DISCIPLINE SHEET

ACADEMIC YEAR

2022- 2023

1. DATA ABOUT THE STUDY PROGRAM

1.1 Institution of higher education	UNIVERSITY OF MEDICINE AND PHARMACY OF CRAIOVA
1.2 Faculty	**MEDICINE**
1.3 Department	3
1.4 Study domain	HEALTH
1.5 Study cycle	LICENCE
1.6 Study program/ Qualification	MEDICINE

2. DATA ABOUT THE DISCIPLINE

2.1 Discipline name	**CLINICAL HEMATOLOGY**				
2.2. Discipline code	MED 5102				
2.3 The holder of course activities	Rotaru Ionela				
2.4 The holder of seminar activities	Rotaru Ionela/ Pătrașcu Ana-Maria/Goanţă Janina Georgiana				
2.5.Academic degree	Assoc.Prof./Teaching assistent				
2.6. Employment (base norm/associate)	Base norm				
2.7. Year of study	**V**	2.8. Semester	**I**	2.9. Course type (content) 2.10. Regime of discipline (compulsoriness)	**CSD**

3. TOTAL ESTIMATED TIME (teaching hours per semester)

3.1 Number of hours per week	**3**	From witch - course	**1**	seminary/laboratory	**2**
3.4 Total hours in curriculum	**42**	From witch - course	**14**	seminary/laboratory	**28**
Time found distribution (hours)					
Study by manual, course support, bibliography, and notes					**9**
Additional documentation in the library, specialized electronic platforms and, on the field					**9**
Training seminars / labs, homework, reports, portfolios, and essays					**9**
Tutoring					**2**
Examinations					**2**
Other activities, counselling, student circles					**2**

3.7 Total hours of individual study	**33**
3.9 Total hours per semester	**75**
3.10 Number of credits	**3**

4. PREREQUISITES (where appropriate)

4.1 curriculum	Students must have a solid knowledge of semiology, internal medicine, laboratory and medical genetics.
4.2 competency	

5. CONDITIONS (where appropriate)

5.1. of curse deployment	UMF Craiova/ Online
5.2. of seminary/ lab deployment	Craiova Hematology Clinic/Practical works room/ Online

6. SPECIFIC COMPETENCES ACCRUED

PROFESSIONAL COMPETENCES	C1. Identification the disease status and establishing the correct diagnosis. C2. Designing and implementing of a treatment plan appropriate for identified condition (diseases). C4. To address health issues/illness from the perspective of community specifics, directly related to the social, economic and/or cultural specific to community. C5. To initiate and conduct a scientific research activity and / or a training activity inside the field of competence

TRANSVERSAL COMPETENCES	**CT1.** Autonomy and responsibility • the acquisition of moral reference points, the formation of professional and civic attitudes, that will allow to the students to be fair, honest, helpful, understanding, to cooperate and to be comprehensive in the face of suffering, to be available to help people, and to be interested in community development; • to know, to respect and to contribute to the development of moral values and professional ethics; • to learn how to recognize the problems when they arise, and provide solutions for solving them. **CT2**. Social interaction • to recognize and to have respect for diversity and multiculturalism; • to have or to learn how to develop teamwork skills; • to communicate orally and in writing the manner of work requirements, the obtained results, to consult with the team; • to engage themselves in voluntary activities, to know the essential problems of the community. **CT3.** Personal and professional development • to have opening to lifelong learning, • to be aware for self-study as a basis of personal autonomy and professional development; • to derive the optimum and creative potential in their own collective activities; • to know how to use information and communication technologies.

7. DISCIPLINE OBJECTIVES (based on the grid of specific competences acquired)

7.1 The general objective of the discipline	To acquire theoretical concepts related to topics discussed in class(iron deficiency anemia, megaloblastic anemia, aplastic anemia, hemolytic anemia, acute myeloblastic and lymphoblastic leukemia, chronic myeloid leukemia, chronic lymphocytic leukemia, multiple myeloma, Hodgkin's disease, non-Hodgkin malignant lymphomas, bleeding disorders), can establish a correct diagnosis of hematologic diseases studied and can apply these concepts in the profession, regardless of specialty that will follow.
7.2 The specific objectives of the discipline	Course completion the student will be able to: 1. to be able to have an interactive discussion with other students and teachers about the subjects studied. 2. to know the technique of a bone marrow aspirate 3. to recognize a peripheral blood smear of normal red blood cells and pathological erythrocytes. 4. to recognize leukemic blasts on a peripheral blood smear and bone marrow smear. 5. to recognize the pathological cells in LLC, MM, the histopathological and immunohistochemical aspects in diffuse large B cell lymphoma and Hodgkin disease. 6. to be able to interpret in the context of clinical signs of hematological diseases with laboratory explorations that allow positive and differential diagnosis of these diseases. 7. to be able to make a correct differential diagnosis in all hematologic diseases. 8. to interpret electrophoresis and immunoelectrophoresis. 9. to communicate orally with the team and to consult with the team;

8. CONTENTS

8.1 Course (content units)	Hours
C1. Anemic syndrome Definition. Morphological classification. Clinical and laboratory manifestation in iron deficiency anemia, chronic anemia and megaloblastic anemia. Aplastic anemia. Stem cell concept. Aplastic anemia - definition, classification, risk factors, positive and differential diagnosis, symptomatic treatment, specific treatment.	**2**
C2. Acute leukemia Definition, classification, risk factors, positive and differential diagnosis, symptomatic treatment, specific treatment, bone marrow transplant concept.	**2**
C3. Chronic myeloproliferative syndrome Ph 1 positive and negative	**2**
C4. Chronic lymphocytic leukemia- etiology, classification, clinical entities, positive and differential diagnosis, staging, evolution, complications, prognosis, treatment. Immunophenotype. Hodgkin disease - etiology, lymphoid neoplastic classification, histology, staging, positive and differential diagnosis	**2**
C5. Non-Hodgkin lymphoma- etiology, classification, histology, staging, positive and differential diagnosis, evolution, complications, prognosis, treatment. Hodgkin disease - evolution, complications, prognosis, treatment.	**2**
C6. Multiple myeloma Etiology, staging system, positive and differential diagnosis, evolution, complications, prognosis, treatment.	**2**
C7. Bleeding disorders. Hemostasis. Clinical and laboratory evaluation in bleeding disorders. CID – etiology, diagnostic.	**2**

BIBLIOGRAPHY 1. Teaching course. 2. Hematologie clinică -Ionela Rotaru, Alina Daniela Tănase, Editura Medicală Universitară, 2020. 3. Manual de hematologie clinica – Ionela Rotaru, Editura Alma, 2019. 4. Harrison, Principles of internal medicine editia 20, 2018. 5. Wintrobe's Clinical Hematology. Lippincott Williams and Wilkins, editia 14, 2018. 6. Hoffman Hematology. Hoffman, Benz, Silberstein et al. Elsevier, editia 7, 2018.	
8.2 Practical work (topics / themes)	
LP1 Investigation plan of anemia. Peripheral blood smear. Normal and pathological bone marrow smear. Blood tests interpretation.	**2**
LP2 Iron deficiency, megaloblastic, haemolytic anemia- case reports	**2**
LP3 Investigation plan of acute leukemias.	**2**
LP4 Acute myeloid leukemia- case report. Blood tests interpretation.	**2**
LP5 Acute lymphoblastic leukemia – case report. Blood tests interpretation.	**2**
LP6 Chronic myeloproliferative syndrome: framing, investigations, positive diagnosis. CML investigation plan. Interpretation of cytogenetic and molecular examination	**2**
LP7 Chronic myeloproliferative syndrome – case report. Interpretation of CBC, cytogenetic and molecular exams	**2**
LP8 CLL - positive and differential diagnosis, immunophenotype.	**2**
LP9 CLL case report. Interpretation of BS, MO, flowcitometry analysis in CLL.	**2**
LP10 Hodgkin disease – case report.	**2**
LP11 Non-Hodgkin lymphoma – case report.	**2**
LP12 Non-Hodgkin lymphoma – case report.	**2**
LP13 Multiple myeloma case report, interpretation of the bone marrow smear, serum protein electrophoresis, bone Rx.	**2**
LP14 Investigation in hemorrhagic syndrome. Plan investigation in DIC. Blood tests interpretation.	**2**
BIBLIOGRAPHY 1. Teaching course. 2. Hematologie clinică -Ionela Rotaru, Alina Daniela Tănase, Editura Medicală Universitară, 2020. 3. Manual de hematologie clinica – Ionela Rotaru, Editura Alma, 2019. 4. Harrison, Principles of internal medicine editia 20, 2018. 5. Wintrobe's Clinical Hematology. Lippincott Williams and Wilkins, editia 14, 2018. 6. Hoffman Hematology. Hoffman, Benz, Silberstein et al. Elsevier, editia 7, 2018.	

9. CORROBORATING THE DISCIPLINE CONTENT WITH THE EXPECTATIONS OF EPISTEMIC COMMUNITY REPRESENTATIVES, PROFESSIONAL ASSOCIATIONS AND EMPLOYEE REPRESENTATIVES RELATING TO THIS PROGRAM

Department of Hematology is a compulsory discipline for every student regardless of the specialty training to further that and it will choose. Accumulated knowledge, practical skills, ethnic attitudes learned on this subject during the course and practical works are fundamental to understanding and learning any curative and preventive act in medical diagnostic.

10. MHETODOLOGICAL LANDMARKS

Course	Teaching Techniques / learning materials and resources: exposure, interactive course, group work, problem learning. **In case of special situations (alert states, emergencies, other types of situations that limit the physical presence of sudents) the activity can be carried out online using computer platforms approved by the faculty / university. The online education process will be adapted appropriate to ensure the fulfillment of all the objectives provided in the discipline file.**
Practical work	The following combined methods are used: lecture, debate, problematization.
Individual study	Before every course and practical work Lecture, debate, problematization based on materials provided in advance.

11. RECOVERY PROGRAM

	No. absences that can recover	**Location of deployment**	**Period**	**In charge**	**Scheduling of topics**
Absences recoveries	2	Hematology Clinic Filantropia Hospital Craiova/ Online	The last week of the semester	Teaching Assistant	According to the internal schedule
Schedule consultations / Students' Scientific Circle	2h/week	Hematology Clinic Filantropia Hospital Craiova/Online	Weekly	All teaching assistants	The theme of the week

Program for students poorly trained	2h/week	Hematology Clinic Filantropia Hospital Craiova/Online	Weekly	All teaching assistants	According to the situation of each student Theme from that specific week

12. ASSESMENT

Activity	**Types of assesment**	**Methos of evaluation**	**Percentage from final grade**
Lecture	Formative assesment through essays, projects and surveys during the semester Summative assesment during the exam	Multiple Choice Questions Answering System (MCQ)/MCQ with the help of the IT platform in the online version.	60%
Practical work	Formative assesment through Multiple Choice Questions Answering System (MCQ) or/and descriptive, projects, survey during the semester. Periodic assesment during the semester Summative assesment during the exam	Multiple Choice Questions Answering System (MCQ) simultaneously with the one from the course / with the help of the video platform in the online version.	20%
Periodic assesment			10%
Assesment of individual activity			10%
Minimum performance standard	At least 50% for each component of the evaluation		

13. GUIDANCE AND COUNSELLING PROGRAMS

Professional guidance and counselling programs (2 hours/monthly)

Scheduling the hours	**Place of deployment**	**In charge**
Every last Friday of the month	Hematology clinic/Online	Lecture holders

Endorsement date in the department: 28.09.2022

Department Director,
Prof. Cristin VERE

Coordinator of study program,
Prof. Marius Eugen CIUREA

Discipline holder,
Assoc. Prof. Ionela ROTARU