>Prerequisites:</b> Non-Major English 3</p> <p>This course helps students develop their language knowledge and language experience at level B1 according to the European Framework of Reference (CEFR). Students demonstrate their language ability through topics such as friends, self-discoveries, persuading people, travelers' tales, celebrities, eating out and choices. At the same time, students will also get acquainted with the format of the competency assessment test according to the European Framework of Reference (CEFR).</p>	
<b>2</b>	<b>Ho Chi Minh Ideology</b>	<b>2</b>
	<p><b>Prerequisites:</b> Scientific socialism</p> <p>The module helps to equip students with basic knowledge about: origins, foundations, stages of formation and development of Ho Chi Minh thought as well as the contents of Ho Chi Minh's thought on basic issues of Ho Chi Minh's thought related to Viet Nam's revolution that train for the students some skills such as analysis, comparison, synthesis of problems; presentation skills and forming correct attitudes and awareness about the basic contents of Ho Chi Minh's thought.</p>	
<b>3</b>	<b>Fundamental Nursing and First Aid</b>	<b>2</b>
	<p><b>Prerequisites:</b> Pharmacology, Medical psychology – Career ethics</p> <p>The module provides learners with basic knowledge about patient care techniques in first aid techniques. Moreover, learners are trained in the skills of first aid and care</p>	

	for accident response in life and especially in the clinical context on the model with a duration of 30 hours at the Nursing Department, after that students will build their own sense of serious learning as well as compliance with safety principles when learning practice.	
<b>4</b>	<b>Epidemiology</b>	<b>2</b>
	<b>Prerequisites:</b> Probability and Statistics in Medicine The module helps to equip students with basic knowledge about risk factors, evolution, measures to prevent epidemics and epidemiological characteristics of common infectious diseases.	
<b>5</b>	<b>Cellular Haematology</b>	<b>3</b>
	<b>Prerequisites:</b> Fundamental Hematology The module provides learners with general knowledge about the field of hematology such as the development process of each blood cell line (red blood cells, white blood cells, platelets), the principle of automatic hematology machines, blood count analysis, external blood smears.... At the same time, learners will gain skills in performing tests in the field of hematology. Finally, the module also helps to form students' cautious and meticulous attitude when performing technical operations.	
<b>6</b>	<b>Biochemistry 2 (Disorders of Metabolism of Basic Substances)</b>	<b>2</b>
	<b>Prerequisites:</b> Biochemistry 1 The module helps to equip students with basic and expertise knowledge about normal metabolism and metabolic disorders of basic substances and to train for students in technical skills: correct operation of technical procedures, interpretation and reasoning of experiments and tests related to the ability to use and preserve chemicals, tools, vehicles and machines in the laboratory.	
<b>7</b>	<b>Microbiology 2</b>	<b>2</b>
	<b>Prerequisites:</b> Microbiology 1 The subject provides students with basic knowledge, skills in preparation, classification, and use of media in microbial identification, and expertise knowledge about the group of pathogenic cocci as well as common pathogens that helps students to evaluate and argue the results of the microbiology test based on the practical results in the laboratory and the instructor's guidance.	
<b>8</b>	<b>Cytological Analysis 1</b>	<b>2</b>
	<b>Prerequisites:</b> General Human Anatomy, Embryology The module equips students with knowledge about lesions in terms of macroscopic, microscopic, and viral images of cells, tissues and major parts, organs in the body,	

	<p>the relationship between structural and morphological changes of diseased tissue and symptoms. At the same time, the course also aims to train students to recognize the morphological and structural changes of cells, tissues, and organs under the microscope in common diseases. Finally, the module also helps to form the attitude and awareness in students about the sense of sterility in career and life, the spirit of self-study and self-research.</p>	
<b>9</b>	<b>Internal pathology</b>	<b>2</b>
	<p><b>Prerequisites:</b> General Human Anatomy, Embryology, Pathophysiology - Immunology</p> <p>The module helps to equip students with basic/ expertise knowledge about the pathogenesis, clinical symptoms of some medical diseases: respiratory, digestive, endocrine, hematological, neurological, and heart. The module also helps to form for students to practice the attitude and awareness about having a positive attitude in learning, loving the subject that helps students to easily absorb knowledge. Doctors must put the interests of their patients before their own. It takes a soul to be nourished daily to be able to vibrate before the suffering of the sick. Students should practice their attitude, voice calmly, calmly, gesture properly, both intimate and serious to instill and maintain the patient's trust. Students must be exemplary, words go hand in hand with deeds, especially in the implementation of Things that I still advise patients such as not smoking, living a healthy, moderate life, keeping the soul, body, and environment clean.</p>	
<b>10</b>	<b>Surgical pathology</b>	<b>2</b>
	<p><b>Prerequisites:</b> General Human Anatomy, Embryology, Physiology</p> <p>The module helps equip students with basic knowledge about common surgical medicine, including specialties: gastrointestinal surgery, orthopedic trauma and neurosurgery. The module also helps to form the attitude and awareness for students to approach and care for surgical patients appropriately.</p>	
<b>11</b>	<b>Nutrition – Food Safety and Hygiene</b>	<b>1</b>
	<p><b>Prerequisites:</b> Internal pathology</p> <p>The content includes basic knowledge of nutrition and food science to ensure nutritional needs of subjects in the community. Nutrition assessment and monitoring knowledge in the detection of nutritional problems in the community as well as the knowledge of food hygiene and safety in the organization of food hygiene management, food security and prevention of food poisoning.</p>	
<b>12</b>	<b>Environmental Health</b>	<b>1</b>



	<p><b>Prerequisites:</b> None  <b>Parallel:</b> None</p> <p>The module helps to equip students with basic knowledge about the relationship between health, environment, and disease related to environmental risk factors affecting health and prevention measures. The course also helps to form the attitude and awareness for students about the importance of the subject in the program.</p>	
<b>SEMESTER V</b>		
<b>1</b>	<b>History of Vietnamese communist party</b>	<b>2</b>
	<p><b>Prerequisites:</b> Ho Chi Minh Ideology</p> <p>The course presents the guidelines set forth by the Vietnamese Communist Party during the leadership of the Vietnamese revolution from 1930 to the present that provide for students a basic understanding of the birth of the Vietnamese Communist Party and the party's first political platform; the line of the struggle for authority (1930-1945); the line of resistance against the French colonialists and the American imperialist's invasion (1945-1975); industrialization path; the road to building a socialist-oriented 21 market economy; the way to build the political system; the way to build and develop culture and solve social problems; foreign policy.</p>	
<b>2</b>	<b>Parasitology 2 (Protozoa)</b>	<b>2</b>
	<p><b>Prerequisites:</b> Parasitology 1</p> <p>The module helps to equip students with basic knowledge about morphology, ecology and the development of life-cycle, epidemiological characteristics, and the approaches of diagnosis of malaria and protozoan parasites. At the same time, the course also aims to train students in the skills of the techniques in the performed diagnostic parasites such as malaria protozoan. The module also helps form students to practice the attitude and awareness of soft skills: Show a cautious and meticulous attitude when performing technical operations.</p>	
<b>4</b>	<b>Biochemistry 3 (Liver, Kidney and Heart Biofunction)</b>	<b>2</b>
	<p><b>Prerequisites:</b> Biochemistry 1, Biochemistry 2</p> <p>The module helps to equip students with basic and specialized knowledge of clinical metabolism including the function of liver, and kidney, as well as the acid-base balance, and electrolytes in the body, training students in professional skills such as standard operation and safe practice and ability to handle problems that occur during manipulation, skills to analyze factors affecting test results.</p>	
<b>5</b>	<b>Microbiology 3</b>	<b>2</b>
	<b>Prerequisites:</b> Microbiology 1, Microbiology 2	

	<p>This course provides students with the knowledge of testing to identify common pathogenic bacteria such as the intestinal bacteria family. In addition, it helps students practice the previously learned test operations more proficiently, argue and evaluate the results of Microbiology tests accurately.</p>	
<b>6</b>	<b>Cytological Analysis 2</b>	<b>2</b>
	<p><b>Prerequisites:</b> Cytological Analysis 1  The module helps to equip students with basic and specialized knowledge about diseases and injuries in terms of macroscopic, microscopic, and viral images of cells, tissues and major organs, of organs in the body, as well as the correlation between structural and morphological changes of diseased tissue and symptoms. At the same time, the course also aims to train students to recognize the morphological and structural changes of cells, tissues and organs under the microscope in common diseases. Finally, this subject also helps to form the right attitude and awareness in students about the sense of sterility in career and life, the spirit of self-study and self-research.</p>	
<b>7</b>	<b>Coagulation Haematology</b>	<b>2</b>
	<p><b>Prerequisites:</b> Fundamental Haematology  The Hematology and Coagulation course provides learners with knowledge about the initial hemostasis process, plasma coagulation as well as fibrinolysis. At the same time, learners will gain skills in performing tests in the field of blood coagulation. The module also helps to form students' cautious and meticulous attitude when performing technical operations.</p>	
<b>8</b>	<b>Transfusion Haematology</b>	<b>2</b>
	<p><b>Prerequisites:</b> Fundamental Haematology  The subject provides learners with general knowledge about the field of blood transfusion hematology such as the antigens of the red blood cells, white blood cells, and platelets; blood products as well as blood-borne diseases.... At the same time, learners will gain skills in performing tests in the field of hematology and blood transfusion. Finally, the module also helps to form students' cautious and meticulous attitude when performing technical operations.</p>	
<b>9</b>	<b>Hospital Infection Control</b>	<b>2</b>
	<p><b>Prerequisites:</b> Microbiology 1  The module provides learners with basic knowledge about patient safety in a hospital environment; hospital-acquired infections; infection control procedures, using evidence related to infection; The role and duties of the medical staff in hospital</p>	

	infection control. Learners build their own sense of serious learning as well as compliance with safety principles when learning by practice.	
<b>10</b>	<b>Scientific Research Methods in Medicine</b>	<b>2</b>
	<b>Prerequisites:</b> Probability and Statistics in Medicine The course equips students with basic knowledge of methodology and methods of conducting scientific research such as research knowledge, research subjects, sample size calculation, methods of data collection, analysis and processing, and bias control in research as well as issues related to medical ethics in scientific research and medicine and then comment, evaluate reports, scientific research documents, methods of presenting a scientific research content.	
<b>11</b>	<b>Professional English in Medical laboratory</b>	<b>2</b>
	<b>Prerequisites:</b> Non-Major English 4 The module equips students with basic knowledge of grammar, common communication skills and necessary vocabulary for medical communication; At the same time, it can be applied to refer to several medical documents on the Medical Laboratory industry. Intermediate level requirements for students who have completed a 7-year foreign language program of general education.	
<b>SEMESTER VI</b>		
<b>1</b>	<b>Biochemistry 4 (Cancer Makers and body fluids)</b>	<b>2</b>
	<b>Prerequisites:</b> Biochemistry 1, Biochemistry 2, Biochemistry 3 The module helps equip students with basic and specialized knowledge about immunological methods, cardiovascular disease, risk factors and techniques in cardiovascular disease testing that helps to recognized the origins, roles, testing of body fluids, musculoskeletal tests, origin, chemical nature and significance of cancer markers, clinical significance and erroneous causes of cancer markers that train for students in professional techniques such as: standard operation and laboratory safety and ability to handle problems that occur during manipulation, skills to analyze factors affecting test results.	
<b>2</b>	<b>Parasitology 3 (Medical Microfungus)</b>	<b>2</b>
	<b>Prerequisites:</b> Parasitology 1, Parasitology 2 The module helps to equip students with knowledge and skills on morphology, ecology and development of life-cycle, epidemiological characteristics, approaches and techniques related to the diagnosis of diseases caused by fungi.	
<b>3</b>	<b>Microbiology 4 (Virus and Immunology)</b>	<b>2</b>
	<b>Prerequisites:</b> Microbiology 1, Microbiology 2, Microbiology 3	

	<p>This subject provides students with knowledge of testing to identify rare pathogenic bacteria. Besides, the provision of knowledge about viruses and the approaches of diagnostic viruses. Simultaneously, generalize and systematize the diagnostic testing procedures for microorganisms in various types of specimens such as blood, cap, sputum, oropharyngeal fluid, urine, and feces; helping students practice the skills of identifying and interpreting microbiological test results.</p>	
<b>4</b>	<b>Quality Inspection in Medical Testing</b>	<b>2</b>
	<p><b>Prerequisites:</b> Fundamental Medical Laboratory Techniques</p> <p>The module provides learners with knowledge about the importance of testing quality assurance and control, internal and external testing of test quality, methods of detection and error handling.... At the same time, learners will gain skills in performing internal and external testing, and detecting errors that occur during testing.</p>	
<b>5</b>	<b>Medical Laboratory Practice: Haematology</b>	<b>3</b>
	<p><b>Prerequisites:</b> Cellular Haematology, Coagulation Haematology, Transfusion Haematology</p> <p>The Hematology Hospital Practice module provides knowledge on hematology testing from the organization, workflow in the process of taking, receiving, and returning results to patients that help to train the ability to communicate and behave appropriately with patients, colleagues, hospital leaders and departments and coordinate well with laboratory staff in implementing technical procedures, ensuring quality in hematology - blood transfusion testing as well as comply with the principles of infection prevention for individuals and the community in handling patient samples, creating conditions for students to accumulate experience, apply the specialized knowledge and medical ethics learned in practice.</p>	
<b>6</b>	<b>Medical Laboratory Practice: Biochemistry</b>	<b>3</b>
	<p><b>Prerequisites:</b> Biochemistry 1, Biochemistry 2, Biochemistry 3, Biochemistry 4</p> <p>The module helps to equip students with specialized knowledge about tests to help assess the function of some organs in the body and related diseases; and train students in professional skills such as standard operation and safe practice as well as capable of handling problems that occur during manipulation, operation of biochemistry laboratory, operation of testing machines at practice facilities that motivate students for self-study and lifelong research to contribute to community health care.-</p>	
<b>SEMESTER VII</b>		

<b>1</b>	<b>Medical Laboratory Practice: Microbiology and Parasitology</b>	<b>3</b>
	<p><b>Prerequisites:</b> Microbiology 1, Microbiology 2, Microbiology 3, Microbiology 4; Parasitology 1, Parasitology 2, Parasitology 3</p> <p>The course helps to equip students with specialized knowledge about providing knowledge and skills on infection detection, isolation and identification of some common bacteria, viruses, and parasites encountered from clinical specimens, and identify the results of microbiological tests, pathogenic parasites. In addition, the course also trains students in professional skills, standard operations, and laboratory safety that help to able to handle problems that occur during manipulation, operation of biochemistry laboratory as well as the operation of testing machines at practice facilities that stimulate students to self-study and research throughout life contributes to community health care.</p>	
<b>2</b>	<b>Medical Laboratory Practice: Cytological Analysis</b>	<b>2</b>
	<p><b>Prerequisites:</b> Cytological Analysis 1, Cytological Analysis 2</p> <p>The content includes specialized knowledge to use equipment, preparation of chemicals, and proficiently perform basic testing techniques in the field of cytopathology testing and train the technician's ethics to be meticulous, careful, accurate and honest as well as practice communication skills with colleagues, patients and the community.</p>	
<b>3</b>	<b>Biosafety in the Laboratory</b>	<b>2</b>
	<p><b>Prerequisites:</b> Quality Inspection in Medical Testing</p> <p>The module helps to equip students with basic knowledge about biosafety and biosecurity, necessary laboratory equipment for biosafety; biosafety standards when conducting tests and research with samples containing pathogens; environmental biosafety assessment; electrical, fire and chemical safety. At the same time, the course also aims to train students the skills to perform manipulation techniques in biosafety laboratories; how to use the necessary equipment for the biosafety room and how to organize the biosafety laboratory. The module also helps form students to practice the attitude and awareness of soft skills such as showing a cautious and meticulous attitude when performing technical operations.</p>	
<b>4</b>	<b>Haematological Pathology</b>	<b>3</b>
	<p><b>Prerequisites:</b> Cellular Haematology, Coagulation Haematology, Transfusion Haematology</p> <p>The course provides learners with knowledge about hematological diseases. Moreover, learners will gain skills to recognize morphological changes of blood cell</p>	

	lines in hematological diseases in peripheral blood and bone marrow. The module also helps to form students' cautious and meticulous attitude when practicing.	
<b>5</b>	<b>Medical Laboratory Techniques for Detecting Microorganisms Causing Infectious Diseases</b>	<b>2</b>
	<b>Prerequisites:</b> Analytical Chemistry, Physics and Biophysics, Biochemistry 1, Biochemistry 2, Biochemistry 3, Biochemistry 4 Provide students with specialized knowledge in the field of infectious disease microbiology testing and proficiently perform testing techniques, interpret, and interpret test results, and participate in scientific research that help students systematize and master professional knowledge.	
<b>6</b>	<b>Parasitology 4 (Ectoparasites)</b>	<b>2</b>
	<b>Prerequisites:</b> Parasitology 1, Parasitology 2, Parasitology 3 The module helps to equip students with knowledge and skills about morphology, ecology and the development of life cycle, epidemiological characteristics, approaches and techniques in the diagnostic diseases caused by medical discipline.	
<b>7</b>	<b>Molecular Biomedicine</b>	<b>2</b>
	<b>Prerequisites:</b> Biology and Genetic The module helps to equip students with the basic knowledge of molecular biology used in medical laboratory techniques. At the same time, the course also aims to train students the skills to develop a complete test procedure and to evaluate and report the analytical results of a medical testing technique as well as the ability to access the most modern in the field of testing and diagnostics diseases in medicine.	
<b>8</b>	<b>Analytical Techniques for Food Safety and Hygiene</b>	<b>2</b>
	<b>Prerequisites:</b> Microbiology 1, Microbiology 2, Microbiology 3, Microbiology 4; Parasitology 1, Parasitology 2, Parasitology 3, Nutrition – Food Safety and Hygiene The content includes knowledge of the techniques, basic microbiological and parasitic tests to assess food safety and hygiene. The applying and relating the knowledge to research in the field of preventive medicine.	
<b>9</b>	<b>Biochemistry 5 (Endocrine Function)</b>	<b>2</b>
	<b>Prerequisites:</b> Biochemistry 1, Biochemistry 2, Biochemistry 3, Biochemistry 4. The module helps to equip students the fundamental of knowledge about the main hormones in the body, the pathology and testing of the thyroid - adrenal - gonads - pituitary - pancreas, as well as the causes of incorrect diagnostic techniques in quantity of substances that train students in professional skills such as standard	

	operation and safe practice. Ability to handle problems that occur during manipulation, skills to analyze factors affecting test results.	
<b>SEMESTER VIII</b>		
<b>1</b>	<b>Medical Laboratory Final Practice: Biochemistry, Haematology, Microbiology and Parasitology</b>	<b>4</b>
	<p><b>Prerequisites:</b> Specialized subjects.</p> <p>The module helps to equip students with general knowledge and skills for specialized testing in biochemistry, parasites, microbiology, hematology, helping to evaluate the function of some organs in the body related to illness. In addition, the module equips knowledge about the operation of biochemistry, hematology, microbiology, and parasitology laboratories at the internship facility.</p>	
<b>2</b>	<b>Graduation thesis/ Graduation Placement</b>	<b>7</b>
	<p><b>Prerequisites:</b> Specialized subjects.</p> <p>The course helps students to apply the knowledge and skills learned to scientific research in the field of specialized testing. In addition, students can access theoretical knowledge and practical knowledge, helping to develop and practice creative thinking skills and work independently in the research process.</p> <p>The graduate thesis must be completed individually for each student.</p>	