

CHART OF DISCIPLINE/ SYLLABUS

1. Study Program Data

1.1 High Education Institute	
1.2 Faculty	
1.3 Department	VII.INTERNAL MEDICINE II
1.4 Study Domain ¹⁾	License
1.5 Cycle Studies ²⁾	License
1.6 Study programme/ Qualification	

2. Course Data

2.1.Course/Department	Echocardiography and General ultrasound							
2.2 Course tutor	Prof. Dr. Alina Popescu S.I. Dr. Florina Parv							
2.3 Practical activity tutors	-							
2.4. Year of study	4	2.5 Semester	8	2.6 Assessment	Colocvium	2.7 Course rank	Content ³⁾	DS
							Mandatory /Compulsory ³⁾	DO

3. Duration/Estimated Time (number of hours/ semester of teaching activity)

3.1 Number of hours/ week	1	3.2 lecture/course	1	3.3 laboratory	0
3.4 Total hours of curriculum	14	3.5 lecture/course	14	3.6 laboratory	0
Time distribution for course activities					
Study support- manuals, lectures, references and notes					20
Additional documentation – library, dedicated platforms from domain					10
Documentation for seminars/ practical activity/ projects, themes, portfolios and essays					4
Tutoring					
Assessment					2
Other activities					
3.7 Total number of hours for individual study	34				
3.8 Total number of hours per semester	50				
3.9 Number of credits ⁵⁾	2				

4. Preconditions (if applicable and requested)

4.1 Courses- studied curriculum/ rules for attending the course	Anatomy, Physiology, Physio- pathology
4.2 Practical activities/seminars/projects studied curriculum, basic skills/ rules for attending the course	Not applicable

5. Condition (if applicable and requested)

5.1 Courses	<ul style="list-style-type: none"> Mobile phones will be shut down during classes, telephone conversations are not tolerated during the course, nor do students leaving the classroom for personal phone calls; The students are not allowed to be late for the courses as it proves to be disruptive to the educational process; The attendance at the course is compulsory, with a maximum of 30% of the total absences being accepted.
5.2 Laboratory/practical activity/ project	-

6. Key competencies and basic skills

	1. Knowing the terminology used in ultrasound 2. Knowing the normal ultrasound aspect of the abdominal organs and heart 3. Knowing the main pathological ultrasound aspects of the abdominal organs and heart 4. The ability to explain the ultrasound changes as well as their clinical significance in a given condition; 5. Formulation of diagnostic assumptions based on the ultrasound changes; 6. Designing an investigation plan in the context of specific ultrasound changes 7. Designing a therapeutic plan in the context of specific ultrasound changes;
	1. Preoccupation for professional development by active participation in the course and internship; 2. Involvement in scientific research activities by participating to writing papers, studies, specialized articles; 3. Effective use of information and communication resources and assisted training (Internet portals, specialized software applications, databases, on-line courses, etc.) both in international languages;

7. Disciplines/Course objectives (based on the key competences)

7.1 Disciplines/Course general objectives	General ultrasound courses have as main objective the familiarization of students with basal notions of general ultrasound and echocardiographic.
7.2 Disciplines/Course specific objectives	General ultrasound courses have as main objective the familiarization of students with basal notions of general ultrasound and echocardiographic with the normal and pathological ultrasound aspect of the abdominal organs and the heart, as well as with the positive and differential diagnosis of digestive, renal, hematologic, cardiologic diseases using ultrasound.

8. Content

8.1 Course	Teaching method	Number of hours	Notification
1. Physics of ultrasound. Ultrasound examination technique. Notions of ultrasound anatomy	INTERACTIVE COURSE	1	<ul style="list-style-type: none"> Lectures with structured, interactive Powerpoint presentations, accompanied by a rich and suggestive iconography of ultrasound films, available on the Moodle e-learning platform of the university. The lectures are revised and supplemented with the latest information available. Each course presents the educational objectives at the beginning and ends with summarizing the notions presented.
2. Ultrasound in diffuse liver diseases		1	
3. Ultrasound in focal liver lesions		1	
4. Ultrasound of the gall bladder		1	
5. Normal and pathologic pancreas		1	
6. Ultrasound of the kidney, urinary bladder		1	
7. Ultrasound of the spleen, lymph nodes and large vessels		1	
8. Echocardiography 2D and M mode		1	
9. Echocardiography 2D - color flow Doppler		1	
10. Coronary Artery Disease and Cardiomyopathy		1	
11. Valvular Heart Disease. Endocarditis		1	
12. Pericarditis. Hypertrophic cardiomyopathy		1	
13. Congenital Heart Disease		1	
14. Aortic Dissection		1	

Mandatory reading:

- Course of abdominal ultrasound for students. Roxana Sirli, Ioan Sporea, Editura „Victor Babeș” Timișoara, 2016 e-book, available: http://www.umft.ro/data_files/documente-atasate-sectiuni/2213/curs_20eco_20eng.pdf
- Course of Echocardiography for students. Prof. Dr. Adina Ionac

Optional reading:

- Abdominal ultrasound in clinical practice. Ioan Sporea, Cristina Cijevschi Prelipcean, Editura „Victor Babeș” Timișoara, 2017. E-book disponibilă: http://www.umft.ro/data_files/documente-atasate-sectiuni/3642/eco_20sporea_20ebook.pdf
- Essential in ecocardiografie. Prof. Dr. Carmen Gînghină
- Ultrasound Atlas of Clinical cases. Sporea I (editor) (Popescu A, Șirli R, Danila M, Bende F, Mare R, Ghiuchici AM, Moga T). Editura „Victor Babeș” Timișoara, 2020. http://www.umft.ro/data_files/documente-atasate-sectiuni/7039/ultrasound_20atlas_20of_20clinical_20cases.pdf
- Atlas of Abdominal Ultrasound Images. Sporea I (editor) (Popescu A, Șirli R, Danila M, Bende F, Mare R, Ghiuchici AM, Moga T). Editura „Victor Babeș” Timișoara, 2020. http://www.umft.ro/data_files/documente-atasate-sectiuni/6958/atlas_20of_20abdominal_20ultrasound_20images-18_20mai.pdf

8.2 Seminars/ Laboratory/practical activity/ projects	Teaching-learning, methods	Number of hours	Notification
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Optional references:

Ultrasound identification of abdominal organs Recognizing the normal or pathological appearance of the abdominal organs. Integrating the ultrasound in the clinical context of the patient Recognizing the normal cardiac structures. Recognizing the pathological- cardiac disease (Ex: Valvular heart disease, Cardiomyopathy, Aortic dissection, Pericarditis, Endocarditis, Congenital heart disease) Integrating the echocardiography in the clinical context of the patient.
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Activity	10.1 Assessment criteries	10.2 Assessment methods	10.3 Percentage of the final grade
10.4 Course	<p><i>Knowledge for Note 5:</i> Ultrasound Identification of Abdominal Organs</p> <ul style="list-style-type: none"> - Recognizing the normal cardiac structures <p><i>Knowledge for Note 10:</i></p> <ul style="list-style-type: none"> - Recognizing the normal or pathological appearance of the abdominal organs. - Integrating the ultrasound aspect in the clinical context of the patient - Recognizing the pathological - heart disease <p>Ex: Valvular heart disease, Cardiomyopathy, Aortic dissection, Pericarditis, Endocarditis, Congenital heart disease</p> <ul style="list-style-type: none"> - Integrating the echocardiography in the clinical context of the patient 	<p><i>Continuous rating:</i> seminar, case studies</p> <p><i>The final exam</i> consists of written exam consisting of one subject each regarding echocardiography and abdominal ultrasound, respectively plus interpretation of 5 ultrasound images each of echocardiography and abdominal ultrasound</p>	<p>10%</p> <p>90%</p>
10.5 Practical activity/ seminar	-	-	-
10.6 Minimum performance standard-basic knowledge			
Knowledge of terminology related to ultrasound and ultrasound identification of abdominal organs			

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Notes:

- 1) Domeniul de studii - *se alege una din variantele:* Licență/ Masterat/ Doctorat (se completează conform cu Nomenclatorul domeniilor și al specializărilor/ programelor de studii universitare în vigoare);
- 2) Ciclu de studii - *se alege una din variantele:* Licență/ Master/ Doctorat;
- 3) Regimul disciplinei (conținut) - *se alege una din variantele:* DF (disciplină fundamentală)/ DD (disciplină din domeniu)/ DS (disciplină de specialitate)/ DC (disciplină complementară) - *pentru nivelul de licență;* DAP (disciplină de aprofundare)/ DSI (disciplină de sinteză)/ DCA (disciplină de cunoaștere avansată) - *pentru nivelul de masterat;*
- 4) Regimul disciplinei (obligativitate) - *se alege una din variantele:* DI (disciplină obligatorie)/ DO (disciplină opțională)/ DFac (disciplină facultativă);
- 5) Un credit este echivalent cu 25 – 30 de ore de studiu (activități didactice și studiu individual).

*nr de ore de studiu individual (punctul 3.7.)= nr total ore (nr credite X 25) minus nr. ore din planul de învățământ (punctul 3.4) – ore alocate pentru examinări. Aceste ore se împart între

Studiul după manual, suport de curs, bibliografie și notițe	
Documentare suplimentară în bibliotecă, pe platformele electronice de specialitate și pe teren	
Pregătire seminarii/ laboratoare/ proiecte, teme, referate, portofolii și eseuri	
Tutoriat	

- 6) Pentru specializările și/sau disciplinele a căror tematică se regăsește în bibliografia de rezidențiat, aceasta devine obligatorie.