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	IV
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				**INTERVENTIONAL RADIOLOGY**	
2.2. Discipline code				MED4215.2	
2.3 The holder of course activities				Cristian Constantin	
2.4 The holder of seminar activities				-	
2.5.Academic degree				Associate professor	
2.6. Employment (base norm/associate)				Base norm	
2.7. Year of study	**IV**	2.8. Semester	**II**	2.9. Course type (content) 2.10. Regime of discipline (compulsoriness)	**EDD**

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

3.1 Number of hours per week	**1**	3.2 From which course	**1**	3.3 seminary/laboratory	
3.4 Total hours in curriculum	**14**	3.5 From which course	**14**	3.6 seminary/laboratory	
Time found distribution (hours)					
Study from manual, course support, bibliography, and notes					**30**
Additional documentation in the library, specialized electronic platforms and, on the field					**4**
Training seminars / labs, homework, reports, portfolios, and essays					
Tutoring					
Examinations					**1**
Other activities, counselling, student scientific programs					**1**

3.7 Total hours of individual study	**36**
3.9 Total hours per semester	**50**
3.10 Number of credits	**2**

4. PREREQUISITES (where appropriate)

4.1 curriculum	Students must have a good knowledge of radiology, physiology and anatomy
4.2 competency	

5. CONDITIONS (where appropriate)

5.1. of curse deployment	
5.2. of seminary/ lab deployment	

6. SPECIFIC COMPETENCES ACCRUED

PROFESSIONAL COMPETENCES	C1 – Identifying the state of ill-health and accurately diagnosing the condition(s). C5 – Initiating and performing scientific research and-or training activity in the respective domain 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, nonconflictual, 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	The main objective of the INTERVENTIONALRADIOLOGY discipline is to provide students with a deep understanding of the most frequently encountered interventional procedures and associated minimally invasive therapeutic options. In addition, the INTERVENTIONAL RADIOLOGYcourse aims to build up on the notions of radiology, taking a special interest in the diagnosis and treatment of a wide array of pathologies, all in a minimally invasive manner. Therefore, the course touches subjects such as basic techniques of interventional echography, also covering interventional CT and MRI procedures. Physiological, anatomical, physiopathological, pharmacological and radiological aspects involved in the interventional component are thoroughly explained, in order to shape a comprehensive structure involving procedure techniques alongside their indications. Not lastly, each techique will be explained in its entirety, emphasising on understanding the undelying mechanisms and practical implications for the future physician.
7.2 The specific objectives of the discipline	INTERVENTIONAL RADIOLOGY, as discipline, is trying to form cognitive abilities,attitudes and skills that will allow to the students the correlation between the paraclinic dates with the clinic ones,in order to diagnose the most frequent vascular and nonvascular diseases and emphasize upon the eligibility for minimally invasive treatments. ***After taking the course, the students will be able to acquire:*** ***COGNITIVE ABILITIES which will allow*** • To realise the integration of the exploratory aspects in the clinical context of some different pathologies; • To accumulate and to use the notions that will permit to fulfill the dates necessary for a good diagnosis of: illness, evolution and efficacity of the treatment; • To be able to identify cases where minimally invasive treatment is applicable. • To recognise and know how to use the basic medical devices used in order to place an arterial line and perform basic endovascular procedures. • To be able to maneouver the basic INTERVENTIONAL RADIOLOGY endovascular devices, mainly using anatomical moulds. • To be able to match the theoretical and practical aspects of INTERVENTIONAL RADIOLOGY with notions aquired in other disciplines and develop the ability to use them as a basis for clinical thinking. • To communicate clear, rigorous, the knowledges or the results obtained. ***PRACTICAL SKILLS*** • To be able to place an arterial line; • To be able to place a venous line; • To take part and know the main steps involved in an arteriography; • To be able to obtain hemostasis after an arterial puncture. ***ATTITUDES*** • to be open to acquiring moral guidelines, training of professional and civic attitudes that enable students to be fair, honest, non-confrontational,

	cooperative and understanding in the face of suffering, available to help people interested in the developer community; • 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; • recognize and have respect for diversity and multiculturalism; • have or learn to develop teamwork skills; • to communicate orally and in writing the requirements, work method, the results obtained, to consult the results with the team; • to be involved in volunteering,to know the main problems of the community; • to be open to lifelong learning; • to understand the need for individual study as the basis of personal autonomy and professional development; • exploit their potential to the optimum and creative collective activities; • know how to use information and communication technology; • to have initiative, to involve itself in educational and scientific activities of the discipline.

8. CONTENTS

8.1 Course (content units)	Hours
1. Introduction to INTERVENTIONAL RADIOLOGY	2
2. Interventional ultrasound – echographically guided punctures, biopsies and drainages	2
3. INTERVENTIONAL RADIOLOGY – the angiography	2
4. INTERVENTIONAL RADIOLOGY – the angioplasty	2
5. INTERVENTIONAL RADIOLOGY – acute and chronic hemorrhages	2
6. INTERVENTIONAL RADIOLOGY – vertebral column diseases	2
7. Using CT and MRI for INTERVENTIONAL RADIOLOGY maneouvers	2
TOTAL	**14**
BIBLIOGRAPHY 1. The course taught during the semester 2. **Diagnostic Radiology. Interventional Radiology Grainger , Allison , Elsevier 2015**	

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

- INTERVENTIONAL RADIOLOGY is an optional discipline, very important for a student to become a doctor. Knowledge, practical skills and attitudes learned in this discipline provides the basis for the study of pathological processes which will be detailed in other disciplines and forms the basis for understanding and learning of any medical act preventive, diagnostic, curative and rehabilitation.

10. MHETODOLOGICAL LANDMARKS

Types of activity	Techniques of teaching / learning, materials, resources: lecture, interactive group work, learning based problems / projects etc.:
Course	Lecture, debate, learn based problem
Practical work	Practical applications, case study, projects
Individual study	Before each lecture and each practical work

11. RECOVERY PROGRAM

	No. absences that can recover	**Location of deployment**	**Period**	**In charge**	**Scheduling of topics**
Absences recoveries	1	The Radiology and Medical Imaging Discipline/internet	The last week of the term	Practical work holder	According to schedule
Schedule consultations / Students' Scientific Program	0,5h/week	The Radiology and Medical Imaging Discipline/internet	weekly	The teacher responsible for practical work	Themes of that week
Program for	0,5h/week	The Radiology and	every two	The Radiology and	Themes of those

students poorly trained		Medical Imaging Discipline/internet	weeks	Medical Imaging Discipline/internet	weeks

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.	**80%**
Practical work			
Periodic assesment			15%
Assement of individual activities			5%
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	**Location**	**In charge**
The last day of Friday of avery month	The Radiology and Medical Imaging Discipline/internet	Lecture holders

Endorsement date in the department: 28.09.2022

Department Director,
Prof. Dr. Paul MITRUȚ

Coordinator of study program,
Prof. Dr. Marius Eugen CIUREA

Discipline holder,
Assoc. Prof. Dr. Cristian CONSTANTIN