

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	4
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	INTERNAL MEDICINE NEPHROLOGY			
2.2. Discipline code	MED4101.C			
2.3 The holder of course activities	Lecturer dr. Maria Daniela Teodora			
2.4 The holder of seminar activities	Lecturer Dr. Maria Daniela Teodora, Assist.professor. dr. Dinu Robert			
2.5.Academic degree	Course: Lecturer Clinical stage: Lecturer, Assistant professor			
2.6. Employment (base norm/associate)	Base norm			
2.7. Year of study	IV	2.8. Semester	I	2.9. Course type (content) 2.10. Regime of discipline (compulsoriness)
				CSD

3. THE ESTIMATED TOTAL TIME (teaching hours per semester)

3.1 Number of hours per week	3	3.2 From which course	1	3.3 seminary/laboratory	2
3.4 Total hours in curriculum	42	3.5 From which course	14	3.6 seminary/laboratory	28
Time found distribution (hours)					
Study from manual, course support, bibliography, and notes					20
Additional documentation in the library, specialized electronic platforms and, on the field					5
Training seminars / labs, homework, reports, portfolios, and essays					5
Tutoring					
Examinations					2
Other activities, counselling, student scientific programs					1
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 extensive knowledge of anatomy, physiology, pathology
4.2 skills	-

5. CONDITIONS (where applicable)

5.1. of the course	Course Hall with projector / Online environment
5.2. to conduct seminar / laboratory	Room in the Nephrology Department Online environment

6. SPECIFIC COMPETENCES ACCRUED

PROFESSIONAL COMPETENCES	C1 - Identify condition and to establish the correct diagnosis of disease (diseases) of the kidney and / or urinary tract. C4 – To address health issues / illness from the perspective of community specifics, directly related to the social, economic and cultural conditions. C5 – To initiate and conduct a scientific research and / or format in its field of competence
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TRANSVERSAL COMPETENCES	<p>CT1. Autonomy and responsibility</p> <ul style="list-style-type: none"> • acquisition of moral guidelines, training of professional and civic attitudes that allow students to be fair, honest, non-confrontational, cooperative and understanding in the face of suffering, • to know, respect and contribute to the development of moral values and professional ethics • learn to recognize when a problem arises and provide responsible solutions to solve them. <p>CT2. Social Interaction</p> <ul style="list-style-type: none"> • to recognize and have respect for diversity and multiculturalism; • have or learn to develop teamwork skills; • to communicate orally and in writing the requirements, the working methods, the results and to consult with the team; • to be involved in volunteer activities, to know the essential problems of the community <p>CT3. Personal and professional development</p> <ul style="list-style-type: none"> • to be open to lifelong learning • aware of the need for individual study as the basis of personal autonomy and professional development; • to build their own optimal potential in collective activities; • the ability to use information and communication technology.
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7. DISCIPLINE OBJECTIVES (grid based on competencies acquired)

7.1 The overall objective of the discipline	The objective of Nephrology discipline is to provide to the fourth-year students the basic theoretical and practical concepts of Nephrology, information necessary for understanding and interpretation of clinical manifestations of reno-urinary system diseases and formation of appropriate clinical thinking to formulate a correct diagnosis and developing a treatment plan.
7.2 Specific objectives	<p>At the completion of discipline, student (a) will be able (a) to acquire:</p> <p>Cognitive skills:</p> <ul style="list-style-type: none"> - to know the prevalence of kidney disease, especially chronic kidney disease. - Identify risk factors for chronic kidney disease and therapeutic punish them for control progression to end - stage renal disease. - Analyze critically the variations of biological parameters (functional renal parameters, blood count, inflammation tests, urinalysis, urine culture, 24 hours proteinuria, serum ionogram, immune tests) and identify factors that induce these changes - Communicate clearly, confidently the knowledge acquired <p>Practical skills:</p> <ul style="list-style-type: none"> - to know and duly completed observation sheet of a patient with reno-urinary disease - to know the indications, contraindications and hierarchy imaging in renal disease - to interpret the bulletin of laboratory, ultrasound, scintigraphy. - to interpret the bulletin of renal biopsy - to support positive and differential diagnosis of reno-urinary diseases - to recognize nephrological emergencies and know the correct behavior in these situations - to know pharmacologic therapy (preparations, route of administration, indications, contraindications, dosage adjustment in the presence of renal dysfunction) in renal diseases - to know early diagnosis algorithm of chronic kidney disease. - to know the fundamentals of renal replacement therapy (hemodialysis, peritoneal dialysis, renal transplantation) <p>Attitudes:</p> <ul style="list-style-type: none"> - To gain patient compliance and adherence to the treatment, especially to renal replacement therapy - To acknowledge and empower students and their family to socio-professional impact of chronic kidney disease. - Be motivated in order to make interdisciplinary connections to increase the quality of care.

8. CONTENTS

8.1 Course (content units)	Hours
- Glomerular nephropathies (GN)(acute diffuse GN, focal and segmental glomerulosclerosis, rapidly progressive GN, membranous GN, membrano-proliferative GN, Ig A nephropathy -Berger disease)	2
- Interstitial nephropathies (Acute interstitial nephropathy, chronic interstitial nephropathies)	2
- Tubular nephropathies	2
- Vascular nephropathies (hypertensive nephropathy, papilla necrosis, renovascular hypertension, vascular diseases -thrombosis or embolic)	2
- Hereditary kidney diseases (Alport's syndrome, congenital nephrotic syndrome, Fabry's disease, Polycystic kidney disease)	2
- Urinary tract infections (UTI) (pyelonephritis, cystitis, urinary tract infections in pregnancy, recurrent urinary tract infections)	2
- Diabetic nephropathy	2
- The Kidney in Pregnancy	2
- Acute kidney injury (AKI) (etiopathogenesis, Stages of AKI, causes of AKI, diagnosis, prognostic factors, therapy)	2

- Chronic kidney disease (CKD) (epidemiology, etiology, pathogenesis, diagnosis, conservative therapy of CKD, renal replacement therapy in CKD)	3
BIBLIOGRAPHY	
<ol style="list-style-type: none"> 1. Mircescu Gabriel, Gener Ismail, Checherita Ionel Alexandru -Manual de Nefrologie, Editura Universitar Carol Davila Bucuresti, 2020. 2. Mota Eugen (sub red.) - <i>Compendiu de Nefrologie</i>, Editura Medicala Universitara Craiova 2010. 3. Covic Adrian (coord). <i>Nefrologie: principii teoretice și practice</i>. Editura Casa Editorială Demiurg Iași 2011. 4. Karila L. (redactor). <i>Le Book des ECN</i>. Editura Medicală Universitară Iuliu Hațieganu Cluj Napoca 2011 5. Gluhovschi Gheorghe. <i>Manual de nefrologie clinică</i> Editura Mirton, 2008 6. Johnson RJ, Feehally J, Floege J. <i>Comprehensive Clinical Nephrology</i>. Ed. a 6-a. Philadelphia, SUA: Saunders Elsevier, 2019. 7. Mircescu G, Mandache E, Stancu S, et al. <i>Glomerulopatiile</i>. București: Editura Medicală, 2016 8. Victor Stoica si Viorel Scripcariu (coordonatori). <i>Compendiu de specialitati medico-chirurgicale</i> - vol. 1. Editura Medicala, Bucuresti, 2016; <ul style="list-style-type: none"> • Mircescu Gabriel – Capitolul VII.25 "Boala cronica de rinichi" (pag. 473- 514) • Vladutiu Dan – Capitolul VII.26 "Glomerulopatii" (pag. 515 – 548) • Eugen Mota si Sorin Ioan Zaharie - Capitolul VIII.27 - "Nefropatii tubulo-interstitiale"(pag 549-563). 	
8.2 Practical work (topics / themes)	Hours
History and physical examination of the patient with renal disease	2
Paraclinical evaluation of the patient with renal disease	2
Nephrological syndromes: edema and hypertension secondary to renal disease	2
Nephrological syndromes: nephritic syndrome, nephrotic syndrome	2
Patients with glomerular nephropathy	2
Patient with interstitial nephropathy	2
Patient with tubular nephropathy	2
Patient with vascular nephropathy	2
Patient with hereditary nephropathy	2
Patient with acute renal injury	2
Patient with chronic kidney disease in predialytic stages	2
Patients in stage 5 of chronic kidney disease on hemodialysis	2
Patients in stage 5 of chronic kidney disease on peritoneal dialysis	2
Patients in stage 5 of chronic kidney disease with renal transplant	2
BIBLIOGRAPHY	
<ol style="list-style-type: none"> 1. teaching course (ppt presentation) 2. Covic Adrian (coord). <i>Nefrologie: principii teoretice și practice</i>. Editura Casa Editorială Demiurg Iași 2011. 	

9. COURSE CONTENT CORROBORATING WITH THE EXPECTATIONS OF REPRESENTATIVES EPISTEMIC COMMUNITY, PROFESSIONAL ASSOCIATIONS AND REPRESENTATIVE EMPLOYEE

<ul style="list-style-type: none"> ▪ Discipline of Nephrology is a fundamental discipline, required for a student to become a doctor ▪ knowledge, practical skills and attitudes learned in this discipline is the foundation for understanding and learning of any preventive, diagnostic, curative or rehabilitation medical act in Renal and urinary disorders.
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10. METHODOLOGY

Forms of activity	Techniques of teaching / learning materials, resources; exposure of the course in computerized format (video); interactive course, audio-video recordings In case of special situations (alert states, emergency conditions, other types of situations that limit the physical presence of people) the activity can be carried out online using computer platforms approved by the faculty/university. The online education process will be adapted accordingly to ensure the fulfillment of all the objectives provided in the discipline file.
Course	Use these combined methods: lecture, debate
Clinical shifts	Use these combined methods: practical applications, presentation of clinical cases, projects
Self-study	Before each course and each practical work

11. RECOVERY PROGRAM

Absences recoveries	No. absences that can recover	Location of deployment	Period	In charge	Scheduling of topics
	3	Nephrology Department/ online	The last week of the semester	Teaching assistant	According to the internal schedule

Schedule consultations / Students' Scientific Program	2 hours/week	Nephrology Department/online	Tuesday 12 -14 hours	Maria Daniela Dinu Robert	Subjects propose by coordinators or students
Program for students poorly trained	2 hours/week	Nephrology Department/online	Monday 12 -14 hours	Maria Daniela Dinu Robert	Theme from that specific week

12. ASSESSMENT

Activity	Types of assesment	Methods of evaluation	Percentage from final grade
Lecture	By survey during the semester, after each course	Written Exam- Multiple Choice Questions Answering System (MCQ)/MCQ with the help of the IT platform in the online version (minimum standard 5 points)	90%
Practical work	Multiple Choice Questions Answering System (MCQ) or/and descriptive, projects, survey, during the semester.	practical examination/online (minimum standard 5 points)	10%
Periodic assesment written test (during stages)			
Assement of individual activities -			
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)		
Schedule	Location	Coordinator
Wednesday of the first week of the month	Nephrology Department / online	Maria Daniela

Endorsement date in the department: 27.09.2022

Department Director,
Prof. Paul MITRUȚ

Coordinator of study program,
Prof. Marius Eugen CIUREA

Discipline holder,
Lecturer Sorin Ioan ZAHARIE