SUBJECT OUTLINE

1. Program of study description

1.1.	**"CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY**
1.2.	**FACULTY OF MEDICINE /CLINICAL DEPARTMENT**
1.3.	**DISCIPLINE OF CARDIOLOGY AND CARDIOVASCULAR SURGERY – University Emergency Hospital Bucharest**
1.4.	**DOMAIN OF STUDY: Healthcare – regulated sector within the EU**
1.5.	**CYCLE OF STUDIES: BACHELOR'S DEGREE**
1.6.	**PROGRAMME OF STUDY: MEDICINE**

2. Subject description

2.1.	**Name of the subject/compulsory subject/elective subject within the discipline: CARDIOLOGY**						
2.2.	**Location of the discipline: University Emergency Hospital Bucharest**						
2.3.	**Course tenured coordinator: Professor Dragos Vinereanu**						
2.4.	**Practicals/clinical rotations tenured coordinator:**						
2.5. Year of study	IV	**2.6. Semester**	I + II	**2.7. Type of assessment**	Exam with an eliminative practical test and a written test	**2.8. Subject classify-cation**	Mandatory

3. Total estimated time (hours/semester of didactic activity) – teaching module

Number of hours per week	25h	**Out of which: course**	10h	**Clinical rotation**	15h
Total number of hours from curriculum	195h (39 days x 5h/week=195h)	**Out of which: course**	78h (39 daysx2h/day=78h)	**Clinical rotation**	117h (39daysx3h/day=117h)
Distribution of time resources	9 weeks	**Out of which : -4 days cardiovascular surgery -2 days – final exam**			**Hours** 5h/day

Study according to the discipline manual, course digital support, bibliographic references, and course notes	
Additional documentation at the library, on specialized electronic platforms and during the practical activity	
Preparing seminars / laboratories, assignments, reports, portfolios, and essays	
Tutoring	
Examinations	
Other activities	
Total hours of individual study	
Number of credit points	**11**

4. Prerequisites (where applicable)

4.1. of curriculum	Basic knowledge of anatomy and physiology of cardiovascular system
4.2. of competencies	Basic knowledge of semeiology of cardiovascular system

5. Requirements (where applicable)

5.1. for delivering the course	Students receive in advance the digital support of the course and the manual of the discipline in a Goggle Classroom created especially for each module. The course takes place in an amphitheater of the faculty of medicine, usually the amphitheater of the University Emergency Hospital Bucharest. The lecturers teach the course based on a digital support in power point played on with an appropriate equipment.
5.2. for delivering the clinical rotation	Students carry out the practical activity according to a protocol uploaded in the dedicated Google Classroom and an instruction at the beginning of the clinical rotation.

6. Acquired specific skills

Professional competencies (expressed through knowledge and skills)	At the end of this module students must understand the pathophysiology of cardiovascular diseases and must be able to establish a correct diagnosis and a treatment plan for the main cardiovascular patolgies.
Transversal competencies (of role, of professional and personal development)	The practical internship aims to: 1. Develop the ability of students to collect medical information from patients and to analyze it in relation to the acquired theoretical knowledge. More concretely, we consider training students in the direction of establishing a correct diagnosis of cardiovascular pathology, especially for the most common diseases and for the most serious situations. 2. Familiarize the students with deontological and ethical problems of the medical profession 3. Stimulate team work

7. Subject learning objectives (based on the scale of acquired specific competencies)

7.1. General learning objective	Acquiring basic knowledge about the mechanisms, diagnosis and treatment of the main cardiovascular diseases.
7.2. Specific learning objectives	Acquiring correct communication with patients, performing a complete clinical examination of the cardiovascular system, recognizing the main rhythm disorders on the ECG, identifying the information that can be provided by the imaging methods for investigating the cardiovascular system, knowing how to care for patients with cardiovascular diseases both through conventional means, as well as through interventional ones.

8. Content

8.1. Course	**Teaching methods**	**Observations**
CARDIOLOGY		
Course 1	Particularities of the clinical examination in cardiovascular pathology	2h – 1 course
Course 2-3	Normal and pathological electrocardiogram (ventricular hypertrophies; bundle branch blocks; electrocardiographic ischemia)	4h – 2 courses
Course 4-5	Imaging exploration in cardiac diseases	4h- 2 courses
Course 6	Rheumatic fever	2h – 1 course
Course 7-8-9-10	Valve diseases (mitral, aortic, tricuspid)	8h – 4 courses
Course 11	Congenital cardiac diseases	2h – 1 course
Course 12	Endocarditis	2h – 1 course
Course 13-14-15-16	Rhythm disorders	8h – 4 courses
Course 17-18-19	Arterial hypertension	6h – 3 courses
Course 20	Pericarditis – acute and chronic	2h – 1 course
Course 21	Atherosclerosis and its risk factors	2h – 1 course
Course 22	Chronic coronary syndromes	2h – 1 course
Course 23-24-25	Acute coronary syndromes	6h – 3 courses
Course 26-27	Myocarditis and cardiomyopathies (dilated, hypertrophic, restrictives)	4h – 2 courses
Course 28-29-30-31	Heart failure	8h – 4 courses
Course 32-33	Venous thromboembolic disease	4h – 2 courses
Course 34-35	Peripheral artery disease and aortic pathology	4h – 2 courses
Course 36-37	Cardio-respiratory resuscitation and sudden death	4h-2 courses
Course 38	Cardiovascular manifestations in systemic diseases	2h – 1 course
	TOTAL	**38 courses = 76 hours**

CARDIOVASCULAR SURGERY		
	Cardiac surgery – past, present and future	4h - 2 courses
	Indications and surgical treatments of valvular diseases	4h – 2 courses
	Indications and treatment of ischemic cardiac disease	2h – 1 course
	TOTAL	**5 courses – 10 hours**
	GENERAL TOTAL	**43 courses – 86 hours**

8.2. Clinical rotation	**Teaching methods**	**Observations**
	Daily practical activity during which the students are asked to examine patients, to learn how to perform current investigations such as electrocardiography, to know the meaning and usefulness of specific investigations, such as echocardiography and to familiarize themselves with the way of caring for patients with diseases cardiovascular.	Assessment tests during the internship.

Bibliography for course and clinical rotation: CARDIOLOGY, University Ed. "Carol Davila"

9. Corroboration of the subject content with the expectations of the representatives of the epistemic community, professional associations, and major employers in the field of the program of study

Correct training for medical practice and acquiring the necessary knowledge for the license and residency exam.

10. Assessment

Type of activity	Assessment criteria	Assessment methods	Assessment weighting within the final grade
Course	Knowledge of the taught theoretical concepts.	Questionnaire with 30 items and 5 descriptive topics	The written exam has the maximum weight in the final evaluation; +/- 2 points are adjusted depending on practical exam and internship activity
Clinical rotation	The ability to establish diagnoses based on clinical and paraclinical data.	Practical exam with information gathering time - 20 min, thinking time - 20 min and case presentation time - 20 min	
Minimum performance standard			
At least 50% for each component of the evaluation.			

Date of filing	**Signature of the course tenured coordinator**	**Signature of the seminar tenured coordinator**

Date of approval in the Council of the Department: **Signature of the Head of the Department**